

AN ABSTRACT OF THE THESIS OF

CHARLES FRANKLIN EREKSON for the DOCTOR OF PHILOSOPHY
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DEVELOPMENT OF AUTONOMY IN COLLEGE FRESHMEN

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The purpose of this investigation was to identify sources of influence on one major growth trend for college students: the development of autonomy. Specifically, the study focused on whether change in autonomy in college freshmen was related to the background of the students, their associations with peers, their contacts with faculty, or the interaction between background and interpersonal relationships with faculty or peers.

The subjects of the study were 371 Oregon State University freshmen residing in University housing during the 1972-73 academic year. The data used in testing the hypotheses under consideration were collected during the first week of fall term, 1972 and eight months later during the last week of April, 1973. The autonomy scale of the Omnibus Personality Inventory was used to measure the change in autonomy in the subjects. The frequency of contact with faculty experienced by the students was measured by a self-report assessment technique. Selected subscales of the University Residence Environment Scale were used to assess relevant dimensions of peer association

experienced by subjects in their residence units. The dimensions of peer association identified in the study included involvement, emotional support, independence, competition, and intellectuality. Finally, information was gathered regarding the sex, socioeconomic status, religious background, and academic ability of each participant.

The eleven hypotheses developed for the study were tested using analysis of covariance and multiple regression analysis. Initial score on the Autonomy scale was introduced into each analysis in order to isolate differences in level of autonomy among the subjects at the beginning of their freshman year. In each of the analyses, the .05 level of confidence was accepted as indicating significance.

The results of the study showed:

1. During the eight month period of the study, significant positive change in the development of autonomy was found in the overall sample of college freshmen and in each of the subgroupings of students identified in the study.
2. Positive change in autonomy was more likely to occur among those freshmen who had not experienced as much development in autonomy prior to college.
3. The background variables of sex, socioeconomic status, and academic ability were not significant factors influencing the development of autonomy during the freshmen year.
4. An active religious background, whether represented by affiliation or commitment, limited the development of autonomy prior to college and, thus, provided the

opportunity for greater growth in autonomy during the freshman year.

5. Three of the dimensions of peer association examined in the study -- independence, competition, intellectuality -- did not have a significant relationship to the change in autonomy observed in the freshmen. However, peer group support in a student's residence unit, as indicated by the peer association dimensions of involvement and emotional support, did influence positive development of autonomy in the college freshmen.
6. The frequency with which female freshmen had contact with faculty did not affect the change in autonomy observed in these students. However, development of autonomy during the freshman year among males was favorably influenced by greater contact with non-teaching faculty.
7. Significant interaction relative to change in autonomy in college freshmen was observed between the dimensions of peer association and the background variables of sex, socioeconomic status, religious affiliation, and academic ability. However, no discernible pattern of interaction effects was apparent.
8. No significant interaction relative to change in autonomy in the freshmen was found between contact with teaching faculty and the five background factors. Change in autonomy was significantly related, however, to the interaction

between contact with non-teaching faculty and the background variable of academic ability.

THE INFLUENCE OF BACKGROUND, PEERS, AND
FACULTY ON THE DEVELOPMENT OF AUTONOMY IN COLLEGE FRESHMEN

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Charles Franklin Erikson

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Redacted for Privacy

Professor of Education
in charge of major

Redacted for Privacy

Dean, School of Education

Redacted for Privacy

Dean of Graduate School

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THE INFLUENCE OF BACKGROUND, PEERS,
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AUTONOMY IN COLLEGE FRESHMEN

CHAPTER I

INTRODUCTION

To suggest that colleges and universities have an impact on students is hardly a novel proposition. Much recent research has shown that changes do occur in the interests, attitudes, and values of college students (Feldman and Newcomb, 1969). However, the evidence gathered on the specific sources of influence on change among students is less clear (Axelrod et al, 1969).

The importance of identifying the sources of influence on students has been emphasized by several writers. Over a decade ago Sanford (1962b) recognized the need for research to focus on those factors influential in the lives of college students. In a comprehensive review of research on college students, Feldman and Newcomb (1969) stressed the significance of addressing the question: "under what conditions have what kinds of students changed in what specific ways?" (p. 3-4). In further support of this point, Shoben (1968) has asserted that "to deal responsibly with the restructuring of our apparatus of higher education . . . , we must learn a good deal more about the sources and types of influence which that apparatus contains within itself" (p. xiv).

One potentially influential feature of the college environment is the interpersonal associations a student experiences on the

campus. The investigations of Heath (1968) at Haverford revealed that "change is mediated primarily by the quality of one's personal relationships with others" (p. 214). After considering the different elements of the college environment which have an impact on students, Chickering (1969) concluded:

It should be clear that the principal reason such variations make a difference is that they influence the frequency and intensity, the content and contexts, of interpersonal encounters and relationships. For basically it is persons who affect persons, not structural arrangements (p. 232).

Yamamoto (1970) has suggested that the two sources of interpersonal influence on students available within the campus environment are faculty members and other students. The resolution of adjustment crises, achievement of developmental tasks, and mastery of the environment is dependent upon both intergenerational and intragenerational interaction. Considerable research has shown that a student's interactions with his peers has a profound impact on his interests, attitudes, values, and general development (Jacob, 1957; Siegel and Siegel, 1957; Newcomb, 1962a & 1962b; Jencks and Riesman, 1962; Bushnell, 1962; Prior, 1964; Wallace, 1966). Other research has indicated that faculty who have close relationships and frequent contacts with students also influence their growth and development (Murphy and Raushenbush, 1960; Raushenbush, 1964; Vreeland and Bidwell, 1966; Heath, 1968; Newcomb et al, 1970; Feinberg, 1972; Wood and Wilson, 1972; Appel, Berry, and Hoffman, 1973).

An alternative hypothesis might contend, however, that those factors in the background of a student that propelled him to seek post-secondary education will also be the primary determinants of change during the collegiate experience. Evidence from several studies has shown that pre-college experiences are related to attitudinal and behavioral changes among college students (Ferman, 1960; Payne, 1961; Stember, 1961; McConnell and Heist, 1962; Hassenger, 1966, Trent and Medsker, 1968; Jones, 1971).

A more comprehensive approach would suggest that changes among college students were influenced not only by pre-college background and campus interpersonal relationships but also by the interaction that occurs between background and collegiate experience. Feldman and Newcomb (1969) have proposed a useful paradigm for examining the interrelationship of background and college experiences to changes among students. The model suggests a causal network among student input, college environment, and student outcome. McConnell and Heist (1962) have emphasized that the outcome of college attendance is "the product of the fortunate conjunction of student characteristics and expectations, and the demands, sanctions, and opportunities of the college environment and its subcultures" (p. 250).

One area of change among college students which might be influenced by pre-college background and campus interpersonal relationships is the development of autonomy. Achieving independence from parents and other forms of external authority and moving in the direction of greater self-reliance is an important task for

many college students (Chickering, 1969; Coons, 1970). Research on the development of college students has consistently described changes which reflect movement toward increasing autonomy; however, the factors associated with this change have been varied and unclear (Axelrod et al, 1969).

Statement of the Problem

The problem of the present study was to ascertain whether college students change in the level of their autonomy during their first academic year, and, if so, whether certain factors influence this change. Specifically, this investigation sought to determine whether change in autonomy among freshmen is related to the background of the students, their associations with peers, their contacts with faculty, or the interaction of background and interpersonal relationships with faculty or peers.

Importance of the Study

Institutions of higher education have an opportunity and a challenge to make crucial contributions to the maximum development of large numbers of late adolescents and young adults. A greater understanding of the personality development of college students and the factors which influence that development is essential for colleges to maximize their impact on students. Chickering (1967b) has emphasized that "research must address these questions if educational practices . . . are to be based on evidence instead of myth" (p. 303). Therefore, it is imperative that empirical data

pertinent to the factors that have an impact on college students be gathered and carefully analyzed.

The present investigation is of importance in that it will provide relevant information for understanding the influence of background, peers, and faculty on the development of autonomy in freshmen at Oregon State University. The study should be helpful in the evaluation and future planning of institutional practices and programs at Oregon State University. The results of the study could provide a partial basis for alterations in existing programs and the introduction of new approaches.

The findings of the study will add to the growing accumulation of knowledge about the personality development of young adults in general and college students in particular. Insight into the developmental process among students provided by studies such as this is important to college personnel who work with students. Further, sharing the results of the study with students could improve their understanding of their own personal growth and aid in the more effective resolution of developmental tasks.

Finally, it is hoped that the investigation will raise hypotheses and questions that will stimulate further research in the area of the impact of college on student development. Only with a continual effort to broaden the understanding of this complex topic will significant progress be made.

Research Hypotheses

In order to facilitate statistical analysis of the data, the

following null hypotheses were developed.

1. There is no significant difference in the change in autonomy in male freshmen and female freshmen.
2. There is no significant difference in the change in autonomy in freshmen of upper, middle, and lower socioeconomic status.
3. There is no significant difference in the change in autonomy in freshmen of Protestant, Catholic, and no religious affiliation.
4. There is no significant difference in the change in autonomy in freshmen who have experienced different frequencies of religious service attendance.
5. There is no significant relationship between the change in autonomy in freshmen and their academic ability.
6. There are no significant relationships between the change in autonomy in freshmen and any of five dimensions (involvement, emotional support, independence, competition, intellectuality) of peer association.
7. There is no significant difference in the change in autonomy in freshmen who experienced different frequencies of contact with teaching faculty.
8. There is no significant difference in the change in autonomy in freshmen who experienced different frequencies of contact with non-teaching faculty.
9. There are no significant relationships between the change in autonomy in freshmen and the interaction of any of five dimensions (involvement, emotional support, independence, competition, intellectuality) of peer association and

- a. sex
- b. socioeconomic status
- c. religious affiliation
- d. frequency of religious service attendance
- e. academic ability.

10. There are no significant relationships between the change in autonomy in freshmen and the interaction of the frequency of their contact with teaching faculty and

- a. sex
- b. socioeconomic status
- c. religious affiliation
- d. frequency of religious service attendance
- e. academic ability.

11. There are no significant relationships between the change in autonomy in freshmen and the interaction of the frequency of their contact with non-teaching faculty and

- a. sex
- b. socioeconomic status
- c. religious affiliation
- d. frequency of religious service attendance
- e. academic ability.

Definition of Terms

In order to attain precision and clarity of meaning, the following terms were defined for the study.

Freshmen: Male and female Oregon State University students

without previous college credit, 19 years old or younger, citizens of the United States, and residing in OSU housing throughout the 1972-73 academic year.

Development of Autonomy: A growth trend of the personality in the direction of increasing self-reliance and decreasing external dependence. Characteristic of a high level of autonomy is a cluster of interrelated dimensions including parental independence, reduced reliance on authority, non-authoritarian thinking, tolerance of divergent viewpoints, freedom from the continual need for approval and reassurance, and the recognition and acceptance of the interdependent nature of life.

Socioeconomic Status: The social position occupied by a family in the status structure of society determined by a combination of the factors of occupation and education.

Religious Background: Prior religious experience as represented by religious affiliation and frequency of religious service attendance.

Academic Ability: A combined measure of scholastic aptitude and academic performance weighted so as to provide a prediction of potential for academic achievement.

Peer Association: The interaction with other students in one's residence unit. Five dimensions of peer association were identified:

- a. Involvement: degree of social interaction, feeling of friendship, and group commitment among students.
- b. Emotional Support: manifest concern for other students, especially as expressed through efforts to aid each other with

academic, social, and personal problems.

c. Independence: tolerance of divergent thought and diverse behavior without social sanction; lack of emphasis on conformity.

d. Competition: emphasis on striving for status among peers through rivalry in grades, dates, and other activities.

e. Intellectuality: emphasis on scholarly, cultural, and aesthetic interests and activities.

Faculty Contact: The frequency with which students encounter teaching and non-teaching faculty outside classroom or other formal meetings during the academic year.

CHAPTER II

REVIEW OF RELATED LITERATURE

The review of literature is designed to provide a frame of reference for considering the problem under investigation in the present study. The review provides an overview of scholarly works pertaining to personality development during college and the sources of influence on college students. For clarity, the review is divided into five sections. The first section presents a theoretical framework for personality development during college, and part two focuses specifically on the development of autonomy in college students. The final three sections are devoted to a discussion of the sources of impact on the lives of students. Specifically, the last three parts deal with the influence of background, peers, and faculty on students.

A Theoretical Framework
of Personality Development During College

Traditional conceptualizations of personality development have been dominated by the theories of psychoanalysis and behaviorism. These two approaches are based largely on a deterministic viewpoint which describes man as a passive, adjusting, conforming, and reactive organism. Further, these theories proposed that the primary influence on personality is exerted during infancy and childhood with the final shaping of the personality occurring at the end of adolescence. From this point of view, little opportunity

exists for alterations in personality during the college years.

The writings of Snygg and Combs (1949), Rogers (1951), May (1953), Maslow (1968), and others marked the emergence of a "third force" in the psychology of human behavior. This new orientation was based on the somewhat overlapping concepts of phenomenology, existentialism, humanism, and organismic theory. Emphasis was on the

free, responsible, creative, and autonomous nature of man, who is constantly striving to discover himself and his relation to the world around him as he works toward becoming the fully functioning person with the self-actualization of his unique capacities and potentialities (Gale, 1969, p. 6).

Both the internal strivings and external experiences of man are understood in a developmental framework. Thus, according to this viewpoint, expansion of the personality is possible beyond adolescence into the college years.

Personality development has come to be viewed in terms of a series of stages during which certain aspects of development, or growth trends, become relatively predominant (Havighurst, 1950 and 1953; Blocher, 1966). Development is dependent on the successful achievement of critical challenges, or tasks, appropriate to the growth trends at each stage. Failure to accomplish the developmental tasks required during a period results in retardation of progress toward fulfillment of the personality.

The life stage of college students has been variously referred to as late adolescence, young adulthood, and youth. The primary constellations of development during this period have been conceptualized as developmental tasks, growth trends, crises,

developmental challenges, and vectors of development. While these formulations reflect slight differences in approach and emphasis, there are aspects of development common to this period that have been identified by several theorists.

Havighurst (1950) introduced the concept of developmental task into the psychological literature. He defined this concept as follows:

A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks (1953, p. 2).

Thus, each period of growth is accompanied by certain tasks appropriate to the developmental level of the individual. Havighurst described two growth processes in later adolescence: achievement of personal independence and establishment of a philosophy of life. Included among the developmental tasks associated with these growth processes were (1) achieving mature relations with members of both sexes, (2) establishing an acceptable masculine or feminine social role, (3) achieving emotional independence of parents and other adults, (4) securing economic independence, (5) selecting an occupation, (6) adopting a socially responsible pattern of behavior, and (7) forming a value system.

