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A LONGITUDINAL STUDY OF SELF CONCEPTS AND ATTITUDES OF ECONOMICALLY AND EDUCATIONALLY DISADVANTAGED STUDENTS DURING 1968 TO 1972

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Elaine Miyo Naramoto Tanabe, B.S., M.A.

* * * * *

The Ohio State University

1973

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CHAPTER I

INTRODUCTION

This study focuses on two movements—one in psychology, the other in higher education—and their convergence during the years from 1968 to 1972.

The concept of "self" has had a prominent place in the explanation of human behavior since the late 1800's with the writings of William James. More recently the self concept (the totality of one's perceptions about oneself) has had increased attention. Phenomenologists believe that individuals formulate their self concepts from all the perceptions they gather about themselves in interaction with others. Other psychologists in the human potential movement believe a person's self concept is a dynamic, developing and directing force which is important to an understanding of human behavior. Further, it is believed that a healthy concept of self enables one to develop one's potential to the fullest and become self-actualized.

Writings on the "self" have stimulated research and had
definite heuristic value in psychology. What research has not yet discovered is when or if the self concept stabilizes, under what conditions it changes and whether entry into certain situations will enhance or worsen it. The self theories have been severely hampered by voids in good measurement devices and longitudinal, developmental data. This study hopes to fill some of that void.

In the decade of the 1960's higher education became one of the fastest growing enterprises in the United States with a total enrollment of over eight and a half million students. Higher education was seen by the majority of the American people as an opportunity to improve the individual's standing in society and was sought after by many persons of college age. In the late 1960's it became woefully apparent that while college enrollment doubled in that decade, racial, ethnic and economic minority persons were severely underrepresented in those figures.

This discrimination met violent confrontation in 1968 with the assassination of Dr. Martin Luther King, Jr., epitomizing for many, the gross inequalities which had not been resolved by a democratic society. The demand for equal educational opportunity for all persons was fermenting. Persons in higher education were forced to rethink
their system, add new goals and reorder old and new priorities. With a new commitment to make higher education accessible for all institutions struggled to identify persons from these previously forgotten minority groups and bring them to higher education. This study deals with such persons.

As an example of the changing role of higher education the Carnegie Commission on Higher Education (1971) directed that attention and study be given to critical variables operating in those persons from minority and disadvantaged backgrounds as they proceed through some kind of higher education because:

1. the future thrust of higher education would probably be universal access,

2. many more persons who previously would not be "destined" to attend college would now be doing so because of financial aid opportunities and the proximity of institutions, especially the two-year community college, and

3. colleges must do more than admit these minority students—there is a professional educational responsibility to make the best possible assessment of these students as they progress through higher education so that their potential may have a
better chance to be fully realized.

In the summer of 1968 The Ohio State University sponsored a program for economically and educationally disadvantaged students. Called the Higher Education Opportunity Program (HEOP), it enabled 170 students to attend an intensive summer compensatory education program to improve competence in mathematics, communications skills and self concept. Many of the students went on to attend Ohio State in the fall.

Statement of the Problem

The primary purpose of this study is to look at the self concepts of the HEOP students as they were exposed to a compensatory education program by a major university and as they proceeded to enter and continue enrollment at that university. Second, related information on these students was also desired such as their attitudes towards the college experience, persistence and future plans.

If self theory is to develop and become more definitive there will need to be refinements in measurement of the self concept and studies which focus on the development of this psychological construct. Second, as higher education becomes more accessible for minority students there is a
need for institutions to have more information on the impact of the college experience on the more diverse student population. With access being new to minority group members and with the increasing awareness of the plurality of cultures existing in the United States there is a need to study the phenomenon of minority group entry into higher education, specifically, as it is reflected in the perceptions these persons have of themselves.

Measures of self concept, attitudes, biographical information and persistence were employed to study these students from 1968 to 1972. To provide some comparison, "majority group" or "advantaged" college students were followed in a similar manner.

It was expected that the study would yield information on answers to the following questions:

1. What is the pattern of self concept development among disadvantaged and advantaged college students?
2. What are the attitudes and values held by disadvantaged and advantaged students as they progress through college?
3. Are there any differences on the above variables between the disadvantaged and advantaged students and between males and females?
Because of the lack of definitive answers to the previous questions, because it was not known whether self concepts of HEOP students would improve or worsen when they entered an essentially white university and a foreign environment, hypotheses could not be directional.
CHAPTER II

REVIEW OF THE LITERATURE

Since the present study concerned itself with psychological and environmental variables the survey of the literature attempted to highlight important theoretical considerations, significant research and descriptive information. Specifically, the following general topics were reviewed: self concept and self theory, disadvantaged and minority cultures, education and higher education in the United States and minority students in college.