According to Madison (1969), expansion of the personality occurs when "an individual makes an emotional commitment to a developmentally challenging situation, providing the ensuing challenges are within his learning capabilities" (p. 485). These

developmentally challenging situations have the character of requirements, thus, leading to the idea of developmental tasks. Among the developmental tasks facing a college student are acquiring a satisfactory identity; achieving competency in dating, love, and sexual expression; securing independence from parents; and selecting a college major and intended career.

Development of the human personality has been described by White (1952) in terms of growth trends. A growth trend implies a general direction of change in which the individual's development is moving. From his observations at Harvard, White specified four growth trends among college-age individuals. These included the stabilizing of ego identity, freeing of personal relationships, deepening of interests, and humanizing of values. Further, under certain circumstances the personality evolves in the direction of greater maturity, effectiveness, and contentment. White concluded that the challenge is to identify the crucial conditions under which this development occurs.

Erikson (1963) described the development of the individual as governed by the epigenetic principle of maturation. According to this thesis, "anything that grows has a ground plan" (p. 66) out of which parts emerge at a critical time of ascendancy. Each stage of ascendancy is marked by crises which must be resolved so that further development will be possible. The overlapping stages of late adolescence and young adulthood are accompanied by two of these major crises. The primary task is the formation of a sense of identity that rests on a meaningful synthesis of past, present, and

future. Identity diffusion, the opposite of identity formation, occurs when the individual fails to develop into an autonomous being with a hierarchy of values giving purpose to his life. In addition to the identity crises, the young adult must resolve an intimacy crisis. One must learn to overcome isolation from others and to achieve gratification from intimate relationships. The two crises are highly interrelated with the fusion of identity a necessary prerequisite of the development of a capacity for intimacy.

Chickering (1969) has contended that the concept of identity by itself is so abstract that it provides only a vague guide for understanding the developmental concerns of young adults. In contrast, he has proposed seven major vectors of development common to young adults in college. These dimensions of personal growth include not only establishing identity but also achieving competence, managing emotions, freeing interpersonal relationships, clarifying purposes, developing integrity, and becoming autonomous. The vectors are characterized by both direction and magnitude resembling a spiral or series of steps of development.

Keniston (1963) has identified a period of youth which differs in important ways from childhood and adulthood. During this period the individual experiences a psychological moratorium during which he is preparing for adult responsibilities. The primary developmental task associated with this life stage is the overcoming of alienation and the achievement of identity, or inner-sameness, so that one views himself as a distinctive individual in society.

The college student is viewed by Nixon (1962) as being in a

cognitive stage of development, one of five stages of personality growth. The cognitive stage is characterized by a sequence common to all five stages: discovery, experimentation, and mastery. During this stage the individual has the capability to know himself and his cultural setting and to master the anxiety created by the discrepancies between the two. Struggling for independence, especially from the family unit; moving from external to internal modes of control; freeing oneself from guilt associated with sexual and aggressive impulses; and determining a concept of oneself as a separate identity in the world are tasks Nixon has associated with this stage.

From his long association with college students, Coons (1970) outlined five prominent developmental tasks encountered by students while at college. The five tasks are (1) shifting the nature of one's relationships with one's parents from a child-parent to an adult-adult model, (2) solidifying a sexual identity, (3) formulating a personal value system, (4) developing the capacity for true human intimacy, and (5) choosing a life's work. Based on his observations, Coons concluded the manner used to resolve these tasks is crucial not only to the student's successful adaptation in college but also to his establishment of a more permanent life style.

Independence and a willingness to accept responsibility are the two most crucial attributes distinguishing adults from children or adolescents according to Pikunas and Albrecht (1961). The major developmental task associated with young adulthood, then, is the achievement of autonomy in the emotional, social, and economic

areas of life. The young adult is attempting to acquire emotional independence from parents, to establish a distinctive identity in his social relations, and to overcome financial dependence.

In summary, traditional conceptualizations of personality development have contended that little opportunity exists for changes in the personality during college. However, newer theories based on the concepts of phenomenology, existentialism, humanism, and organismic theory have proposed a developmental framework in which expansion of the personality is possible during the college years. According to the more recent theories, growth is dependent on the successful achievement of tasks appropriate to the developmental level of the individual. Several growth trends common to the life stage of college students have been identified in the literature. These growth trends, or developmental tasks, include (1) resolution of a distinctive identity, (2) clarification of purpose through choice of college major and intended vocation, (3) solidification of a personal value system, (4) achievement of meaningful interpersonal relationships, and (5) development of a sense of personal autonomy.

The Development of Autonomy in College Students

The securing of independence from parents has been identified by several theorists as an important developmental challenge in the life stage of college students (Havighurst, 1950 & 1953; Madison, 1969; Coons, 1970; Erikson, 1963). However, other writers have viewed the shift in relationships with parents as only one aspect of

a broader growth trend, the development of autonomy (Nixon, 1962; Chickering, 1969; Murphey et al, 1963; Pikunas and Albrecht, 1961). As Murphey et al (1963) have pointed out, "the ability to handle separation from home was only one part of a broader developmental issue: a challenge for the exercise of more autonomous functioning" (p. 644).

The development of autonomy has been described by Chickering (1969) as one of the seven major developmental vectors during the college years. According to this thesis, the process of becoming autonomous involves three components: the securing of emotional independence, the development of instrumental independence, and the recognition of interdependence. Emotional independence requires that an individual be free from the continual need for reassurance, affection, and approval. The capacity to cope with problems, to initiate activities, and to be mobile in relation to needs are necessary ingredients of instrumental independence. The development of autonomy culminates with the recognition and acceptance of the interdependent nature of life. Chickering has summarized his thoughts regarding the development of autonomy:

Change occurs along three vectors, emotional independence, instrumental independence, and recognition and acceptance of interdependencies. Development of emotional independence begins with disengagement from the parents, and rebelliousness in relation to them, to other adult authorities, and to established institutions. During this period, relationships with peers and sympathetic adults provide transitory emotional support. Maturity in this vector comes when relationships of reciprocal respect and helpfulness are developed with parents and peers such that the strengths and weaknesses of self

and others are recognized and mutually satisfying relationships are sustained through vagaries of distance and disagreement.

Development of instrumental independence occurs as the confidence and capacity to carry out most of life's activities by oneself is strengthened and as one becomes able to leave one place and go to another when it is worthwhile to do so.

These two vectors are complementary and change in one is limited without change in the other. Both gradually culminate in identification of significant interdependencies, and with gradual definition of one's limits for giving and for receiving in the various areas required (p. 77).

According to Pikunas and Albrecht (1961), the major developmental task associated with young adulthood is the achievement of autonomy in the emotional, social and economic areas of life. Emotional independence is the most difficult aspect of autonomy to achieve. The young adult must arrive at a level in which his emotional needs are better satisfied by peers than by parents without transferring emotional dependency from parents to peers. Social independence implies the establishment of oneself as a distinct individual in the eyes of society. Finally, attainment of autonomy requires the acquisition of the ability to support oneself and one's dependents financially. Pikunas and Albrecht described the three facets of autonomy as highly interrelated with achievement in one area impossible without progress in the other two.

Heist and Yonge (1968) have described autonomy as the opposite of authoritarian thinking. Individuals functioning at a high level of autonomy are characterized as being independent of authority as traditionally imposed through social institutions, as opposing infringements on the rights of others, as possessing a high tolerance

for divergent viewpoints, and as being intellectually and politically liberal. According to Trent and Medsker (1968), autonomy incorporates not only "the ability to think for oneself without reliance upon authority, . . . but also the ideas of flexible, objective thinking and an openness of attitude which facilitates awareness of and adaptability to the environment" (p. 9-10). Murphey et al (1963) have defined autonomy as the ability to make separate, responsible choices. This ability encompasses "the feeling of being a separate person, an awareness of freedom to make choices in selecting or rejecting outside influences, and assuming responsibility for one's own decisions" (p. 645).

The development of autonomy then involves more than just the securing of an identity separate from one's parents. It is a broader growth trend of the personality in the general direction of increasing self-reliance and decreasing external dependence. Characteristic of a high level of autonomy is a cluster of interrelated dimensions including not only parental independence but also reduced reliance on all forms of authority, non-authoritarian thinking, tolerance of divergent viewpoints, freedom from the continual need for approval and reassurance, and the recognition and acceptance of the interdependent nature of life.

Autonomy is a psychologically important dimension of the individual personality. Writings and research have indicated that autonomy is fundamental to the healthy personality, important to identity formation, and related to creativity and intellectuality. Rogers (1951) has stressed that the actualized individual demonstrates

movement toward greater independence and self-responsibility.

Erb and Hooker (1967) have emphasized that "actualization occurs to the extent that the person is able to . . . become more integrated, autonomous, and self-directing" (p. 123). Maslow's (1968) investigations revealed that the healthy personality is characterized by a high level of autonomy marked by a resistance to enculturation and freedom from external environmental controls. Based on his analysis of the individual in American society, Riesman (1950) has described social maturity in terms of an inner-directed, autonomous individual.

The resolution of identity is intricately tied to growth in autonomy. Relative independence of parental control, peer pressure, and other external influences are often described as prerequisites for the establishment of personal identity. In his theory of personality growth, Erikson (1959) has stated that an individual can establish a suitable ego identity only after he has attained adequate independence from his parents. Further, Trent and Medsker (1968) have observed "when the development of autonomy is limited, the development of identity and realization of potential are also generally limited" (p. 10).

Autonomy has also been found to be closely related to creativity. MacKinnon (1962) identified a personality syndrome often found in creative individuals which links autonomy with creativity. A cluster of traits including freedom of impulse expression, flexibility, self-awareness, openness to experience, and broad perspective tended to distinguish between highly creative persons and less creative ones. Gough (1964) differentiated the creative person from less creative

individuals by, among other qualities, his relative freedom from conventional restraints and restrictions, his independence in thought and action, and his inclination not to strive for achievement in situations where conformity was expected. The investigations of Heist (1968) found that college students identified as highly creative by their peers and faculty members also possessed a high degree of personal autonomy. The creative students were free from their subcultural pasts, relatively non-judgmental, anxious to examine new ideas, and willing to try different experiences. Creativity and autonomy have also been linked in the studies of Barron (1953 & 1963), Hitt and Stock (1965), and Sanford (1966).

Autonomy has been related to intellectually in much the same way that authoritarianism has been related to non-intellectuality. Webster, Freedman, and Heist (1962) concluded from their research that authoritarianism represents a distinct failure in maturity and is particularly a sign of lack of intellectual awareness. The studies of Stern (1962) and Dressel (1958) have shown that authoritarianism is associated with differential rates of progress and success in educational settings. Riesman (1950) also linked intellectuality and autonomy in his investigations. In commenting on the relatedness of autonomy and intellectuality, Trent and Medsker (1968) have stated:

the autonomous individual is capable of the objective, open, and flexible thinking which characterizes intellectuality, and the authoritarian individual is distinguished by the highly opinionated, closed thinking which is the mark of non-intellectuality (p. 11).

In addition to its relevance to the psychological welfare of the

individual, autonomy has been described as a basic aim of education. The writings of several educators have identified the development of autonomy as a goal of the educational process. Dewey (1938), Newman (1947), and Whitehead (1929) have stated that education should foster independence of thought and freedom from traditional patterns. The educated man was described by Van Doren (1943) as one who has developed the capacity to use his intellect without prejudice. Similarly, assisting the individual to overcome authoritarianism and to become an independent thinker has been called a fundamental goal of education by Sanford (1968). According to Heath (1968), becoming more autonomous is one of the characteristic dimensions of the process of becoming liberally educated.

The development of autonomy is an especially critical task for the college freshman. Katz (1968) has pointed out that freshmen arrive at college with a high degree of readiness to become more autonomous and encounter an atmosphere which tends to support this predisposition. Matriculation at a college marks the first time that most students have lived away from home for any extended period of time and, therefore, offers most of them the initial opportunity for freedom from the gravitational field of their family and local community. In trying out the newly acquired independence, the freshman student is faced with a wider range of responsibilities without the direct emotional support and adult guidance of his pre-college years.

Katz (1968) has further observed that the college atmosphere provides a greater degree of independence than the previous home

and school situations of most students. In the climate of the campus, the student can try new modes of behavior, can assume different roles, and can stimulate new images of himself in others. Further, the student is almost destined to encounter values and attitudes different from those which he has come to take for granted. Heath (1968) has suggested that the college's atmosphere, especially the skeptical and questioning student body, encourages the development of autonomy. Institutional expectations clearly demand that the individual take charge of his own life. Yamamoto (1970) has summarized the situation of the freshman:

When freshmen arrive on campus, they are immediately confronted with immensely complex tasks. They must meet a new set of academic standards, social codes, and other environmental demands, typically without close familial and familiar support. In this process, their overwhelming anxiety notwithstanding, students are expected to retain their self-confidence, to learn and/or develop effective coping strategies, and to pursue their long-range goals (p. 811-812).

Several studies have described changes in college students which reflect movement toward increasing autonomy. Reporting on the Project on Student Development, Chickering (1969) presented evidence that increases do occur in the level of autonomy among college students. Significant change on both the Social Maturity and Autonomy scales of the Omnibus Personality Inventory was observed at nine different colleges. Analysis of the findings revealed that change occurred in the direction of increased independence for both men and women. Differences between colleges were found to be greater than differences between sexes at the same institution. The

data also indicated that the greatest amount of change in autonomy occurred during the first two years of college.

Results of the Harvard Student Study showed that one of the changes observed in students during the four years of college was a strong rejection of authority with a corresponding increase in autonomy and self-confidence (Finnie, 1970). The students experienced a definite decrease in self-effacing dependence and nurturance and a clear drop in the uncritical acceptance of external authority. Although some changes were noted throughout the four years, the largest change took place during the first year for most individuals. Finnie summarized the changes which he observed as "a movement from the inward lookingness of adolescence toward the outward lookingness of the adult and the mediating factor which serves as the vehicle for this change is increasing self-confidence" (p. 30).

Heath (1968) concluded from his study at Haverford College that senior students had become more autonomous since their freshman year. The seniors reported that their values were more personally determined, their ideas about themselves were more distinctly their own, and their attitudes were no longer as easily influenced by the opinions of friends and family. Further, these students had become increasingly free of the control of their parents and tended to identify less with their families.

Research conducted at Vassar indicated that the expression of rebellious and critical attitudes toward parents increased during the college years (Freedman, 1967). Rebellious independence toward authority distinguished seniors from freshmen according to the

Developmental Status Scale described in this study. In summarizing these findings, Freedman stated "it was apparent that most students had become more independent of family standards and that their attitudes toward their parents had grown more critical" (1967, p. 44).

Newcomb et al (1970), reporting some preliminary findings of a five-year study at the University of Michigan, observed that the students showed an increase in interpersonal independence. Change was in the direction of more generalized autonomy in relation to family, peers, and religious orthodoxy. The largest increases were noted among residents of the "living-learning" complex where student-faculty interaction was greatest.

Data from the investigations of Trent and Medsker (1968) revealed that during the four years following high school graduation some of the young adults studied changed considerably in the level of their autonomy as measured by the Non-authoritarianism and Social Maturity Scales of the Omnibus Personality Inventory. The direction and extent of change varied according to the nature of the post-high school experiences. Although little initial difference was observed among the young adults, at the end of four years there appeared a direct relationship between the amount of time spent in college and increase in autonomy. Indeed, those individuals who were enrolled in college throughout the four years clearly showed the greatest increase in autonomy, while the non-attenders, particularly the females who became full-time housewives immediately after high school, regressed in autonomy. From these findings one can infer

that college seems to foster the development of autonomy, whereas early employment and homemaking seem to retard and even suppress growth in this trait.

The development of autonomy then is a more generalized growth trend of the personality than just the emancipation from parental control. Movement is in the direction of increasing self-reliance and decreasing dependence on external authority. Autonomy has been identified as an important dimension of the individual personality in the literature. Autonomy has been described as basic to the healthy personality, important to identity formation, and related to creativity and intellectuality. The development of autonomy is an especially critical task for the college freshman. New students arrive at college with a high degree of readiness to become more autonomous and encounter an atmosphere which generally tends to support this predisposition. Several studies have revealed changes among college students which reflect movement toward increasing autonomy. Further, the studies have found changes in autonomy in both male and female students and significant change often occurring early in the college career.

The Influence of Background on Students

The impact of college on students is mediated by the particular background of the individual students. Evidence from a large number of studies has indicated that the pre-college experiences of students are important determinants of choice of college, adjustment to college, and attitudinal and behavioral changes during college.

Douvan and Kaye (1962) considered the sources of influence on decisions to attend college and to enroll at a specific school. From their observations, the authors noted that the decision to attend college is primarily influenced by family-related variables, and particularly the social class of the family. Further, Douvan and Kaye observed that the meaning a particular college holds for a student differs for males and females. Thus, both the decision to attend college and the choice of a particular institution reflected the strong influence of familial factors.

In their follow-up study of 10,000 high school graduates, Trent and Medsker (1968) found a strong association between family background and several variables related to college attendance. Familial environment was linked to the tendency of young adults to attend college, to persist in college, to choose certain vocations, and to change in selected personality characteristics. Of particular interest to the present study was the finding that those individuals who increased the most in autonomy during the four years of the study came from relatively autonomous and educationally oriented homes.

Several studies have revealed a relationship between a student's background and his adjustment to the collegiate environment. Davie (1958) observed that satisfaction with college was a function of socioeconomic background. The results of Lane's (1961) study showed that female students with lower-class backgrounds differed from female students with upper-class backgrounds in their adaptation to the college environment. The students from lower-status families

experienced more difficulty in meeting the demands of the college campus. Specifically, the lower-class girls demonstrated a sense of inadequate academic skills, an insecure approach to academic expectations, over-conformity to administrative guidelines, and greater internal stress. Whyte (1963) examined social alienation among male undergraduates at Cornell University. Middle class and urban students were found to be more alienated from the academic system than were students from rural and working class backgrounds. In another study, Potvin and Westoff (1967) found that the extent of emphasis on religion in the family unit was an important factor in the early satisfaction with college choice among a sample of 6500 Catholic college women.

Gamble (1962) examined the relationship between students' pre-college experiences and their satisfaction with curricular choices. A few background variables were linked to the number of curriculum changes made by a sample of students during the first three semesters of their college work. For male students, parental attitude toward college attendance, age, and certainty of vocational choice were related to curriculum changes. Other background variables, including father's occupation, father's education, and birth order, were not associated with curriculum changes among males. In contrast, only one background variable, participation in high school student government, was associated with curricular changes among female students.

In a study conducted at the University of Florida, Wright (1966) investigated the relationship between economic level and

academic achievement. Evidence from the study confirmed Wright's hypotheses regarding achievement and economic level. The academic performance of lower income students tended to be higher than predicted, while the opposite held true for higher income students.

Much research has linked the values of college students and attitudinal change to the background experiences of students. In a recent study at Oregon State University, Penn (1973) found that religious affiliation influenced freshman female students' rankings of values and that both religious affiliation and family socioeconomic status were associated with students' attitudes concerning University-student relationships. Hershenson (1967) tested the hypothesis that individuals with different family religious backgrounds would exhibit intrareligious differences in value structure. The study revealed not only that religious background was an important variable in value orientation but also that type of secondary school experience was related to value structure.

In a review of several studies, Stember (1961) analyzed prejudice among college students. The investigation revealed that students from less privileged families were less likely to be prejudiced than those from more privileged background. Further, seniors of either background were found not to differ appreciably from freshmen. Based on his findings, Stember concluded:

a student's behavior is probably less determined by his college experience than by the status of his family. The fairly close similarity in the responses of students from similar occupational backgrounds, regardless of college class, would seem to support the thesis that attitudes toward

minorities are formed early and remain more or less impervious to college experience (p. 156-157).

Hassenger (1966) observed minimal change in the religious values and attitudes of a sample of Catholic college students. The students tended to hold firmly to the moralistic orientations growing out of their backgrounds. However, two groups of students, those from public high schools and those from working-class backgrounds, experienced an observable change in religious orientation which differentiated them from other students.

Ferman (1960) concluded that change in religious attitudes during college was closely tied to influences which the students bring to campus with them. Religious affiliation was significantly related to shifts in general religious orientation. Further, Ferman found the higher the educational level of the father, the greater the tendency for off-spring to de-emphasize religion in college.

Payne (1961) investigated the relationship between selected background characteristics and change in attitudes and values exhibited by students during their first year in attendance at Michigan State University. Analysis revealed significant relationships between attitude change among male students and parents' educational level, father's occupational level, and religious affiliation. However, there was a significant relationship between attitude change and background characteristics of female students for only one variable, father's education. Results of this study indicated that factors most closely linked with change in attitudes and values were familial in nature rather than intellectual.

Jones (1971) found that a college environment's impact on students' attitudes was limited by the socioeconomic background of the students. His findings showed that students from low socioeconomic background became less dependent in their attitudes toward parents and peers, while students from higher socioeconomic backgrounds changed more in their cultural sophistication and social conscience.

In an extensive analysis of religion in American colleges and universities, Overholt (1970) reviewed the impact of religion on college students and change in religious orientation among students. Religious affiliation was found to be associated with change in religious orientation. From his studies, Overholt suggested that religious background was related to the broad developmental life tasks encountered by college students.

The research of McConnell and Heist (1962) prompted the hypothesis that student background and college experience interact to influence behavioral and attitudinal change. Their investigations identified the two factors of academic aptitude and sociocultural background as important determinants of change among college students. Based on their studies, McConnell and Heist concluded that the characteristics of entering students can either impede or facilitate the changes in attitude and behavior that occur during the college years.

To summarize, pre-college experiences have been associated with several variables related to college attendance. Different studies have linked background with choice of college, adjustment

to college, and behavioral and attitudinal changes during college. Socioeconomic status, religious background, sex, and academic ability have been identified in the literature as important factors influencing the lives of college students. Some research has suggested that student background and college experience interact to influence behavioral and attitudinal change among students.

The Influence of Faculty on Students

The potential ways in which faculty members can influence students are many and varied. Feldman and Newcomb (1969) have suggested that faculty may serve as a source of knowledge, an extrinsic source of motivation, a critic and judge of academic efforts, a catalyst for changes in values, a reinforcer of existing attitudes, or a source of support and encouragement. Sanford (1962b) has also listed several roles that faculty members may fulfill in the teacher-student relationship.

The teacher may be for the student a source of inspiration, a model of adult behavior, an object of unconscious "identification", an ally in his struggles with his parents, a realistically perceived "parent-figure" to be used in revising relationships with actual parents; the teacher may force a reorganization of the student's value system, induce self-insight respecting his childish or inappropriate tendencies, crucially strengthen his serious aspirations and his confidence in his intellectual abilities; or the teacher may be an object of dependent, submissive, or erotic phantasies; or he may finally convince the student that the intellectual life is not for him (p. 55).

Beyond the specific behavior of a faculty member, what he generally represents, or his image, may serve as a model for students. The

faculty member may serve as a model of adult behavior or an ego-ideal worthy of emulating (Riesman, 1959). Identification with a faculty member can also serve as a means of achieving a necessary new personal identity for some students (Adelson, 1962). Katz (1962) has also expressed this opinion:

The college teacher is a special transference object for his students. He is an "in between" object, in between parents and the adult relations the student will establish in and after college . . . Teachers thus may become "associates in the student's mind in his rebellion against his parents (p. 387).

Adelson (1962) has submitted that a faculty member may also serve as an anti-model for students. Whatever the faculty member represents, the student vows to oppose. Thus, Adelson sees a dualistic quality in the role of faculty: "If we follow a student's development closely enough we generally discover both positive and negative models; the decision to be or become like someone goes hand in hand with a negative choice of identity and ideal" (p. 414).

Some research has shown that faculty have significant impact on the lives of students. Several studies revealed that faculty have considerable influence on the occupational decisions and educational aspirations of individual students. Austin (1965) found that faculty were the most important source of influence on the career choices of students in five liberal arts colleges in the Midwest. Teachers influential in career choice were viewed by students as being dynamic, enthusiastic, possessing much self-insight, and having a high degree of satisfaction with themselves and their jobs. In another study, Newton (1962) observed that faculty were

clearly the most important element in the career decisions of students who became college teachers. Frequency of faculty contact with students was found by Grigg (1965) to be a significant factor in the educational plans of a large sample of college seniors in the South. Those students who experienced frequent talks with faculty members tended more often to have plans for attending graduate school than did those who indicated less frequent discussions with faculty. Thistlethwait's investigations (Thistlethwaite, 1959, 1960, 1962; Thistlethwaite and Wheeler, 1966) indicated that faculty affect students' motivation for advanced study. Students who perceived their teachers as enthusiastic, humanistic, stressing achievement, and deemphasizing compliance tended to raise their aspirations for advanced training more than those students not reporting such press. Further, Thistlethwaite's analysis revealed that college faculties play important roles in motivating not only undergraduates' pursuit of advanced training but also their actual entry into graduate school. The results of a nationwide study by Davis (1964 & 1965) also showed that the encouragement of a faculty member was a key factor in the decisions of students to pursue graduate school. Davis further observed that members of the college faculty were as important in helping the student make a career choice as were the student's parents. The research of Wallace (1966) supported the contention that there are relationships among academic achievement, aspirations for graduate study, and admiration of faculty. Faculty members were found to influence freshmen toward greater emphasis on obtaining high grades. Faculty influence on

orientation toward achievement seemed to have had greater impact on low ability students and greatest impact on those who received unaccustomed high grades. Wallace also observed a direct relationship between admiration of faculty and aspirations for graduate school. In a summary of the research in this topic, Feldman and Newcomb (1969) stated:

In over a dozen studies in which students were asked to name the sources of influence on their vocational planning and decisions, faculty along with parents ranked as extremely important. In fact, with only two or three exceptions, students perceived faculty to be either as influential as their parents or more so (p. 253).

Although Feldman and Newcomb (1969) concluded that the impact of faculty was most often limited to the intellectual development and career decisions of students, other investigations have found that faculty frequently influence students in more general way. In his extensive review of the impact of college teaching on students, Jacob (1957) concluded that the quality of teaching had relatively little effect on the values of most students. However, Jacob did identify several "potent" colleges in which changes in student values were notable. At these schools Jacob pointed out

some teachers do exert a profound influence on some students, even to the point of causing particular individuals to re-orient their philosophy of life and adopt new and usually more socially responsible vocational goals (p. 7 & 8).

Heath (1968) examined the relationships between faculty members and students at Haverford, one of Jacob's "potent" campuses. Haverford students reported that the principal effects of student-faculty contacts were to stimulate them "to become more aware of

and consistent in their images of themselves, to develop more logical, orderly, and integrative intellectual skill, as well as more socially centered values" (p. 204).

In a study at the University of Wisconsin, Feinberg (1972) observed that frequency of contact between faculty and students was related to the students' scores on the Social Introversion scale of the Minnesota Multiphasic Personality Inventory when controls were introduced for academic achievement. Academically successful students who had much contact with faculty were more extrovert than were equally successful students who reported little informal faculty contact. For less academically successful students, Feinberg found the opposite to be true.

Murphy and Raushenbush (1960) concluded that the most important factor in the growth of the students which they studied was the opportunity for extensive interchanges between teachers and students during which students were exposed to the intellectual, personal, and social values of the men and women who taught them. In another study, Raushenbush (1964) observed that faculty members fostered the development of competence in students through the pursuit of common problems or concerns, the sharing of experiences, and the demonstration of a sincere respect for students. In both studies the critical element was the willingness of faculty members to share themselves with students.

The ways in which teachers affect seriously the education of their students are many; but however the teachers function in the classroom, whatever their style, their subject, their way of talking to the student or with them, what students remember,

what reached the heart of their learning, what they cherished more than any other one thing, is the sense of shared experience with a teacher (Raushenbush, 1964, p. 133).

Newcomb et al (1970) reported some preliminary findings of a study at the University of Michigan comparing the experiences of students in a traditional undergraduate school with those in a residential college. The researchers used the Quality of Teaching and Faculty-Student Relationships scales of the College and University Environment Scales to assess the nature of student-faculty contact. One of the characteristics differentiating the residential college was a higher incidence of student-faculty interaction. Students in the residential college also experienced greater change in several areas as measured by the Omnibus Personality Inventory. From the evidence collected in the study, Newcomb et al concluded "the degree of faculty-student contact shows an impressive, positive relationship to change and impact . . . those students who have more faculty contact become more liberal, more socially concerned, and more culturally sophisticated" (p. 155).