**Self Concept and Self Theory**

What is the self concept and how does it operate? One cannot see it but only infer its presence. The self concept is that psychological construct which is one's total appraisal of oneself (LaBenne, 1969). It is an individual's attempt to describe oneself via various descriptions (Yamamoto, 1972).

Theorists, beginning with James (1890), began to write about the self as a dynamic entity. Snygg and Combs (1949)
well represent a phenomenological view of the self—that a person's behavior is caused by his perception of the world or environment around him and by his perceptions of himself—his phenomenal field. Summarizing the writings of theorists who have written of the self concept, Epstein (1973) lists seven aspects of the self concept:

1. It is a subsystem of a larger conceptual system.
2. It has different empirical selves.
3. It is in a dynamic state, changing with experiences.
4. Interaction with others is a primary influence on it.
5. Its organization directs individual functioning.
6. There is a basic need for self-esteem.
7. It organizes and synthesizes experience and facilitates need fulfillment.

Pointing out the divergence in views of two schools of psychology, Epstein (1973) and Allport (1955) feel that no one has adequately defined the self concept as a construct and thus it might be wiser to eliminate it as a construct and refer to specific aspects of self-referent behavior such as self-image, self-understanding, self-awareness. In fact, behaviorists might well call the self concept mysticism.

On the other hand, phenomenologists feel the self concept
is not only useful, but necessary to understanding behavior. Snygg and Combs (1959), Rogers (1961) and Fitts (1971) feel, in fact, that the self concept is the core of psychology because it provides a vantage point for understanding all behavior.

Epstein (1973) proposes that one's self concept is a self theory—a theory one formulates about oneself which is a part of a broader theory one has about all experience. For Epstein, the self theory serves to regulate the pleasure-pain balance, facilitate the maintenance of self-esteem and organize experience effectively. In this process man will also distinguish the subjective self from the objective world.

Most recently, Fitts has done extensive work with theoretical formulations as well as research on the self concept. Fitts (1973) believes that the self concept is a critical variable to understanding human behavior and differences between people and helping them change. He feels that the self concept influences the way an individual views and interacts with the world around him/her—that there is constant interaction between self concept and one's behavior, each influencing the other. Fitts et al. (1971) write of the essential characteristics of the self concept as stated by various self theorists:
1. the self concept derives from interactions with others and the responses to oneself,
2. the self concept directs behavior, and
3. one's perception of the responses of others is reality.

The three principal parts of the self which operate in dynamic interaction with each other and are internal dimensions are:

1. **self-as-object** (the identity self): this is the who am I which can be determined by the labels, adjectives and attributes one attaches to oneself—ugly, cute, good, smart, black, poor, Paula, athletic, fat and so on. This identity is formed most often after behavior has been tried. One would not call oneself a smart person unless one had scored the highest on tests in school and had other similar experiences. Behaviorists would concentrate on behavior—a person being his/her behavior. Self theorists insist on looking at both identity and behavior and studying the interaction between the two—whether that interaction is realistic—for instance, is someone saying one thing and behaving another way?

2. **self-as-doer** (the behavioral self): a child experiments with new behaviors as he is physically developing new capabilities for movement. Reinforcement received for various behaviors will have an impact on new behaviors
developing and also a relationship to the identity self. I can walk; my parents like it when I walk; I am a walker.

3. **self-as-observer** (judging self): this aspect of the self enables one to incorporate behavior and identity into a total self concept by serving as an evaluating mechanism. If some behavior is an accomplishment, the judging self may give approval or show disgust when one is not satisfied with one's behavior or performance on a task. The observer, evaluator role of the judging self enables positive and negative values to be attached to various perceptions of oneself and provides the basic data for self-esteem.

Self-esteem becomes important to look at as it derives from one's ability to enhance oneself and maintain one's self concept satisfactorily. Self-esteem is necessary for one to begin to actualize oneself. On the other hand, self-esteem is derived from one engaging in self-actualizing behaviors as well as from the esteem from other persons (Fitts et al., 1971). Maslow (1954) describes the process of self-actualization in terms of a need hierarchy—as physiological and love needs are satisfied one has the confidence and esteem needs to satisfy.

Besides the internal dimensions, Fitts et al. (1971) feel
there are five external dimensions or frames of reference—physical self, moral-ethical self, personal self, family self and social self. Other selves could be professional self, student self, citizen self, sexual self, self when interacting with boss and employees. There are many types of frames of reference but Fitts et al. chose the five main frames cited above. In integrated persons all these selves which have been created in an individual's own self system will and should work effectively together.

There are other variables in the self concept which need to be considered—distortion of self-perception, variability between subselves, clarity and differentiation of subselves, conflict and contradiction. Fitts has developed the Tennessee Self Concept Scale (TSCS) as an instrument to measure all the aforementioned aspects of the self concept. While many researchers use only the general self-esteem score of the TSCS in studies, all scores are recommended for use in order to obtain a clearer picture of this complex construct.