In the investigations of the Project on Student Development, Chickering (1969) observed when contact between students and faculty was frequent and when it occurred in diverse situations, change in students was stimulated. Specifically, members of the faculty had an impact on the achievement of competence, clarification of purpose, attainment of integrity, and development of autonomy. Chickering emphasized the particular importance that student relations with faculty have for the development of autonomy:

Adults who are accessible and who can be fully known can have substantial impact. With them the actions and reactions habitual with parents and other adults, which were learned during childhood, can be examined and new behaviors can be tested. In this fashion new modes of relationship with persons in authority and with institutional expressions of authority can be developed. A student can then move from dependence through rebellious independence toward relationships of mutual respect and regard where areas of interdependence are recognized, and from which an autonomous existence can be built (p. 238-239).

Wood and Wilson (1972) reported preliminary results of a study conducted at the Center for Research and Development in Higher Education exploring the correlates of faculty-student interaction. The four-year study conducted at eight widely varying institutions identified students who experienced different levels of frequency of interaction with faculty. Several notable findings were reported by Wood and Wilson:

(1) Students whose intellectual orientation increased significantly over four years reported more frequent interaction with faculty than those students whose intellectual disposition did not increase.

(2) High-interacting students more often named a faculty member as having influenced their choice of major than did low-interacting students.

(3) Students with more faculty contact expressed greater overall satisfaction with their college experience than did those with fewer faculty contacts.

(4) In comparison to the low-interactors, high-interacting students had a firmer sense of identity, a higher degree of self-awareness, a more definite commitment to a vocation, and a greater capacity to form close relationships.

In both empirical studies and personal experiences related in the literature of higher education, productive relationships between faculty and students are characterized by frequent and personal interaction. Sanford (1967) argued that the best education is gained when there is a high degree of personal involvement between faculty and students. Vreeland and Bidwell (1966) have hypothesized from their findings at Harvard that the higher the level of faculty interest in and interaction with students, the more extensive the attitude and value change among students. Based on his studies at Haverford, Heath (1968) described effective faculty as "those who, out of genuine personal concern, seek out a young man to help him know himself and find his direction" (p. 204). Further, Haverford students valued their associations with faculty who were professionally competent, whose lives were highly integrated, and who felt comfortable revealing their humanness to students. Jacob (1957) found faculty influence was more pronounced at those colleges where the associations between students and faculty were frequent and personal. Faculty identified as having impact were described as

persons whose own value-commitments are firm and openly expressed, and who are out-going and warm in their personal relations with students. Furthermore, faculty influence appears more pronounced at institutions where association between faculty and students is normal and frequent, and students find teachers receptive to unhurried and relaxed

conversations out of class (p. 8).

On the basis of his research on college press, Thistlethwaite (1959) also described the teacher who stimulates development in students:

He does not see students only during office hours or by appointment; open displays of emotion are not likely to embarrass him; students need not wait to be called upon before speaking in class; in talking with students he frequently refers to his colleagues by their first names; students do not feel obligated to address him as "professor" or "doctor" (p. 189).

Chickering (1969) has suggested four general conditions conducive to meaningful relationships between faculty and students: accessibility, authenticity, knowledge, and the ability to communicate. Accessibility implies a climate in which contact between students and faculty is legitimized as a necessary ingredient of the teaching-learning process. Authenticity requires that faculty members have a firm and consistent system of values and pattern of behavior. Further, the faculty member must be willing to reveal his real self to students. Knowledge involves professional competence by the faculty member in his academic speciality and an awareness of the developmental concerns of students. Finally, the ability of faculty to talk with and listen to students is a necessary element in the student-faculty relationship. These conditions must be accompanied by a genuine respect for each other on the part of both faculty and students.

In summary, the potential for faculty influence has been documented in the literature. Several writers have suggested a variety of functions which faculty may perform in the teacher-student relationship. Research has shown that faculty have

considerable influence on the vocational choices and educational aspirations of students. Other studies have indicated that some faculty influence students in areas other than their educational and occupational decisions. Finally, productive relationships between faculty and students have been characterized by frequent and personal contact.

The Influence of Peers on Students

"A student's most important teacher is another student" (Chickering, 1969, p. 253). Substantial evidence supports the contention that peers have a greater impact on students than any other group during college (Jacob, 1957; Jencks and Riesman, 1962; Bushnell, 1962; Newcomb, 1962a & 1962b; Hughes, Becker, and Geer, 1962; Newcomb and Wilson, 1966). The campus-wide peer reference group, formal membership groups, and informal friendship groups provide norms of accepted behavior and standards for self-evaluation (Feldman and Newcomb, 1969). From his research, Prior (1964) has observed that the most potent force influencing the values, attitudes, and behavior of students in the environmental press of the college campus was the students' peer group. Based on his extensive analysis of student culture, Wallace (1966) concluded that the peer social structure has a significant effect on the aspirations, attitudes, and achievement of college students. The research of Siegel and Siegel (1957) has also demonstrated the potential impact of reference groups on the attitude changes of students. Axelrod et al (1969) have stated clearly that "the student culture on campus constitutes

the most important influence brought to bear on a student during his college years" (p. 154).

Studies at several schools have shown that students who were members of a highly selective student population tended to depreciate their own scholastic abilities (Astin, 1965; Skager and Braskamp, 1966; Skager, Holland, and Braskamp, 1967; Davis, 1964 & 1965). These researchers further concluded that the more select the student body the more likely students were to lower their self-perceptions. Thus, students' evaluations of themselves were based on the immediate campus peer group rather than a broader student population that allowed for differences in institutional selectivity.

Interest in advanced study and certain careers has been related to peer influences. Astin (1965) examined the effects of different college environments on the vocational choices of high aptitude students. Evidence from the study showed that a student's career choice tended to conform to the modal career choice of the campus student population. Wallace (1966) analyzed the interpersonal environment of selected freshmen at a Midwestern liberal arts college. His research revealed a definite relationship between the peer associations of the freshmen and changes in their aspirations for graduate school. Thistlethwaite and Wheeler (1966) also found that certain pressures and opportunities present among the student campus community were correlated with not only aspirations for advanced training but also actual entrance into graduate or professional school.

From his analysis of the college environment, Wilson (1966)

has suggested that peers are key agents in stimulating those changes that occur in a student as a result of his collegiate experience. Certain student attributes condition the peer group a student enters and are altered by exposure to peer influence. These attributes were ordered by Wilson into four categories of variables including biological traits, nature of the family unit, characteristics of pre-college peer groups, and personality traits.

Feldman and Newcomb (1969) have suggested several functions that the peer group serves for individual students. The functions which they described include (1) supporting the academic goals of the institution, (2) offering general emotional support, (3) providing an opportunity for interaction with individuals of different background, interests, and orientations, (4) reinforcing pre-college values and attitudes, (5) facilitating the examination and modification of existing values and attitudes, (6) providing an alternative source of gratification for academically unsuccessful students, and (7) establishing personal ties which will be maintained after college. An additional function of the peer group is the provision of support and assistance in the achievement of independence from parents and the development of autonomy. Levine (1966) has expressed the opinion that peers mediate the "transition from dependence on parents and parent-supervised activities to a life in which self-reliance and personal freedom are greater" (p. 112). Lozoff (1968) has further stressed that the successful redefinition of one-self as an individual separate from one's family is dependent upon the support of peers. Sharing experiences with one or several friends facilitates the

separation process and aids in the clarification of self-concept.

In discussing the campus clique as an agent of socialization, Smucker (1947) has stated:

In the strange new world of the campus-culture the informal subgroup is the nearest equivalent of the family. The traumatic effect of separation from parents is cushioned because of the intimate friendly contacts provided in clique groupings (p. 167).

Chickering (1969) and Sanford (1956) agree that the peer culture serves as a replacement for the external support and authority of a student's pre-college years and as a means for transcending the limiting expectations of the home community. Benne (1964) concluded that "peer group experiences . . . cannot only help members to work more effectively with others, but also to develop the basic attitudes and values that aid the growth of an autonomous and rational individual" (p. 302).

In discussing the general nature of peer group influence, Newcomb (1966) has identified four conditions that facilitate the impact of student peer groups on the attitudes of their members. The most obvious of these conditions is group size. Smaller groups are characterized by stronger interpersonal relationships resulting in more pressure for compliance with group attitudes. Homogeneity of group members is the second condition listed by Newcomb. Similarity in age, sex, social class, or religious affiliation affect peer influences primarily due to the homogeneity of attitudes that tends to accompany such similarities. Relative isolation from other groups with divergent attitudes is a third factor facilitating

peer impact. Lack of exposure to other viewpoints tends to strengthen the dedication to the beliefs of one's own group. The final condition for peer group influence is the importance to individual members of the group-sanctioned attitudes. Solidarity of the group, and hence its impact, is largely determined by the significance the individual member associates with the standards supported by the group.

The living arrangements of college students provide a setting in which the impact of the peer group on the development of the individual can be extensive. Since most resident students spend a large proportion of their time in their residence, peers within the same residence unit often are the most important reference group for these students. Chickering (1967a & 1969) has emphasized the potential impact of peer associations in residences:

College residences do provide a significant context for student development. It is there close associations with other students occur. The student's opportunities for contact with different kinds of persons can lead to increased ease and freedom in his relationships with others. Because in his residence hall a student observes the impact of his behavior on others and feels the force of the group's behavioral norms and standards, he can better develop a personal system of values that he can hold with integrity (1969, p. 221).

Newcomb (1962b) has contended that one's living arrangements affect those with which one develops meaningful relationships. He pointed out that there are many other persons with which an individual might become closely associated; however, those with whom one actually does form significant relationships are limited by the opportunity for personal contact and mutual exploration. Further,

Newcomb explained that individuals tend to maintain close relationships with those persons with whom such association was initially developed. Therefore, peer interaction within a student's living unit during his freshman year will likely be significant in his development throughout college.

Some evidence suggests that peer interaction within the residence environment is a crucial determinant of attitudinal and behavioral change among students. The investigations of Dressel and Lehmann (1965) at Michigan State led them to conclude "the most significant reported experience in the collegiate lives of these students was their association with differing personalities in their living unit" (p. 250). Taylor and Hanson (1971) found that the influence of peers in one's residence had a strong and positive effect on individual achievement. DeCoster (1966) observed that high ability students living in close proximity to one another were more academically successful than randomly placed high ability students. In a recent study at Oregon State University, Schroeder (1973) found differences in the amount of change in selected dimensions of self-actualization between students living in single-sex residence halls and students living in coeducational residence halls. From his observations, the author suggested that these differences might be attributed to differing modes of interaction within the two types of halls. The examination of the impacts of the residential houses of Harvard by Vreeland and Bidwell (1965) revealed that differences in the environments of the residential settings did affect the values and attitudes of residents. Further,

the extent of change was greatest when peer involvement and interaction in a house was high. In another study, one of the most important determinants of maturing reported by undergraduates at Haverford was living in close physical proximity with a roommate (Heath, 1968).

The literature has suggested that a student's associations with his peers has a profound impact on his interests, attitudes, values and general development. The campus-wide peer reference group, formal membership groups, and informal friendship groups provide experiences for the college student which largely determine the outcome of his education. Among the functions the peer group performs for its members is the provision of support and assistance in the achievement of independence from parents and the development of autonomy. The living arrangements of students provide a setting conducive to the conditions which facilitate peer impact. Therefore, an analysis of peer association within student residences would provide useful information for assessing the impact of peers on the development of autonomy in students.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to summarize the methodology used in testing the hypotheses developed for the study. Specifically, the chapter presents a description of the subjects of the study, the sources of the data, and the procedures used in collecting and analyzing the data.

Subjects

The subjects selected for the study were freshmen enrolled at Oregon State University during the 1972-73 academic year. In order to limit the influence of extraneous variables, only those students born September 1, 1953 or later, with no previous college attendance, and citizens of the United States were eligible to be subjects. Since one variable under investigation was peer association within student residence units, the subjects were further limited to residents of OSU recognized student housing.

A total of 2410 students fulfilled the requirements for inclusion in the study population. Four hundred eighty-two students, a 20 % sample, were selected to participate in the study by a standard random number sampling technique. Table I summarizes the number and percentage of subjects participating in the study. Although 62 students were disqualified between the fall pre-test and spring post-test administrations due to withdrawing from the University or changing residence units, 76.9 % of the original sample participated

throughout the study.

Table 1. Summary of Participants

	Total Sample	Pre-Test Participants	Eliminated Participants	Post-Test Participants
Number	482	461	62	371
% of Sample	100.0	95.6	12.9	76.9

Sources of the Data

The sources of the data used in testing the hypotheses under investigation in the study were the Omnibus Personality Inventory, the University Residence Environment Scale, a personal information form, and a student-faculty contact assessment form. Additional information regarding the academic ability of the subjects was gathered from the records of the Oregon State University Office of Admissions. Each of the sources of data is discussed in terms of its derivation and purpose in the study.

Autonomy

The Autonomy scale of the Omnibus Personality Inventory, Form F (OPI) was used to measure the change in autonomy in the subjects during the course of the study. The OPI is based on a long process of test development dating back to 1957 including a wide variety of research with and on earlier forms. The present form of the OPI is, therefore, an instrument of considerable technical refinement and one which is a somewhat older, established inventory despite its

rather recent date of publication. The OPI was not constructed on the basis of any organized, systematic personality theory; rather it was developed at the Center for Research and Development in Higher Education at the University of California, Berkeley to fill specific measurement needs in the research programs of that agency. The inventory was designed to provide a meaningful, differentiating description of college students and a means of assessing change in important characteristics of students enrolled in dissimilar institutions of higher education.

The standardization of the OPI was based on a large sample of entering students at diverse institutions of higher education. Thirty-seven colleges and universities were selected for normative purposes in order to effect an appropriate representation of schools in the various categories of higher education (e.g., public vs. private, four-year vs. two-year). The normative sample was composed of 7283 freshmen, of which 3540 were men and 3743 were women. Since the differences between the scores of men and women students, as groups, were small, the authors chose to settle for the advantage of a single normative base.

Form F of the OPI consists of 385 statements designed "to measure the differences among college students with regard to their attitudes, opinions, and feelings on a variety of subjects" (Heist and Yonge, 1968, p. 4). Students are asked to indicate whether each statement is true or false as applied to them. Each of the items belongs to one or more of the fourteen scales of the OPI. The fourteen scales include Thinking Introversion, Theoretical

Orientation, Estheticism, Complexity, Autonomy, Religious Orientation, Social Extroversion, Impulse Expression, Personal Integration, Anxiety Level, Altruism, Practical Outlook, Masculinity-Femininity, and Response Bias. Each of the scales was chosen for its importance in understanding and differentiating among students in an educational context.