In summary, the process of achieving selfhood begins with one trying out behaviors which lead to self-perceptions, leading to self-esteem which hopefully then leads to self-actualization. Now, let us look at some of the specifics regarding development of the self concept.
Development of the Self Concept

Self theorists agree that the self concept is a dynamic entity which forms and develops after birth—it is not present immediately at birth. Once the child is born differentiations between the "me" and "not me" begin to take place, first with one's body (physical being), the child becoming what he thinks of himself. Soon, interpersonal relationships enter to give the self concept a social interaction facet which remains a primary determinant throughout life (Fitts et al., 1971; Combs & Snygg, 1959; Gordon & Gergen, 1968; LaBenne, 1969; Sullivan, 1953). Combs and Snygg (1959) add that the family is the earliest significant impactor on the self concept since it is within this sphere that an individual relates to other persons and experiences love, caring, rejection/acceptance, values, adequacy/inadequacy—many of the basic human feelings and appraisals. Amos (1968) writes of the development of the self concept in early childhood, stating that the years from one to five are critical in the formation of the self concept and development of attitudes and value systems. Thereafter, environmental deprivation has a cumulative effect to the teenage years when, because of going beyond the home environment, persons begin to interact with others in other cultures.
Summarizing, the self concept develops: 1) through experiences, especially interpersonal contacts, 2) through cultural influences (child rearing practices and socialization practices of different cultures), 3) through performance and competence, and 4) through the degree of self-actualizing experiences one is able to realize (Fitts et al., 1971; Gordon & Gergen, 1968; LaBenne, 1969).

In looking at age as a factor in self concept development Grant (1966) did a cross-sectional study of persons from ages 20-69 and found that as persons age they have more positive self concepts. She also found that age and sex had a significant interaction—for example, men in their 30's were much more aggressive and men in their 50's more passive when compared with women in similar age groupings.

Beginning studies in the field of parental influence seem to suggest that children's self concepts are similar to and have important relationships to the self concepts of their parents—disturbed parents have children with disturbing self concepts; healthy parents have children with similar self concepts (Fitts et al., 1971).

Fitts et al. (1971) report that most self theorists agree that once developed, the self concept is fairly stable. They do allow for the continual development of the self
concept but state that by early childhood the differentiations may have been made to formulate a fairly stable self. Studies utilizing the TSCS have found conflicting results on changes during the freshman year in college, effects of counseling and educational and rehabilitation programs. Much more research is warranted before any directional hypotheses may be made and conclusions drawn.

It is very apparent that there is an absence of longitudinal studies on the self concept, thus accounting for the lack of answers. Present studies are at best, cross-sectional. One of the problems is the lack of appropriate and valid measurement instruments to deal with young children. By the time the TSCS, for instance, can be administered (ages 11 or 12) the self concept is already quite formulated. Wylie (1961), in an exhaustive review of self concept research, and Fitts et al. (1971) point to the real need in this area—longitudinal studies.

It is possible that when looking at the results of present studies what we are seeing is a section of time in the lives of certain persons when they have adopted a particular self. Toffler (1970) speaks of persons using the adaptive creation of "serial selves"—different selves which we would develop and discard as we adapt to a rapidly changing
world. Thus, even as a psychological construct the self concept has many nuances and interpretive or theoretical possibilities.

**Measurement of the Self Concept**

Because the self concept is a theoretical construct, measurement is bound to be a problem to which Combs and Snygg (1959), Fitts et al. (1971) and Wylie (1961) have attested. Fitts has devoted a lifetime to developing an instrument which attempts to measure the self concept, the TSCS, and accumulate a wealth of research studies on it to add more specificity to this phenomenon. Part of the problem which exists is that hundreds of instruments have been designed to measure the self concept—almost as many as there are studies. This makes it difficult to integrate findings and develop good hypotheses. There are many psychometric limitations to the instruments being used in terms of good test construction and development. Leake (1970) deals with some problems in measuring self-esteem as being: determining criteria for establishing construct validity, possible irrelevant response determinants—social desirability and defensiveness, instrument content, instrument form, response frequency—low intercorrelations among instruments presumed to measure
self-esteem or similar aspects of self-regard, prediction of relationships between self-esteem and other variables, and discriminant validity. The instruments used most widely are self-report in format because of the difficulty in conducting behavioral observations. Leake concludes that the TSCS is a superior measuring device for self concept presently.