The Autonomy scale (Au) used in the present study consists of 43 of the true-false statements. The characteristic measured by the Au is described by the authors as:

Liberal, non-authoritarian thinking and a need for independence. High scorers show a tendency to be independent of authority as traditionally imposed through social institutions. They oppose infringements on the rights of individuals and are tolerant of viewpoints other than their own; they tend to be realistic, intellectually and politically liberal, and much less judgmental than low scorers (Heist and Yonge, 1968, p. 4).

Further, subjects scoring high on the scale tend to

feel that disobedience to government is sometimes justified, and do not favor strict enforcement of all laws no matter what the consequences; deny that only a fool would change the American way of life, that communism is the most hateful thing in the world today, that the most important qualities of a husband are determination and ambition, and that there must be something wrong with a person who lacks religious feeling (Heist and Yonge, 1968, p. 6),

while those scoring low tend to

feel that parents generally prove to know best, that young people get rebellious ideas but ought to outgrow them and settle down as they mature, that it is the responsibility of intellectual leaders to maintain the established order of things, and that only a callous person does not feel love and gratitude toward his parents (Heist and Yonge, 1968, p. 6).

The Au was considered an important measure to include in the OPI by the authors because of its importance in assessing "a common, semi-cognitive developmental change in post-adolescent thought and behavior" (Heist and Yonge, 1968, p. 3).

The evidence reported on the validation of the Au supports the dimension as a measure of non-authoritarianism, intellectual liberalism, self-reliance, and general adjustment. Higgins (1970) found that the Au had a significant positive correlation with the Goodman Socio-Sexual Adjustment Scale. Heist and Yonge (1968) have reported that the Au has a high degree of concurrent validity with a number of other scales. The Au correlated significantly with the Aesthetic measure of the Study of Values and with those occupations of the Strong Vocational Interest Blank which represent the non-authoritarian aspects of autonomy. Extremely high correlations were observed between the Au and the Intellectual Quality and Creative Personality scales of the Opinion, Attitude, and Interest Survey. Significant correlation was also found between the Au and the Intuition scale of the Myers-Briggs Type Indicator and the Need for Autonomy scale of the Edwards Personal Preference Schedule. Finally, the Au showed high negative correlations with the Deference, Affiliation, Succorance, and Order measures of the Activities Index.

Background

In order to test the hypotheses regarding the influence of background on the development of autonomy, data was gathered on each subject concerning sex, socioeconomic status, religious background,

and academic ability.¹ Measures of socioeconomic status and religious background were obtained from subjects responses to the personal information form² developed for the study, while a measure of academic ability was calculated from information provided by the Oregon State University Office of Admissions. Each of the background variables is discussed in terms of its use in the study.

Sex: Sex was used as a background variable in order to account for any difference in the change in autonomy between male and female students. The sex of each subject was determined from living group rosters provided by the Department of Housing and the Office of Student Services.

Socioeconomic Status: Socioeconomic status was determined by a modified Hollingshead Two-Factor Index of Social Position (Hollingshead, 1957). The Hollingshead Index is based on the education and occupation of the head of the household weighted so as to provide an indication of the social position occupied by a family in the status structure of society. For the purposes of the study, the broad categories of upper, middle, and lower socioeconomic status were identified.

Religious Background: Religious background was represented by the two dimensions of affiliation and commitment. Three broad categories of affiliation emerged from subject responses:

- a. Catholic

¹ See Appendix A

² See Appendix B

- b. Protestant
- c. No affiliation.

An indication of commitment was obtained from the frequency of attendance at religious services. Four frequencies of religious service attendance were identified in the study:

- a. Once or more a week
- b. Once or twice a month
- c. Once or twice a year
- d. Never.

Academic Ability: A measure of academic ability was generated for each subject using formulas developed by Fields (1973). The formula combines the factors of scholastic aptitude and academic performance weighted so as to provide an indication of potential for academic achievement in the form of a predicted grade point average (PGPA). Separate formulas were developed by Fields for males and females in order to provide greater accuracy. The formulas are shown below.

$$\begin{aligned} &\text{Freshman year PGPA for males} \\ &= .71800 \times \text{high school GPA} \\ &+ .00035129 \times \text{SAT-Verbal score} \\ &+ .00083000 \times \text{SAT-Math score} \\ &- .30279 \end{aligned}$$

$$\begin{aligned} &\text{Freshmen year PGPA for females} \\ &= .72616 \times \text{high school GPA} \\ &= .00062199 \times \text{SAT-Verbal score} \end{aligned}$$

$$\begin{aligned} &= .00034884 \times \text{SAT-Math score} \\ &+ .30279 \end{aligned}$$

Faculty Contact

The frequency of contact with faculty experienced by the subjects was measured using a modified form of a self-report assessment technique developed at the Center for Research and Development in Higher Education at the University of California, Berkeley (Wood and Wilson, 1972).³ The assessment technique was developed for and used in a study of faculty impact on student development undertaken at the Center. It was found to be a reliable measure of the frequency of student-faculty interaction.

The measure of faculty contact was based on the total number of discussions in six areas of concern that the subjects reported having had with faculty outside classroom or other formal meetings during the academic year. The subjects were asked to indicate separately the frequency of their contact with teaching and non-teaching faculty. Teaching faculty were described as those faculty members whose primary responsibility was classroom instruction; non-teaching faculty were those whose primary responsibility was something other than classroom instruction, i.e., Registrar, Dean of Administration, Housing Director, Assistant Dean of Students, Counseling Center staff, Activities Adviser.

Using an approach similar to the one employed in the aforementioned study at the Center for Research and Development in Higher

³See Appendix C

Education, the subjects were divided into three groups for the purpose of comparing those who had experienced little, moderate, and frequent levels of faculty contact. Table 2 summarizes the number of subjects who fell into each of the three categories with teaching and non-teaching faculty.

Table 2. Distribution of Participants by Frequency of Contact with Faculty

Type of Faculty	Little Contact N	% of sample	Moderate Contact N	% of sample	Frequent Contact N	% of sample
Teaching Faculty	126	34.0	184	49.6	61	16.4
Non-Teaching Faculty	166	44.7	132	35.6	73	19.7

Peer Association

Selected subscales of the University Residence Environment Scale (URES) were used to assess dimensions of peer association experienced by subjects in their residence units. The URES was developed by Gerst and Moos (1971) to provide a meaningful description of the social-psychological climate of college residences and a means of differentiating among residences on relevant dimensions of the environment. The instrument consists of 96 true-false statements that measure residents' perceptions of the environment which they have experienced. Each of the items belongs to one of ten subscales of the URES. The ten subscales are Involvement, Emotional Support, Independence, Traditional Social Orientation, Competition, Academic

Achievement, Intellectuality, Order and Organization, Innovation, and Student Influence. The five subscales selected for use in the present study to assess dimensions of peer association within residence units are described below.

Involvement Degree of commitment to the residence and the amount of social interaction and feeling of friendship in the residence.

Emotional Support Extent of manifest concern for others in the residence; efforts to aid each other with academic and social problems.

Independence Independence of thoughts and action by individuals; acting in diverse ways without social sanction.

Competition Competing with one another for grades, dates, status of any sort; the casting of many activities into a competitive framework.

Intellectuality Extent to which scholarly, intellectual, and cultural activities and interests are manifest in the residence, (Gerst and Moos, nd, p. 29-30).

The development of the URES followed rigorous steps in order to assure accuracy and stability in the measurement of the residence environment.⁴ Four basic sources were used in obtaining an initial pool of items for the instrument. Dormitory residents, housing staff members, previous studies, and existing environmental scales were used to generate an item pool of more than 500 statements. This list was pared down to a 238-item questionnaire in order to eliminate overlap between items and to include those items most relevant to the environmental dimensions under consideration. The resulting instrument was administered to residents of 13 living units at a

⁴ The following discussion is a brief summary of a paper prepared by Gerst and Moos (nd) tracing the development of the URES.

private university. Of the 238 items, 87.9 % were found to discriminate among residences at the .05 level and 83.6 % were found to discriminate at the .01 level. The items were also correlated with the Crowne-Marlow Scale of Social Desirability; only 7.6 % of the items had significant correlations with the Crowne-Marlow scale. Based on this analysis, a revised form (R1) was developed using the following four criteria: (1) an item should discriminate significantly among the residences tested, (2) an item should not have a true-false response split more extreme than 80% - 20%, (3) an item should not be correlated with the Crowne-Marlow scale, and (4) each subscale should have the same number of true and false keyed items in order to control for acquiescent responding. Form R1 consisted of 140 items representing 14 environmental subscales of ten items each. Each of the subscales of the URES, R1 version was then subjected to a one way analysis of variance across the 13 living units. All 14 environmental subscales reliably differentiated among residences in the sample. The next step in the development was to collect data on a larger number and wider range of student residences. Responses were gathered from samples of students representing 13 different colleges and universities of varying type and 74 living units including coed halls, women's halls, men's halls, and Greek houses. Based on this collection of data, the R1 version of the URES was revised to reduce the total number of items in the scale, to reduce the content overlap and seeming redundancy of some items and to reduce the overlap among some subscales. A factor analysis was performed to determine if item clustering other than that based on

the a priori method used initially would appear. Based on this analysis and an item-subscale correlation, the URES, Form R2 was created in its present form.

Initial standardization and substantive data on the URES demonstrate that the instrument has high reliability, subscale independence, and subscale discrimination among residences. The reliability of the R2 version was assessed by using measures of internal consistency, temporal stability, and profile stability. Correlations of internal consistency ranged from .76 to .87 for the 10 subscales. Test-retest correlations ranged from .59 to .75 for the subscales. A third measure of reliability used by the authors was profile stability, or the stability of subscale scores when the residence as a whole is the unit of measurement. Intra-residence correlations were used to assess profile stability for the subscales. These correlations ranged from .86 to .98; therefore, when the perceptions of living unit residents were pooled, the stability of the perceived environment was remarkably high.

Analysis of the data from the revision sample showed that there was a desirable degree of subscale independence. Most of the subscales were found to be only moderately correlated with one another; many were essentially uncorrelated. The mean of all the inter-subscale correlations was .18. Hence, the amount of overlap between subscales seems to be sufficient to suggest that the various subscales "are measuring aspects of a diverse but unified environment while sharing a small enough common variance to tap the unique components of the residence climate" (Gerst and Moos, nd. p. 13).

A one way analysis of variance across a sample of residences in the norm group showed that all ten subscales discriminate among the residences in the sample. A further analysis of 28 women's halls, 12 men's halls, and 15 coed halls revealed that each type of living unit emphasized different dimensions of the environment. In another comparison, differences were found in the aspects of the living environment stressed by men in residence halls and fraternity houses on the same campus.

Collection of the Data

The data used in testing the hypotheses developed for the study were collected in two phases. During the first week of fall term 1972, the participants completed the Omnibus Personality Inventory and the personal information form. The questionnaires were administered by the author with the assistance of the Resident Advisers, Head Residents, and Resident Assistants in the various residence units. Shortly after the fall pre-test administration, the information used for the calculation PGPA was gathered from the records of the Oregon State University Office of Admissions by the author.

A second testing was conducted during the final week of April, 1973 following eight months of attendance at Oregon State University by the subjects. At the spring post-test administration, the participants again completed the Omnibus Personality Inventory and also responded to the University Residence Environment Scale and the faculty contact assessment items. Resident Advisers, Head Residents, and Resident Assistants in the various residence units again assisted

in the collection of the data.

After each administration, the answer sheets were hand scored using the procedures outlined by the respective test authors and subsequently rescored for possible error. The resulting data were keypunched on separate IBM cards for each subject, verified, and then analyzed by the Oregon State University Computer Center according to the statistical methods outlined in the following section.

Analysis of the Data

Two types of statistical analyses were employed in testing the hypotheses under investigation. The type of analysis used was determined by the nature of the data associated with each hypothesis.

For those hypotheses which involved discrete independent variables, analysis of covariance was conducted to test for significant differences among the subjects. Analysis of covariance represents an extension of analysis of variance which provides for the examination of the correlation between initial and final scores of a measurement. The covariance model is especially appropriate in experiments in which it is not possible to equate subjects at the beginning of the experiment. By utilizing the analysis of covariance method, it is possible to effect adjustment in final scores which allow for differences in important initial variables (i.e., IQ). In the present study, score on the Autonomy scale at the beginning of fall term was treated as a covariate in order to assess its relation to score on the Autonomy scale at the end of the eight month period of the study. When it was determined that there was a significant

relationship between the initial and final scores on the Autonomy scale, the final score was adjusted before the analysis was completed in order to eliminate statistically any difference in level of autonomy among the subjects at the start of their freshman year.

For those hypotheses which involved continuous independent variables, multiple regression analysis was used to test for significant relationships between change in autonomy in the freshmen and the various independent variables. Multiple regression is an expansion of simple linear regression useful when concern is with the measurement of the nature of the linear association between two or more independent variables and a dependent variable. In the testing of each hypothesis when a multiple regression model was utilized, initial score on the Autonomy scale was introduced into the analysis in order to isolate that part of the total variance attributable to initial level of autonomy. Then, the remaining total variance was partitioned among the independent variables under consideration in order to examine the significance of their influence on change in autonomy.

CHAPTER IV

RESULTS

The objective of the study was to determine whether change in autonomy in college freshmen is related to the background of the students, their associations with peers, their contacts with faculty, or the interaction between background and interpersonal relationships with faculty or peers. The purpose of the fourth chapter is to present the results of the analysis of the data relative to this investigation. The results of the analysis are presented in the order that the hypotheses were considered in the study.

Presentation of Results

Hypothesis 1. There is no significant difference in the change in autonomy in male freshmen and female freshmen.

Table 3 illustrates the results of the comparison of change in autonomy between male freshmen and female freshmen. Change in autonomy was observed among both the group of females ($t = 4.43, p .01$) and the group of males ($t = 3.93, p .01$). Hypotheses 1, which considers the difference between the two groups, was tested using an analysis of covariance model with the pre-test scores on the Autonomy scale introduced as a covariate in order to control initial differences within the sample. As the data in Table 3 indicate, the analysis revealed no significant difference in the amount of change in autonomy between the groups. Hypotheses 1, therefore, was not rejected, and it was concluded that change in autonomy in freshmen

was not influenced by the sex of the students.

Table 3. Analysis of Change in Autonomy By Sex

Sex	Pre-Test Mean	Post-Test Mean	Change Mean	F Value
Female	52.21	55.17	2.96	.15
Male	53.23	55.86	2.63	
Covariate				81.65**

F = 3.84 at .05 level

*Significant at .05 level

F = 6.63 at .01 level

**Significant at .01 level

Hypothesis 2. There is no significant difference in the change in autonomy in freshmen of upper, middle, and lower socioeconomic status.