Wylie (1961) says there has been an ambiguity in results and many contradictions among findings of various studies, perhaps a tendency for various methods to produce different results, that has been disappointing. Further, she feels that no self theory has received extensive empirical exploration. This is due to the scientific shortcomings of personality theories which emphasize constructs concerning the self which have subjective validity. Also, she feels that constructs regarding the self have been stretched to cover so many inferred cognitive and motivational processes that their utility for analytic and predictive purposes has been greatly diminished. She suggests: 1) more limited theoretical constructs be employed instead of the overgeneralized ones, 2) more limited molecular variables (self-acceptance, self-esteem) be used instead of broad variables (self-actualization, self-consistency, self-differentiation), 3) more limited and well analyzed measuring instruments, 4) more systematic
analytical designs for research, and 5) more objectively measurable variables gathered to add to study of the self concept and improve prediction. What is not known is whether behavior can be predicted more efficiently by objective measures than by indices of the phenomenal self, or whether adding objective measures to the self concept measure improves the prediction.

Self concept of Disadvantaged Youth

Thomas (1970) writes that minority persons are constantly assaulted by the fact that they are different. Race is one of the more potent bases on which people are treated differently but so are social class, age and sex. Individuals in the minority have to continually fight the discrepancy between their aspirations and their actuality. For some minority persons this becomes an overwhelming state. For others, these differentiations serve to regulate our social systems and castes.

Orem (1968) writes of the language deficiency in lower class youth and their "inadequate self concept." The latter he cites as caused by a nonsupportive and unstable environment where very little attention is given to the development of youth. One wonders whether Orem is observing reality or writing from a white, middle class value system in drawing
such conclusions. He goes on to say that these youth have poor work habits, no sense of time, are frustrated easily, manipulative and without a good concept of social etiquette. With language and cognitive deficits, then, the lower class youth has psychological deficits which make it difficult for him to be successfully assimilated into the majority culture.

Orem points out the relationship of language development to psychological well being. Grier and Cobbs (1968) as well as other black writers would probably contest Orem's value weighting system—they explain vividly and profoundly that among black persons there are definite underlying motivations and reasons for this behavior—that in many instances it is a silent or passive protest against white slave masters.

Writing as two black psychiatrists, Grier and Cobbs trace the historical antecedents to the present anger, disposition and social status of black people in their book, Black Rage (1968). They describe present behaviors of black people as being adaptive responses in an oppressing white society. The black woman relinquishes youth and attractiveness because of sexual exploitation and turns to the adaptive role of motherhood and nurturing a family. Black males feel a hostility toward their mothers who had to teach them to hate themselves if they wanted to survive in a slave system.
The black mother's hopelessness was projected onto the children and they, the children, were often treated as slaves by their mothers. Since the psychological conditions since slavery have not improved much, black males are caught in the historical roots of their slave heritage. Black mothers teach boys not to be assertive if they want to survive--mothers prepare sons for a subordinate place in the world. This accounts for the hostility that black men feel toward black women.

Education was seen as a protective and safe place for black girls but as cowardice for men whose ultimate goal was supposedly to win out through aggression and violence. It was seen not as a vehicle for social mobility but as a refuge. Grier and Cobbs (1968) say that the black intellectual is still black to whites no matter how much he or she achieves. In fact, black intellectuals may also become alienated from other blacks. Summarizing, Grier and Cobbs say that one must make allowances for or subtract the "black norm" when looking at data regarding black people. The norm is those psychological devices or adaptive devices used by blacks to survive in America. The devices include cultural paranoia, depression, masochism and antisocialism.

From another viewpoint, Williams (1970) calls for
revalidation of tests for blacks or culturally different. He cites the existence of different norms for behavior in different cultures as part of the need for revalidation. Hitting a person back might be called "deviant retaliatory behavior" by the dominant culture but "self-preservation" by the culturally different. Perceptions of the same objects may differ between cultures—a banana in the ghetto being brown with yellow spots and not yellow. The same words might have different meanings—"Washington" would mean Booker T. to a black child, not George. There are also different standards for what knowledge is important—why should one know about "Dick and Jane" and not "Funky Chicken" or "The Four Corners." This points out the need for different tests to measure abilities or achievement in different cultures.

Because of increased ethnic pride blacks now have some reassessing of themselves to do. The conflict between black pride and historical black self-hatred will need resolution (Thomas, 1970). A regaining of humanity and a resynthesis of the black self concept will also be in order (Cobbs, 1970). Blacks will need to embrace racial identity as a positive motivating force instead of a burden. Race was a reason for hating whites. It must now become a reason for self-esteem (Thomas, 1970). Because of the impact
of race and racism in America, these suggestions may mean black people will go through pain, searching and sharing of held-back frustrations.

Amos (1968) speaks about the cultural shock that may occur when disadvantaged persons seek a job in the outer world with standards alien to them. At this time the middle class expectations may be rejected in order to maintain the self concept developed thus far. For the disadvantaged person this leads to a practically no-win situation: either one tries to change, assimilate new values and perform well (and risk damaging the developed self concept) or one struggles to maintain the self concept and reject new standards being imposed by a work or majority culture environment. The latter leads to non-success in work and feelings of blame and resentment. This situation may be expanded to include entrance into higher education. Either way, a potent foreign environment and experience, as is the case when culturally different students enter a predominantly white university, could cause damage to the self concept because the special student staunchly and proudly adheres to his/her self concept, does not do well, and/or fails.

Research on the Self Concept

There has been much research on the self concept but
what the previous sections have attempted to point out is that the measures used have been so diverse and psychometrically limiting that it is difficult to know what has been proven of self theory. Additionally, research designs employed have not dealt with longitudinal studies.

Since developing the TSCS in 1965, Fitts has devoted the ensuing years to directing a research program using the TSCS as the criterion and pursuing studies with different populations in order to better understand human behavior. He believes that the TSCS is a good measure of the self concept (a fuller description of the TSCS is in Chapter III) and that it is difficult to determine criteria in the behavioral sciences, mental health and the humanistic movement.

Fitts (1973) cites self concept change and self concept development as the two most important issues in research. Once the relevant factors are identified we may find that they are the same for both issues. Most of the studies which follow utilized the TSCS.

Fitts originally assumed that age, sex, education, intelligence and race had no systematic effect on the self concept. Thompson (1972) reports that age seems to be an important factor—self-esteem and certainty of one's self concept seem to increase with age. Self-definition appears
to be a problem for the very young and very old with dissonance, confusion and contradiction. Thompson finds that junior high and high school students have below average self-esteem, low defenses and are more uncertain about their self concepts compared to people in general. High school students are more open, self-critical and lacking in defenses than any other age group. College students and adults seem to have average self-esteem scores, some with high self-acceptance, and appear to have a clearer and more definite self-image. Elderly persons seem to have above average self-esteem scores, less self-awareness, more defenses and rigidity compared to people in general. Thompson is surprised that youth have lower self-esteem with the focus on youth in the United States. There are also discriminating scores between different samples within the same age group. Thompson (1972) feels that enough studies have been made warranting new norms for the TSCS based on age groups.

As has been discussed before, there are no adequate psychometric instruments on self concept for children, the TSCS included. Although a sixth grade reading level is suggested, there are not enough studies with this age group to establish norms. College students and adult studies show similarity with the norm group while junior high, high
school and elderly persons are much more diverse within their own age group. Thompson concludes that the old and young are not adequately represented in the norm group, that the old and young have more extreme scoring persons, and that the present norms are all right for college students and adults (the 20 to 60 year old range). These conclusions are based on most of the data coming from cross-sectional studies. Because of the rapidly changing times we live in today (Toffler, 1970) it is perhaps more important that some developmental studies on self concept be done.

Many studies have been done on the relationship between self concept and educational level. The difficulty in these is that the many other demographic factors mentioned (age, race, socioeconomic status) confound the studies. Pitts (1972) says that at present there is no apparent correlation between self concept and education. He sees this as a positive phenomenon which indicates that feelings of self-esteem and worth are not dependent upon formal education. Going on, he says that therefore improvements in self concept require more than a purely academic education can presently offer.

Self concept and disadvantage. When looking at self concept and socioeconomic disadvantage, Thompson
(1972) finds:

1. There is a complex interaction effect between age and disadvantagement.

2. Among junior high school students the self concept of disadvantaged students is similar to that of the advantaged.

3. Among high school students, young adults and adults there is less similarity across samples and less similarity between advantaged and disadvantaged.

The studies Thompson reports on focus on highly distinct, special disadvantaged persons (e.g. welfare applicants, training program persons, dropouts) so no generalizations can be made on economically disadvantaged people as a whole. Within the many limitations of the reported studies younger persons (junior high schoolers) do not seem as discrepant from their non-disadvantaged peers while there is a distinction when one moves into the high school, young adult and adult groups. Thompson suggests this is due to the older person's experience of disadvantage and awareness of it.

Only one study utilizing the TSCS is reported on economically disadvantaged college students in Thompson (1972). Bartee (1967) found that blacks and whites had near average self-esteem scores and were similar to the TSCS norm group
and the college student population in general. The only exceptions were that blacks had lower self-criticism and high conflict and variability in their self concepts. This similarity may be due to these particular students being more motivated, intelligent and thus having more self-esteem. Just going to college may raise one's self-esteem. More studies on this sample should be conducted as there will be increasing numbers of these persons having access to higher education.

**Self concept of black persons.** While Thompson (1972) presents some characteristic TSCS profiles of blacks he cautions the reader regarding the limitations of studies looking at the relationship of race and self concept. Socioeconomic status, intelligence and verbal ability have not been adequately controlled in most of the studies. Thus he suggests more refined studies need to be done before any conclusive statements or interpretations are made. Most of the studies indicate blacks have an acquiescent response tendency, are not self-critical and are defensive. They also show conflict and variability in self concept. They have average self-esteem with high esteem regarding their physical and personal selves and a lowered moral-ethical self. Because the TSCS results have not been
proven to mean the same in cross-cultural studies, there could be language, value and socialization factors which cause blacks to respond differently.