Table 4 presents the results of the comparison of change in autonomy in freshmen of different socioeconomic background. Significant change in autonomy was observed in the upper ($t = 4.04$, $p .01$) and middle ($t = 3.91$, $p .01$) socioeconomic status groups, while no significant change in autonomy was found within the lower socioeconomic status group ($t = 1.95$, $p .01$). To compare the change in autonomy between the three socioeconomic groups, analysis of covariance was utilized with the pre-test scores on the Autonomy scale used as the covariate to eliminate statistically initial differences among the groups. The F value reported in Table 4 indicates that the difference in the amount of change in autonomy observed among the three socioeconomic groups was not significant. Thus, Hypothesis 2

was not rejected, and it was concluded that socioeconomic background did not influence the change in autonomy experienced by students during their freshman year in college.

Table 4. Analysis of Change in Autonomy By Socioeconomic Status

Socioeconomic Status	Pre-Test Mean	Post-Test Mean	Change Mean	F Value
Lower	53.98	56.36	2.38	
Middle	52.12	55.11	2.99	1.00
Upper	52.82	55.58	2.76	
Covariate				81.84**

F = 2.99 at .05 level

*Significant at .05 level

F = 4.60 at .01 level

**Significant at .01 level

Hypothesis 3. There is no significant difference in the change in autonomy in freshmen of Protestant, Catholic, and no religious affiliation.

The results of the comparison of change in autonomy in freshmen by religious affiliation are presented in Table 5. Change in autonomy among each of the three religious affiliation groups was found to be significant (Protestant, $t = 5.04$, $p = .01$; Catholic, $t = 2.72$, $p = .01$; No affiliation, $t = 2.01$, $p = .05$). It is interesting to note that those freshmen who indicated no formal affiliation with any religious group had a considerably higher initial level of autonomy than did those of either a Protestant or Catholic background.

Difference in the change in autonomy between the religious affiliation groups was tested by analysis of covariance with the pre-test scores on the Autonomy scale used as the covariate to reduce initial differences among the subjects. As the data in Table 5 show, the difference in change between subjects of different religious affiliations was not significant. Since the difference in observed change in autonomy was not statistically significant, Hypothesis 3 was not rejected. Thus, it was concluded that development of autonomy in college freshmen was not influenced by religious affiliation.

Table 5. Analysis of Change in Autonomy by Religious Affiliation

Religious Affiliation	Pre-Test Mean	Post-Test Mean	Change Mean	F Value
Protestant	51.89	54.96	3.07	
Catholic	52.85	55.60	2.75	1.30
No Affiliation	54.76	56.89	2.13	
Covariate				81.97**

F = 2.99 at .05 level

*Significant at .05 level

F = 4.60 at .01 level

**Significant at .01 level

Hypothesis 4. There is no significant difference in the change in autonomy in freshmen who experienced different frequencies of religious service attendance.

Table 6 illustrates the findings of the analysis of change in

autonomy in freshmen by frequency of religious service attendance. Four frequencies of religious service attendance were utilized in the study: once or more a week, once or twice a month, once or twice a year, and never. Significant change in autonomy was observed among all three groups which indicated that they attended religious services (once or more a week, $t = 4.30$, $p .01$; once or twice a month, $t = 3.35$, $p .01$; once or twice a year, $t = 3.20$, $p .01$). However, the change in autonomy observed in the group of students who indicated that they never attended religious services was not significant ($t = 1.18$, $p .05$).

Analysis of covariance was used in examining Hypothesis 4 with the pre-test scores on the Autonomy scale being the covariate. The analysis of covariance test revealed that the difference in the change in autonomy between the four religious service attendance groups was significant. The greatest change was noted in the group which attended religious services the most frequently, while the least change was found in the group which never attended religious services. Hypothesis 4 was rejected, and it was concluded that change in autonomy in college freshmen was influenced by their religious commitment, as measured by the frequency with which they attended religious services.

Table 6. Analysis of Change in Autonomy by Frequency of Religious Service Attendance

Frequency of Religious Service Attendance	Pre-Test Mean	Post-Test Mean	Change Mean	F Value
Once or More a Week	49.75	53.52	3.77	
Once or Twice a Month	53.27	55.89	2.62	
Once or Twice a Year	52.69	55.50	2.81	3.43*
Never	57.63	58.82	1.19	
Covariate				83.45**

F = 2.60 at the .05 level

*Significant at .05 level

F = 3.78 at the .01 level

**Significant at .01 level

Hypothesis 5. There is no significant relationship between the change in autonomy in freshmen and their academic ability.

The findings of the analysis of the relationship between change in autonomy and academic ability are summarized in Table 7. Regression analysis was used in testing Hypothesis 5 with initial score on the Autonomy scale introduced as a covariate in order to eliminate initial differences in level of autonomy. The analysis revealed no significant relationship between change in autonomy in freshmen and their academic ability. Therefore, Hypothesis 5 was not rejected, and it was concluded that change in autonomy was not influenced by academic ability.

Table 7. Analysis of the Relationship of Academic Ability to Change in Autonomy

	Regression Coefficient	F Value
Academic Ability	.1374	.06
Covariate	-.3286	80.93**

F = 3.84 at .05 level

*Significant at .05 level

F = 6.63 at .01 level

**Significant at .01 level

Hypothesis 6. There are no significant relationships between the change in autonomy in freshmen and any of five dimensions (involvement, emotional support, independence, competition, intellectuality) of peer association.

The results of the analysis of the relationship between change in autonomy and peer association are presented in Table 8. Hypothesis 6 was tested using multiple regression analysis with pre-test scores on the Autonomy scale included as a covariate to isolate the influence of initial level of autonomy. Each of the five dimensions of peer association was identified in the regression equation in order to determine which, if any, were significantly related to change in autonomy.

Two of the five dimensions of peer association were found to have a significant relationship to change in autonomy in freshmen. As Table 8 shows, involvement and emotional support were significantly related to change in autonomy at the .05 level. Consequently,

Hypothesis 6 was rejected, and it was concluded that there was a significant relationship between change in autonomy in freshmen and certain aspects of peer association.

Table 8. Analysis of the Relationship of Selected Dimensions of Peer Association to Change in Autonomy

Dimensions of Peer Association	Regression Coefficient	F Value
Competition	.0484	.09
Emotional Support	.2674	3.89*
Independence	.0328	.06
Intellectuality	.0536	.14
Involvement	.2836	4.80*
Covariate	-.3327	82.28**

F = 3.84 at .05 level

*Significant at .05 level

F = 6.63 at .01 level

**Significant at .01 level

Hypothesis 7. There is no significant difference in the change in autonomy in freshmen who experienced different frequencies of contact with teaching faculty.

The results of the comparison of the change in autonomy in freshmen by frequency of contact with teaching faculty are illustrated in Table 9. Change in autonomy within each group was found to be significant (little contact, $t = 3.46$, $p = .01$; moderate contact, $t = 4.30$, $p = .01$; frequent contact, $t = 2.15$, $p = .05$). An analysis of covariance model, with initial score on the Autonomy scale as the

covariate, was employed in testing the difference in change in autonomy between students who experienced varying degrees of contact with teaching faculty. The data presented in Table 9 show that the difference in change between the three groups was not significant. Thus, Hypothesis 7 was not rejected, and it was concluded that frequency of contact with teaching faculty did not affect change in autonomy experienced by the college freshmen in the sample studied.

Table 9. Analysis of Change in Autonomy by Frequency of Contact with Teaching Faculty

Frequency of Contact	Pre-Test Mean	Post-Test Mean	Change Mean	F Value
Little	53.08	55.76	2.68	
Moderate	52.38	55.29	2.91	1.62
Frequent	52.95	55.67	2.72	
Covariate				82.11**

F = 2.99 at .05 level

*Significant at .05 level

F = 4.60 at .01 level

**Significant at .01 level

Hypothesis 8. There is no significant difference in the change in autonomy in freshmen who experienced different frequencies of contact with non-teaching faculty.

Table 10 presents the findings of the comparison of change in autonomy by frequency of contact with non-teaching faculty. Students in each of the three groups that experienced different frequencies of contact with non-teaching faculty showed significant change in

autonomy (little contact, $t = 3.88$, $p = .01$; moderate contact, $t = 3.60$, $p = .01$; frequent contact, $t = 2.64$, $p = .01$). Hypothesis 8, which considers the difference in change between the groups, was tested by analysis of covariance using the pre-test scores on the Autonomy scale as the covariate. As the F value reported in Table 10 indicates, the analysis revealed that the difference in change in autonomy observed between the groups was not significant. Therefore, Hypothesis 8 was not rejected, and the conclusion was that frequency of contact with non-teaching faculty did not influence the development of autonomy during the freshman year of college.

Table 10. Analysis of Change in Autonomy by Frequency of Contact with Non-teaching Faculty

Frequency of Contact	Pre-Test Mean	Post-Test Mean	Change Mean	F Value
Little	53.34	55.93	2.59	
Moderate	52.28	55.22	2.94	.55
Frequent	52.07	55.08	3.01	
Covariate				81.64**

F = 2.99 at .05 level

*Significant at .05 level

F = 4.60 at .01 level

**Significant at .01 level

Hypothesis 9. There are no significant relationships between the change in autonomy in freshmen and the interaction of any of five dimensions (involvement, emotional support, independence, competition, intellectuality) of

peer association and

- a. sex
- b. socioeconomic status
- c. religious affiliation
- d. frequency of religious service attendance
- e. academic ability.

Hypothesis 9-a dealt with the interaction between sex and peer association relative to change in autonomy in the sample of freshmen subjects. Table 11 presents the results of the analysis of the relationship of the interaction between sex and the five dimensions of peer association to change in autonomy. Significant interaction relative to change in autonomy was found between sex and two dimensions of peer association. The F values in Table 11 indicate that the interaction between sex and emotional support was significant at the .05 level and interaction between sex and independence was significant at the .01 level. Thus, there was observed a significant relationship between change in autonomy in freshmen and the interaction effects of sex and certain aspects of peer association.

Hypothesis 9-b dealt with the interaction between socioeconomic status and peer association relative to change in autonomy in the subjects. The results of the analysis conducted to test Hypothesis 9-b are presented in Table 12. Significant interaction relative to change in autonomy was observed between the variables of socioeconomic status and competition at the .05 level. Thus, it was concluded that there was a significant relationship between the change in autonomy in freshmen and the interaction of socioeconomic status and one

aspect of peer association.

Table 11. Analysis of the Relationship of the Interaction between Sex and Selected Dimensions of Peer Association to Change in Autonomy

Interaction Variables	F Value
Sex X Competition	2.58
Sex X Emotional Support	3.92*
Sex X Independence	6.71**
Sex X Intellectuality	.45
Sex X Involvement	.74

F = 3.84 at .05 level *Significant at .05 level
 F = 6.63 at .01 level **Significant at .01 level

Table 12. Analysis of the Relationship of the Interaction between Socioeconomic Status (SES) and Selected Dimensions of Peer Association to Change in Autonomy

Interaction Variables	F Value
SES X Competition	3.93*
SES X Emotional Support	1.38
SES X Independence	.34
SES X Intellectuality	1.88
SES X Involvement	.89

F = 3.00 at .05 level *Significant at .05 level
 F = 4.61 at .01 level **Significant at .01 level

Hypothesis 9-c dealt with the interaction between religious affiliation and peer association relative to change in autonomy in freshmen. Summarized in Table 13 are the results of the analysis conducted to test this hypothesis. As the data in Table 13 indicate, there was significant interaction between religious affiliation and the dimension of intellectuality. Therefore, the analysis showed that change in the autonomy was influenced by the interaction between religious affiliation and one aspect of peer association.

Table 13. Analysis of the Relationship of the Interaction between Religious Affiliation and Selected Dimensions of Peer Association to Change in Autonomy

Interaction Variables	F Value
Religious Affiliation X Competition	1.98
Religious Affiliation X Emotional Support	.92
Religious Affiliation X Independence	.60
Religious Affiliation X Intellectuality	5.19**
Religious Affiliation X Involvement	.70

F = 3.00 at .05 level

*Significant at .05 level

F = 4.61 at .01 level

**Significant at .01 level

Hypothesis 9-d dealt with the interaction between peer association and the frequency of religious service attendance relative to change in autonomy in freshmen. The results of the analysis conducted to test Hypothesis 9-d are included in Table 14. There were no significant relationships found between the change in autonomy

and the interaction of religious service attendance and any of the five dimensions of peer association. Thus, it was concluded that change in autonomy in freshmen was not affected by the interaction between peer association and religious commitment, as measured by frequency of religious service attendance.

Table 14. Analysis of the Relationship of the Interaction between Religious Service Attendance (RSA) and selected Dimensions of Peer Association to Change in Autonomy

Interaction Variables	F Value
RSA X Competition	1.14
RSA X Emotional Support	1.41
RSA X Independence	1.70
RSA X Intellectuality	.86
RSA X Involvement	1.09

F = 2.60 at .05 level

*Significant at .05 level

F = 3.78 at .01 level

**Significant at .01 level

Hypothesis 9-e dealt with the interaction between academic ability and peer association relative to change in autonomy. The data in Table 15 show that the interaction effects between one of the dimensions of peer association and academic ability was significantly related to change in autonomy. The interaction between academic ability and emotional support relative to change in autonomy was significant at the .01 level. Thus, change in autonomy was found to be influenced by the interaction between academic ability and one aspect of peer association.

Table 15. Analysis of the Relationship of the Interaction between Academic Ability and Selected Dimensions of Peer Association to Change in Autonomy

Interaction Variables	F Value
Academic Ability X Involvement	1.07
Academic Ability X Emotional Support	7.40**
Academic Ability X Independence	1.66
Academic Ability X Competition	1.37
Academic Ability X Intellectuality	1.07

F = 3.84 at .05 level *Significant at .05 level

F = 6.63 at .01 level **Significant at .01 level

To summarize the findings associated with Hypothesis 9, it is noted that significant interaction was observed between four of the background variables and peer association relative to change in autonomy in the freshman subjects. The interactions between at least one dimension of peer association and sex, socioeconomic status, religious affiliation, and academic ability were found to be significantly related to change in autonomy. Therefore, Hypothesis 9 was rejected, and it was concluded that the interaction between certain aspects of background and peer association influenced the development of autonomy in college freshmen.

Hypothesis 10. There are no significant relationships between the change in autonomy in freshmen and the interaction of the frequency of their contact with teaching faculty and

- a. sex
- b. socioeconomic status
- c. religious affiliation
- d. frequency of religious service attendance
- e. academic ability.

Table 16 illustrates the results of the analysis of the relationships between change in autonomy and the interaction of contact with teaching faculty and the five background variables. The F values reported in this table reveal that no significant relationships were

Table 16. Analysis of the Relationship of the Interaction between Selected Background Factors and Frequency of Contact with Teaching Faculty (T) to Change in Autonomy

Interaction Variables	F Value
T X Sex ^a	.22
T X Socioeconomic Status ^b	.72
T X Religious Affiliation ^b	1.19
T X Religious Service Attendance ^c	.48
T X Academic Ability ^a	.52

^aF = 3.02 at .05 level

*Significant at .05 level

F = 4.66 at .01 level

**Significant at .01 level

^bF = 2.39 at .05 level

F = 3.36 at .01 level

^cF = 2.12 at .05 level

F = 2.85 at .01 level

found. Hypothesis 10, therefore, was not rejected for any of the subhypotheses. It was concluded that the interaction between contact with teaching faculty and background exerted no measurable influence on change in autonomy observed in the sample of freshmen.

Hypothesis 11. There are no significant relationships between the change in autonomy in freshmen and the interaction of the frequency of their contact with non-teaching faculty and

- a. sex
- b. socioeconomic status
- c. religious affiliation
- d. frequency of religious service attendance
- e. academic ability.

The results of the regression analysis conducted to test Hypothesis 11 is summarized in Table 17. As indicated by the findings presented in Table 17, no significant relationships were found between change in autonomy and the interaction of contact with non-teaching faculty and three of the background variables. However, the analysis revealed that change in autonomy was significantly related to the interaction between contact with non-teaching faculty and the background variables of sex and academic ability. The interaction of non-teaching faculty contact and academic ability showed a significant relationship to change in autonomy at the .01 level, while the interaction between sex and non-teaching faculty contact was significantly related at the .05 level.

Table 17. Analysis of the Relationship of the Interaction between Selected Background Factors and Frequency of Contact with Non-teaching Faculty (NT) to Change in Autonomy

Interaction Variables	F Value
NT X Sex ^a	3.78*
NT X Socioeconomic Status ^b	1.23
NT X Religious Affiliation ^b	.52
NT X Religious Service Attendance ^c	1.34
NT X Academic Ability ^a	5.41**

^aF = 3.02 at .05 level

*Significant at .05 level

F = 4.66 at .01 level

**Significant at .01 level

^bF = 2.39 at .05 level

F = 3.36 at .01 level

^cF = 2.12 at .05 level

F = 2.85 at .01 level

Table 18 presents a further analysis of the interaction effects between sex and contact with non-teaching faculty. The comparison of mean change in autonomy for each of the six subgroups shows that females with a moderate level of faculty contact experienced the largest amount of change in autonomy. While little meaningful difference was indicated among the females, a discernible pattern was observed among the males. A direct positive relationship was found between frequency of contact with non-teaching faculty and change in autonomy among the male subjects. Therefore, the more contact male freshmen had with non-teaching faculty the greater the

positive change in autonomy experienced by these students.

Table 18. Analysis of Interaction between Sex and Frequency of Contact with Non-teaching Faculty Relative to Mean Change in Autonomy

Sex	Frequency of Contact		
	Little	Moderate	Frequent
Female	2.75	3.32	2.89
Male	2.43	2.61	3.16

Based on the findings summarized above, Hypothesis 11 was rejected. It was concluded that there were significant relationships between change in autonomy and the interaction of background and frequency of contact with non-teaching faculty.

Summary of Results

The analyses conducted to test the hypotheses under investigation in the present study yielded a number of interesting results. Significant change in the development of autonomy was observed in the sample of college freshmen. Further, for each of the subgroupings of students utilized in the study (e.g., sex, socioeconomic status), change in autonomy was found to be in a positive direction. Level of autonomy at the beginning of college showed an inverse relationship to the observed change in autonomy during the freshman year.

Certain aspects of each student's background were examined to

determine if they were related to change in autonomy during the first year of college. The four background variables of sex, socioeconomic status, religious affiliation, and academic ability did not significantly influence the change in the development of autonomy observed in the sample of college freshmen. However, the difference in the change in autonomy observed among the four groups of subjects who attended religious services with different frequencies was statistically significant. Thus, change in autonomy in the sample of college freshmen was influenced by their religious commitment, as measured by frequency of religious service attendance.

The change in autonomy observed among the subjects of the study was influenced by certain aspects of their interactions with peers. Specifically, development of autonomy was affected by the nature of a student's peer associations within his residence unit. The two dimensions of involvement and emotional support showed a significant positive relationship to change in autonomy, while the dimensions of competition, independence, and intellectuality were not significantly related to change in autonomy.

The change in autonomy found in the sample of college freshmen was also examined relative to the frequency with which they had contact with faculty members. There was no statistically significant difference in the change in autonomy among the students who had little, moderate, and frequent levels of contact with either teaching or non-teaching faculty. Therefore, the development of autonomy in these college freshmen was not influenced by the frequency of their contact with members of the faculty.

A number of tests were conducted in order to examine the extent to which the development of autonomy in the sample of freshmen was influenced by the interaction between background and interpersonal relationships with peers and faculty at college. Significant interaction relative to change in autonomy was observed between at least one dimension of peer association and the background variables of sex, socioeconomic status, religious affiliation, and academic ability. However, the interaction effects between frequency of religious service attendance and the background variables was not significantly related to change in autonomy among the subjects. The interaction of background and contact with teaching faculty did not significantly influence the development of autonomy in the sample of freshmen. However, the interaction of background and contact with non-teaching faculty was influential in the development of autonomy in the subjects. Specifically, change in autonomy was significantly related to the interaction between contact with non-teaching faculty and the background variables of sex and academic ability.

CHAPTER V

SUMMARY, DISCUSSION, AND CONCLUSIONS

The research undertaken in the present study was stimulated by an interest in the impact of the collegiate environment on the personality development of young adults. While considerable research has substantiated that changes do occur in the interests, attitudes, and values of college students, the evidence gathered on the sources of influence has been less conclusive.

The purpose of this investigation was to identify sources of influence on one major growth trend for college students: the development of autonomy. Specifically, the study focused on whether change in autonomy in college freshmen was related to the background of the students, their associations with peers, their contacts with faculty, or the interaction between background and interpersonal relationships with faculty or peers.

The subjects of the study were Oregon State University freshmen residing in University housing during the 1972-73 academic year. In order to reduce the influence of extraneous variables, the subjects were limited to those students who were citizens of the United States, without previous college credit, and born September 1, 1953 or later. A 20 % sample of the eligible freshmen was selected to participate in the study by a standard random number sampling technique. A total of 371 students participated throughout the study.

Several sources of information were used in gathering the data employed in testing the hypotheses under investigation. The Autonomy

scale of the Omnibus Personality Inventory was used to measure the change in autonomy in the subjects during the course of the study. The frequency of contact with faculty experienced by the subjects was measured by a modified form of a self-report assessment technique developed at the Center for Research and Development in Higher Education. The students indicated separately the frequency of their contact with teaching and non-teaching faculty. Selected subscales of the University Residence Environment Scale were used to assess relevant dimensions of peer association experienced by subjects in their residence units. The dimensions of peer association identified in the study included involvement, emotional support, independence, competition, and intellectuality. Information regarding the sex, socioeconomic status, and religious background of each participant was obtained from responses to a personal information form developed for the study. Finally, a measure of academic ability was calculated for each student from information provided by the Oregon State University Office of Admissions.

The data used in testing the hypotheses under investigation were collected in two phases. During the first week of fall term of 1972, the participants completed the Omnibus Personality Inventory and the personal information form. A second testing was conducted during the last week of April, 1973 at which time the students again completed the Omnibus Personality Inventory and also responded to the University Residence Environment Scale and the faculty contact assessment items. After each administration, the answer sheets were hand scored using the procedures outlined by the respective test

authors and prepared for analysis.

Two types of statistical analyses were used to test the hypotheses under consideration. The type of analysis employed was determined by the nature of the data associated with each hypothesis. Analysis of covariance was utilized to test for significant differences among the subjects for those hypotheses which involved discrete independent variables. Multiple regression analysis was used to test for significant relationships between change in autonomy and the various independent variables for those hypotheses which involved continuous independent variables. Initial score on the Autonomy scale was introduced into each analysis in order to isolate differences in level of autonomy among the subjects at the beginning of their freshman year. In each of the analyses, the .05 level of confidence was accepted as indicating significance.

Discussion of Results

Change in Autonomy

The initial concern of the study was to determine whether significant change in the development of autonomy occurred in students during their first year in college. In order to obtain a less contaminated measurement of observed change, students' scores on the Autonomy scale of the OPI at the beginning of their freshman year were introduced into the analysis as a covariate to isolate the effects of differences in initial level of autonomy. The analysis of the data revealed that positive change in autonomy was observed in the overall sample of freshmen. The pre-test mean score on the

Autonomy scale for the subjects was 52.71, while the post-test mean was 55.51. Thus, the mean change observed for the sample was 2.80 which was statistically significant at the .01 level. Further, for each of the sub-groupings of students utilized in the study (e.g., sex, socioeconomic status), change in autonomy was found to be in a positive direction. Therefore, over the eight month period covered by the study, change in the development of college freshmen was noted in the general direction of increasing self-reliance and decreasing external dependence. Movement of this nature is characterized by a cluster of inter-related dimensions including parental independence, reduced reliance on authority, non-authoritarian thinking, tolerance of divergent viewpoints, freedom from the continual need for approval and reassurance, and the recognition and acceptance of the inter-dependent nature of life.

The growth in the development of autonomy observed among students in this study supports the findings of several other investigations. Chickering (1969) found significant change on the Autonomy scale of the OPI among students at nine different colleges included in the Project on Student Development. Finnie (1970), Heath (1968), Freedman (1967), and Newcomb et al (1970) observed similar movement in the development of college students at Harvard, Haverford, Vassar, and Michigan, respectively. Growth toward a higher level of autonomy in college students was also found by Trent and Medsker (1968) in a nationwide study cutting across several college campuses. Thus, the development in autonomy reported in the present investigation at Oregon State University tends to support observations made on other

college campuses, some of which are quite dissimilar in nature.

Before discussing the influence on the development of autonomy of the factors under direct examination in this study, the importance of initial level of autonomy to change in autonomy should be noted. As was indicated earlier, subjects' pre-test scores on the Autonomy scale were introduced into the analysis as a covariate to control initial differences within the sample. The relationship between pre-test score and post-test score was found to be highly significant; therefore, the post-test scores were adjusted in order to eliminate statistically initial differences among the subjects. A regression coefficient of $-.32$ was found to describe the relationship between initial level and final level of autonomy in the study. Thus, those individuals in the lower range of autonomy scores at the beginning of their freshman year tended to change more during their first year on campus than did those who fell among the higher scores on the Autonomy scale at entrance.

The most obvious explanation of this finding would be to attribute the inverse relationship to the limitations of the finite measurement device utilized in the study. Feldman (1970) has described this partial dependency of change score on initial score in terms of "ceiling" and "floor" effects. Due to the finite nature of the range of possible scores on the Autonomy scale, an individual scoring high at the initial administration of the scale could not record as large a numerical change on the scale as an individual who initially scored in the lower range of the scale.

An alternative interpretation of the inverse relationship between

pre-test score and change might describe the phenomenon in terms of the challenge-response principle put forth by Sanford (1969). This principle posits that an individual changes when he encounters a situation which necessitates a behavior not present in his repertoire of responses. The challenge creates instability in the existing equilibrium of the personality and requires that the individual develop new behavioral responses. If the disequilibrium is not too great, activity within the individual is set in motion which results in a restabilization of the personality at a higher level of development. As Sanford put it, "people develop when stress is great enough to challenge their prior modes of adaptation, but not so great as to induce defensive reactions" (1967, p. 53).

This principle can provide an explanation of why those students with a higher initial level of autonomy are less likely to change a significant amount during their first year. The higher level of development may have enabled those individuals to cope more adequately with the challenges of the college environment. They already possessed the needed responses and, thus, were less affected by the new stimuli experienced in college. Conversely, those freshmen who initially scored lower on the Autonomy scale did not have the required repertoire of responses to handle all the new challenges experienced during the freshman year. Thus, the low-autonomy freshman responded to the new stimuli of college by adopting new behavior resulting in a greater change in the development of autonomy.

Influence of Background

In order to evaluate the influence of background on the

development of autonomy in college freshmen, analyses were conducted using the factors of sex, socioeconomic status, religious background, and academic ability. The results of the analysis relative to each variable are discussed below.

Significant change in autonomy was observed within both the group of freshman female subjects and their male counterparts. However, no significant difference was found between the change in autonomy experienced by males and that experienced by females. This finding of the present study parallels that reported by Chickering (1969) in an earlier investigation. In reviewing Table 3, one would note that the pre-test mean score on the Autonomy scale for males was slightly higher than that for females. However, the initial difference between the male and female groups was not large enough to indicate a meaningful difference in the developmental levels of the sexes at the beginning of the year.

Significant change in autonomy was found in students from upper and middle socioeconomic status backgrounds. This finding supports the results of the research conducted by Trent and Medsker (1968) in a nationwide study. Trent and Medsker reported that those students who increased the most in autonomy during the four years of college came from homes with emphasis on education, generally of middle or upper socioeconomic status. The change in autonomy observed in the present study among freshmen from lower socioeconomic status backgrounds was not significant. The lack of significant change in autonomy in lower socioeconomic status freshmen represents a contradiction to the findings of one earlier study. Jones (1971) found

that college students who came from low socioeconomic backgrounds became less dependent in their attitudes toward parents and peers while in college. The results of the study reported herein clearly contradict this earlier finding by Jones.

The analysis of covariance conducted to test the significance of this difference of change in autonomy between socioeconomic groups revealed that the difference was not large enough to be statistically significant. This finding of the present study does not agree with the results of much earlier research regarding change in college students and socioeconomic background. Hassenger (1966), Payne (1961), McConnell and Heist (1962), and others have discovered relationships between socioeconomic background and change in interests, attitudes, and values of college students. However, change in the development of autonomy observed in freshmen involved in the present investigation was not directly influenced by their socioeconomic status background. It is possible that the development of autonomy is a more complex aspect of an individual's personality than are interests and attitudes, and thus, it may be more difficult to show a simple relationship between socioeconomic background and change in autonomy. It is also possible that the dispersion of the socioeconomic background of the subjects was not large enough to discriminate effectively among the lower, middle, and upper socioeconomic status groups. In fact, many of the subjects in the lower and upper socioeconomic groups clustered close to the middle group. Therefore, the population of this study may not have represented as wide a distribution of socioeconomic background as some of the earlier studies.