Studies utilizing instruments other than the TSCS (Hartup & Yonas, 1971) indicate that minority group self concepts are less positive than majority group self concepts and that expectations of achievement and actual achievement are discrepant. Guggenheim (1969) found blacks in fact have similar expectations and aspirations. The real issue may be how one copes and defends oneself with discrepancies between expectations and achievement. The problems of school children may center around low achievement rather than low self-esteem. Carpenter and Busse (1969) explored whether black children became more negative in self concept via schooling. They took welfare children in black and white ghetto schools with the same socioeconomic status and looked at equal numbers of male and female first and fifth graders. The children were from father-absent welfare families. Using a specially developed instrument for young children they found that 1) girls seem to be more negative in their self concept than boys in the first and fifth grades, 2) fifth graders were more negative in self concept, and 3) there were no significant racial differences in becoming
negative in self concept. Olavarri (1967) suggests that lower ability students feel greater self worth in homogeneous classroom settings than in heterogeneous settings. Singer and Singer (1972) report the reaction of blacks to desegregated schools and found it has differing effects. Wylie (1961) makes note of the fact that we have only a few studies on black persons, all with many design limitations and thus questionable results.

**Self concept and effective functioning.** Fitts et al. (1971), Combs and Snygg (1959), Rogers (1961) all write that more effective persons have healthy, integrated self concepts. Additionally, Maslow (1954), Fitts (1970) and other humanistic psychologists write in the area of personal adjustment and agree that actualized, fully functioning, competent persons with optimal self concepts are more effective. The above perspective is offered because some may question why it is important to look at self concepts of people at all.

A further problem remains—that of defining the optimal self concept. It is apparent to this writer that this differs for different target groups. Studies need to be refined to definitively look at, for instance, the optimal self concept for economically and educationally disadvantaged, primarily
black students while they pursue a college career. Once we have described that optimal state we can look at those persons who have attained it and evaluate the effectiveness of their functioning. Presently, most instruments have been based on a white, middle class, college student norm group.

**The Disadvantaged**

Being disadvantaged is a relative position—relative to the advantaged group. "Cultural disadvantagement" is a label based on a white middle class standard. In a pure sense, there are no culturally disadvantaged; there are only culturally different. Because one does not conform to accepted standards of behavior of the white middle class does not indicate an absence of morality, integrity or personal ethics. Within one's subculture or different culture there is probably a set of mores governing behavior. Within one's own culture, though, there may be some factors which deem one to be more disadvantaged relative to the rest of that culture or other cultures. Amos (1968) describes disadvantagement as arising from:

1. poverty

2. cultural isolation—lack of exposure to the writing, art, resources of the given culture and exposure to other cultures
3. geographical isolation
4. racial minority group membership
5. physical disability—may be related to lack of economic resources to properly care for oneself physically (malnutrition, teeth, housing, eyesight, illness unattended) and relate to poor performance
6. frequent relocation—cannot establish roots
7. language deficiency.

One might then attribute the following characteristics to a disadvantaged person: poor language skills, lack of financial management skills, police record, lack of motivation, poor work habits and lack of understanding of procedures.

Margolin (1968) writes of the mental health of disadvantaged persons. He says that we often judge behaviors according to how well they fit our social class' standards. Thus, what might seem an ordinary outburst to a lower class person may be perceived as alarming behavior by the middle class person. Margolin feels that deprivation of lower class individuals, not their race, is reason for disenchantment and occasional outbursts against the dominant culture. Using the riots in Watts and Harlem as examples he feels these were outbursts of hope and justice by black people who did not want to be accepting, complacent and passive about their impoverishment. Thus he feels the variation in mental health of individuals seems to be attributed to social class
rather than any other factor (race, ethnic group, etc.).

Mental illness has a complex etiology. For the poor, factors such as place of work, place of residence, personal contacts, education, race, family structure, child rearing practices and material deprivation all may have an effect. There are also some genetic and environmental factors which interact in the process of living which may bear on one's psychological well being as might be seem through the self concept.

In the early development of a child (ages 2-3) numerous skills are acquired. When one lacks such skills one becomes disadvantaged in his interactions with others, his performance of tasks and his performance on tests. Such skill deficits include those in language, cognition, perception, where to go for answers, self-understanding, social interactions, mastery of environment and of self. Concomitant feelings as self-satisfaction, autonomy, self-respect, ambiguity tolerance, security, sense of identity, competence, ability to delay gratification are components of one's psychological well-being. Deficits may obstruct ego development. Further, when skill deficits are compounded by stressful situations the emotional problems may be exacerbated (Margolin, 1968).