The influence of religious background on the development of autonomy was evaluated by using the variables of religious affiliation and religious commitment, as measured by the frequency of religious service attendance. No significant difference in change in autonomy was observed in students of different religious affiliations. However, a significant difference in change in autonomy was found among the subjects when religious commitment was taken into consideration.

In the analysis of change relative to religious affiliation, positive development in autonomy was observed in all three groups -- Protestant, Catholic, and no affiliation. It is important to note that the "no affiliation" group had a substantially higher pre-test mean score on the Autonomy scale than did either Catholic or Protestant students. Thus, religious affiliation appears to have a greater impact on the development of autonomy prior to college than during the freshman year. The greater numerical difference in the pre- and post-test scores on the Autonomy scale was observed among students who indicated that they had some formal religious affiliation in their background. Therefore, the importance of religious affiliation to change in autonomy appears to be not the group with which one was affiliated, but whether there was any formal religious affiliation in the individual's background. Thus, regardless whether a person is a Protestant or a Catholic, one's development of autonomy seems to be affected by something fundamentally similar about being a member of a formal religious group.

As previously stated, development of autonomy was influenced by the independent variable of religious commitment, as indicated by

frequency of religious service attendance. Significant change in autonomy was found among the freshmen in each of the three groups who attended religious services with some frequency, while no change was indicated in the group of freshmen who never attended religious services. The greatest change was noted in the group which attended religious services most frequently, while the least change was found in the group which never attended. Similar to the religious affiliation variable, the least impact on the development of autonomy was among those students without a strong religious commitment in their background. At the beginning of the freshman year, substantially lower levels of autonomy were observed among the students who attended religious services when compared to the group who never attended religious services. Change in autonomy, therefore, is affected more by level of autonomy at the beginning of the freshman year than by religious commitment. Thus, again the importance of religious background appears to be its impact on the level of development at entrance to college rather than its direct influence on change during college.

Influence of Peers

As stated previously, the influence of peers on the development of autonomy in freshmen was evaluated using peer association in residence units as the independent variable. The nature of the peer association experienced by a student in his residence unit was identified by utilizing five dimensions of peer association -- involvement, emotional support, independence, competition, and intellectuality.

Each of the five dimensions was analyzed separately in order to determine which aspect of peer association was related to change in autonomy.

Two of the five dimensions of peer association were found to have a significant relationship to change in autonomy. As the analysis of Hypothesis 6 revealed, involvement and emotional support were significantly related to change in autonomy at the .05 level. The relationship was positive in both cases; therefore, as the level of involvement and emotional support increased in a student's peer group, the amount of positive growth in autonomy also increased.

Involvement was defined in the study as the degree of social interaction, feeling of friendship, and group commitment among students. Emotional support was defined as a manifest concern for other students, especially as expressed through efforts to aid each other with academic, social, and personal problems. These two dimensions of peer association could be considered aspects of the same generalized phenomenon of peer group support. Peer group support then would include an expressed concern by the peer group for its members and a feeling of group commitment based on social interaction.

These results signify an important function of the peer group for the college freshmen. When the freshman is thrust from the protective womb of his family and local community, the peer group provides support and assistance in the achievement of independence from parents and the development of autonomy. Chickering (1969) observed the same phenomenon in his research in the Project on Student Development. One of the conclusions drawn from that study was that

relationships with peers provide critical transitory emotional support in the process of disengagement from parents. In the achievement of autonomy, Pikunas and Albrecht (1961) have suggested that young adults go through a stage in which they transfer their emotional dependency from parents to peers. Levine (1966) made the same observation when he described peers as mediating the "transition from dependence on parents and parent-supervised activities to a life in which self-reliance and personal freedom are greater" (p. 112). The experiences of Lozoff (1968) on college campuses led to a similar conclusion that the successful redefinition of oneself as an individual separate from one's family is dependent upon the support of peers.

In summary, the findings of the investigation reported herein generally support the results of earlier studies that indicate the development of autonomy in college freshmen is positively influenced by peer group support. That the peer group support observed in this study was experienced in the freshmen's residence units has importance. College officials often debate the wisdom of investing funds in student housing facilities and committing resources for the provision of programming within those units. The findings of this study suggest that the provision of residence units on a college campus with programs designed to maximize the benefits of peer group support could be a critical factor in assisting freshmen in making the transition into college life.

Influence of Faculty

The influence of faculty on the development of autonomy in college freshmen was evaluated by analyzing the frequency with which the subjects had contact with faculty during the course of the study. The students indicated separately the frequency of their contact with teaching faculty and non-teaching faculty and were divided into three groups for the purpose of comparing those who had experienced little, moderate, and frequent levels of contact with faculty members.

Students in each of the groups that experienced different frequencies of contact with faculty showed significant positive change in autonomy. However, there were no significant differences in the amount of change in autonomy when the subjects were divided into groups according to the frequency of their contact with either teaching or non-teaching faculty. Therefore, it was concluded that the development of autonomy in college students during their freshman year was not influenced by their contacts with faculty when the sample was considered as a whole. Differences between sexes with regard to faculty contact are discussed in the section on interaction analysis.

The findings of this study do not support the results of two earlier studies. Newcomb et al (1970) and Chickering (1969) both found when contact between students and faculty was frequent, change in the development of autonomy was stimulated. One possible explanation of the discrepancy in these findings is that the designation of "frequent contact" may differ for the studies. It is quite plausible that the freshmen placed in the frequent contact category in this study did

not experience as much actual contact as did those students observed by Newcomb et al and Chickering. While the present study involved only freshman subjects, the other two investigations included upperclassmen. It would be reasonable to speculate that upperclassmen generally have more contact with faculty as they become more familiar with college and concentrate more heavily on an academic major. Thus, the freshmen in the present study may not have had as much interaction with faculty and, consequently, would not have had as much potential opportunity to be influenced by faculty.

Interaction Analysis

Several hypotheses were developed and tested to determine the effects of the interaction of the various independent variables and the significance of their interaction to change in autonomy. Specifically, the interaction effects were analyzed between the background variables and the five dimensions of peer association and between the background variables and the faculty contact variables.

Significant interaction was observed between four of the background variables and peer association relative to the development of autonomy in the freshman subjects. The interactions between at least one dimensions of peer association and sex, socioeconomic status, religious affiliation, and academic ability were found to be significantly related to change in autonomy. The following interaction effects were significant:

- a. sex X emotional support,
- b. sex X independence,

- c. socioeconomic status X competition,
- d. religious affiliation X intellectuality, and
- e. academic ability X emotional support.

It is important to note that one background variable and one dimension of peer association are conspicuously missing from the interaction effects which were significant.

There were no significant relationships found between change in autonomy and the interaction of religious service attendance with any of the five dimensions of peer association. As was pointed out in the discussion of Hypothesis 4, frequency of religious service attendance was significantly related to the change in autonomy experienced by the freshmen involved in the study. Therefore, it can be concluded that the influence of religious commitment, as measured by frequency of religious service attendance, on the development of autonomy was operating separate from the effects of peer influence.

The analysis of the interaction of the peer association dimension of involvement with the five background variables revealed no significant relationships to change in autonomy. As cited previously, the relationship between involvement and change in autonomy was, however, significant. Thus, the influence of involvement in peer associations relative to the development of autonomy was operating apart from any impact exerted by the background of the students. However, the effects of the peer association dimension emotional support appeared to be working somewhat in concert with the background of the subjects. The interaction effects of emotional support

with both sex and academic ability were found to be significantly related to change in autonomy. Thus, the influence of emotional support on the development of autonomy detected in the analysis of Hypothesis 6 was also interacting with the background variables of sex and academic ability.

The significance of the interaction effects of faculty contact and the background variables was tested in Hypotheses 10 and 11. No significant relationships were observed between the change in autonomy among the subjects and the interaction between contact with teaching faculty and any of the five background variables. However, the analysis of Hypothesis 11 revealed that change in autonomy was significantly related to the interaction between contact with non-teaching faculty and the background variables of sex and academic ability. A further analysis of the interaction effects of sex and contact with non-teaching faculty revealed some interesting differences between male and female subjects. While little meaningful difference in change in autonomy was observed among the females who experienced varying frequencies of contact with non-teaching faculty, a discernible pattern appeared among the males. A direct positive relationship existed between frequency of contact with non-teaching faculty and change in autonomy among the male freshmen. Thus, during the eight month period of the study, the more contact males had with non-teaching faculty the greater the growth in autonomy observed among these subjects. Hence, the frequency with which male freshmen had contact with non-teaching faculty was of significance, while no such occurrence was apparent for the female subjects.

This finding suggests an interesting difference about the way males and females approach resolving the developmental task of becoming autonomous. Males appeared to have depended on non-teaching faculty for assistance in making the transition to a more independent being, while females obtained the necessary support from other sources.

Conclusions

The following conclusions were drawn from the results of the study.

1. During the eight month period of the study, significant positive change in the development of autonomy was found in the overall sample of college freshmen and in each of the subgroupings of students identified in the study. Thus, it was concluded that the freshmen became more autonomous during their first year of college.

2. Level of autonomy among the freshmen at the beginning of college had an inverse relationship to observed change in autonomy during the period of the study. Therefore, it was concluded that positive change in autonomy was more likely to occur among those freshmen who had not experienced as much development in autonomy prior to college.

3. The background variables of sex, socioeconomic status, and academic ability were not significant factors influencing the development of autonomy during the freshman year.

4. An active religious background, whether represented by affiliation or commitment, limited the development of autonomy prior to college, and thus, provided the opportunity for greater growth in

autonomy during the freshman year.

5. Three of the dimensions of peer association examined in the study -- independence, competition, intellectuality -- did not have a significant relationship to the change in autonomy observed in college freshmen. However, peer group support in a student's residence unit, as indicated by the peer association dimensions of involvement and emotional support, did influence positive development of autonomy in the college freshmen.

6. The frequency with which female freshmen had contact with faculty did not affect the change in autonomy observed in these students. However, development of autonomy during the freshman year among males was favorably influenced by greater contact with non-teaching faculty.

7. Significant interaction relative to change in autonomy in college freshmen was observed between the dimensions of peer association and the background variables of sex, socioeconomic status, religious affiliation, and academic ability. However, no discernible pattern of interaction effects was apparent.

8. No significant interaction relative to change in autonomy in college freshmen was found between contact with teaching faculty and the five background factors. Change in autonomy was significantly related, however, to the interaction between contact with non-teaching faculty and the background variable of academic ability.

Limitations of the Study

Certain limitations of the study should be considered when

interpreting the results. First, the subjects of the study were limited to 1972-73 Oregon State University freshmen residing in University housing who were citizens of the United States, who had no previous college credit, and who were born September 1, 1953 or later. Second, the data gathered from the subjects are accurate only insofar as the instruments utilized in the study provide valid measurements of autonomy, background, peer association, and faculty contact. Third, it is possible that some uncontrolled variables affected the responses of the subjects to the instruments employed in the study. Finally, the sample used in the study is not necessarily representative of student populations at other institutions of higher education. Therefore, efforts to generalize the results of the study to other groups of students beyond Oregon State University should be undertaken with appropriate caution.

Recommendations

Insight gained from the results of the study suggests the following recommendations for further research.

1. Studies of this type should be replicated at other institutions in order to determine if the phenomena observed at Oregon State University are unique to that campus or if there is a broader basis for generalization of the findings of the study.

2. Future studies of this nature should be conducted over a longer span of time in order to gain a more complete comprehension of the influence of background, peers, and faculty on the development of autonomy. Specifically, a follow up study of the freshman

subjects of the present investigation should be made in subsequent years in order to gain a fuller understanding of the development of autonomy throughout the college years.

3. Studies should be conducted to determine if other background factors (e.g., birth order, home town size) influence the development of autonomy.

4. Measures of the association within peer groups other than those existing in residence units should be developed and utilized in order to ascertain more complete information regarding the influence of peers on the development of autonomy.

5. Measures of the nature of student-faculty contact that examine other aspects than frequency of contact should be developed and utilized to obtain a fuller understanding of the influence of faculty on the development of autonomy.

6. Techniques for observing the behavior of college students other than self-report assessments should be considered in future investigations of this nature.

7. Finally, investigations should be undertaken to examine the influence of background, peers, and faculty on other aspects of personality development in college students such as the resolution of identity, the clarification of purpose, the solidification of a value system, and the achievement of meaningful interpersonal relationships.

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APPENDICES

APPENDIX A

BACKGROUND CHARACTERISTICS OF SUBJECTS

<u>Characteristic</u>	<u>Categories</u>	<u>Number</u>	<u>% of Sample</u>
Sex	Female	188	50.7
	Male	183	49.3
Religious Affiliation	Protestant	217	58.5
	Catholic	72	19.4
	None	82	22.1
Religious Service Attendance	Once or more a week	111	29.9
	Once or twice a month	88	23.9
	Once or twice a year	115	30.9
	Never	57	15.3
Socioeconomic Status	Upper	193	52.0
	Middle	133	35.9
	Lower	45	12.1

APPENDIX B

PERSONAL INFORMATION FORM

1. What is your religious affiliation?

<input type="checkbox"/> Catholic	<input type="checkbox"/> Jewish
<input type="checkbox"/> Protestant	<input type="checkbox"/> No affiliation

2. How often have you attended religious services in the past year?

<input type="checkbox"/> Once or more a week	<input type="checkbox"/> Once or twice a year
<input type="checkbox"/> Once or twice a month	<input type="checkbox"/> Never

3. What was the last year of school completed by your father*?

<input type="checkbox"/> Elementary school or less	<input type="checkbox"/> Some college
<input type="checkbox"/> Some high school	<input type="checkbox"/> College graduate
<input type="checkbox"/> High school graduate	

4. Which of the following most nearly describes your father's* occupation?
 - Higher executives, major professionals with college degrees (doctors, lawyer, engineers, foresters), and owners of large concerns
 - Other professionals (teachers, accountants, nurses, pharmacists, opticians), owners of medium-sized businesses, and managers of large concerns
 - Semi-professionals (photographers, morticians, reporters, appraisers, surveyors), small business owners, and managers of smaller concerns
 - Clerical and sales personnel, farm owners
 - Skilled employees (plumbers, electricians, policemen, lumberjacks, welders, tailors, barbers)
 - Machine operators and semi-skilled employees (watchmen, truck drivers, waiter, roofers, bartenders)
 - Unskilled employees

*If your father is deceased or not residing at your home, please answer questions 3 & 4 for the head of the household (i.e., mother, step-father, guardian).