Writing of black persons, Vontress (1970) acknowledges
that it is bad enough to be of a lower social class since many of our prejudices are class related. Economically disadvantaged persons live a strenuous life, not having the security of a future, deprived of basic needs to survive. But, being black merely adds another dimension of disadvantage—a racial one—one that is indelible and with a history of being one-down and subject to the most extreme forms of oppression and prejudice.

Speaking of black self-hatred, Vontress says it is no wonder when one looks at the actual status, apart from the recent legal status, that blacks are alien in a majority white society, wanting to be white, enjoy the concomitant rewards, and never being quite able to do so. Blacks even have some of the same prejudices that whites have (e.g. against Jews). He continues by saying that blacks may feel their minority status so deeply that they become closed off to others and isolated in their own world. The black male suffers most from the racism in this country. He has not had the support from the home the female has had. Black males are less represented in college and achieve below females. Vontress feels the black matriarchy has debilitating effects on the developing male. He cites the rejection of marriage by many black males which will further compound the problem.
of the black family.

The literature on the disadvantaged is sometimes confusing because of lack of specificity in defining the type of disadvantagement involved. The result is even more confusion in interpreting and generalizing results.

**Education and Higher Education in the United States**

It would be unfair and unwise to study the self concept development and attitudes of economically and educationally disadvantaged college students without devoting some attention to the environmental presses, contextual and situational variables they may contend with in the educational system. This becomes even more important in a study like this one where variables are uncontrollable and not all the potent ones are even identified. Further, the primary variable—self concept—is a psychological construct—not to be seen objectively but only measured implicitly.

One of the best and most comprehensive treatments of higher education has recently been done by the Carnegie Commission on Higher Education. The Commission (1968), in writing about higher education today, said that what needs to be understood is that in today's time higher education has become a means to achieve a better life for
Americans. Placing the achievement of equality of educational opportunity as its number one priority, the Commission says:

Increasingly it is through equal access to education that equality of opportunity in American life becomes possible, but financial barriers and deprivation by location, by ethnic group, by age, and by inadequacy of precollege education still prevent many American citizens from developing their full potential (Carnegie Commission on Higher Education, 1970a, p. 1-2).

The Commission suggested this be achieved by a three part program of financial aid to students (grants to low income and loans to middle income), cost-of-education supplements to institutions and creating spaces for all qualified students with community colleges bearing much of the burden. Three priorities resulted from the Commission's independent study of the needs of higher education and the nation:

1. Greater equality of opportunity to higher education (equal access, not equal attendance) for all. The Commission cited the fact that persons whose families fall in the upper 50% income-wise have three times more of a chance of entering college than those in the lower 50%. The Commission recommended that no able student be denied higher education because of money.

2. Expansion of the health services.

3. Academic reform and innovation for improved quality.
The Commission recommended that to achieve these priorities and the others cited, the federal government would have to assume greater funding and leadership responsibilities. In its report, the Commission recognized that in the sixties the national priorities for education went to the sciences, graduate education and research (Carnegie Commission on Higher Education, 1968, 1970a).

In citing five major factors which are most directly related to social policy and which affect college attendance, the Commission listed:

1. Income: low income persons are significantly underrepresented. Families with incomes under $3000 have five times less chance of having one child attend college than families with incomes over $15,000.

2. Ethnic group: Negro, Indian, Mexican-American, Puerto-Rican persons are all underrepresented.

3. Location (whether there is a college nearby): Deep South students have half the likelihood of attending than students in the Pacific Southwest area.

4. Age: beyond the 18-24 year old group, many persons do not attend.

Speaking of enrollment the Commission (1971) looked at the 1½ million students enrolled in higher education in 1970 and noted that we have been through a decade of the 1960's when enrollment doubled. The 1970's were to see a 50% increase, the 1980's none, and then the 1990's with a 33 1/3% increase. Much of this stabilization has been caused by lack of adequate funding, a labor market that does not need as many college graduates, new lifestyles embraced by some youth (counterculture, cult of experience), controllability of birthrate, more options for education, not having to conform to the traditional timetable for attendance, more adults returning, new technology which allows for the implementation of external degrees and open universities. The Commission did say that while the total enrollment picture for higher education will go through a "go-stop-go" period, the numbers of minority students will be expected to increase as the Commission recommended.

In looking at the representation of males and females in higher education, more men than women, when compared to their relevant age groups, attended college. In white, blue-collar families, it appears that men have the most access to the resources to attend college. In black families women appear to have attended college more than men because
of job opportunities for black women being more available, especially in teaching (Carnegie Commission on Higher Education, 1971).

Socioeconomic status was cited as a potent factor in college attendance. However, given the same income level, children from black families went to college significantly less than those from white families. The Commission hoped that increased financial aid opportunities based on need would reduce the effect of income on college attendance.

Regarding racial minorities the Commission summarized by saying that black Americans, Mexican Americans, Puerto Ricans and American Indians are a definite minority in terms of representation in higher education. Japanese Americans and Chinese Americans, however, are not in the minority in terms of educational representation. Five hundred twenty-two thousand blacks were enrolled in degree programs in higher education in 1970. Three hundred forty-three thousand of these were in the 18-21 year old age group (21%). Whites, on the other hand, had 36% of their 18-21 year old population in college. In the graduate school age group (22-24 years old), 7% of the black population and 15% of the whites were enrolled. Finally, the 522,000 represented a doubling of black student enrollment from

Besides the work of the Carnegie Commission, another landmark study was commissioned by the Congress and undertaken by the U.S. Office of Education as a result of the Civil Rights Act of 1964. This report has been called the Coleman Report for its principal author and deals with equality of educational opportunity (Harvard Educational Review, 1969). The findings reveal that there are marked differences between educational achievement of racial groups and social classes. For example, the average black in the urban Northeast in the 12th grade has a 9th grade reading and a 7th grade mathematics achievement level. Americans believe in the tenet of equal opportunity for all but recently there has been great disagreement over what this actually means when operationalized in various arenas such as education. Having access to free schools and the same curriculum is a popularly held view of equal opportunity. The cries of black Americans and other minority groups regarding the inadequacy of their educational systems have continued repeatedly, even after the 1954 Supreme Court decision on requiring racial integration in schools.

The Coleman Report cites that schools are an impotent factor in improving educational achievement. Background,
social context, home, neighborhood, peers are the potent factors. Inequities in these environmental factors continue through the child's school years and affect his/her achievement. Thus the school might have to become a much more potent environment, inspite of the social environment, for the inequality to be overcome. The possibility of this happening in the American school system is highly dubious. Coleman would define equal educational opportunity as a situation in which achievement would be equal for all racial and social groups. In fact, the editors of Harvard Educational Review (1969) assert that the courts are likely to become involved in judicial tests of equal educational opportunity. States have an obligation as defined by the Constitution—that of equal protection. States are obligated to provide effective equality (a chance for the same outcome) in more than equal dollars, teachers and facilities to schools.

Although criticisms have been lodged against the report's methodology, subsequent reanalyses by different groups of social scientists have supported the major conclusions of:

1. racial achievement gap (whites consistently achieve greater than blacks,

2. influence of child's social class background and
that of peers on achievement, and

3. relatively small effect of education in overcoming social differences.

The real problem is that despite all that research has indicated, the social and political forces supporting the present educational system seem almost impermeable to change of any type. Thus, whether we will ever achieve real educational equality of opportunity is highly questionable.

The report finds that integrated schools improve the educational achievement of the disadvantaged with no damage to the majority students. While, on the other hand, compensatory education in segregated schools has had little payoff. It appears that segregated compensation will perpetuate an inferior educational system for blacks. The forces working against integration in the cities of the North are a real factor with which to contend.

Coleman (1966) and Mitchell (1970) contend that it is the responsibility of the educational institution to achieve equal opportunity or equal achievement—not the individual's. The criterion should be equal achievement, not even equal quality of education because providing equal education for differential groups will still not produce equal outcomes. Beyond using the criterion of equal test scores, the broader
goal should be maximization of individual abilities.

Katz (1969) found black children were most affected by the social environment in which they found themselves in the classroom. This is due to the fact that in lower class black homes cognitive skills such as language development (as perceived by white standards) and problem solving are not reinforced thus having an effect on a low achievement motive. Because of this home environment, the school atmosphere becomes an even more potent variable—presence of social models in the classroom. Further, an integrated school setting is more likely to provide models for good performance and appropriate reward for individual accomplishments. Black schools are more likely to exhibit low achievement levels, lack or voids in reinforcement for achievements and feedback for appropriate self-appraisal. In exploratory research, Katz found that among black males poor academic performance was related to a self-imposed failure by the males having overly high standards or self-expectations. They were highly self-critical. This was related to lack of reinforcement for previous successful experiences and punitive parents. Katz also found self-criticism or self-blame serving to actually reduce anxiety in disadvantaged males by allowing them a response especially when one is
dependent on others for emotional security. Katz felt that one's realistic assessment of his/her ability relative to other classmates, especially white classmates, may help performance by enabling students to have some inner awareness and control. This sense was facilitated by attending schools with whites where one is openly exposed to others and is compared with others. He states it is the perceived isolation from opportunity rather than awareness of intellectual capabilities, that accounts for the incapacitating anxiety in some minority group students.

Crossland (1971) feels that a dilemma for higher education institutions is that a commitment to minority enrollment carries with it bending of admissions standards, sizeable funds to provide financial aid, and reforms and expansion of curriculum offerings. The funds question becomes critical because institutions have overly depended on the federal government for aid, which has recently been brought to sharp focus with the Antioch student strike. Additionally, a critical point in the future will not be college entry, but job placement. If proper assessment of the labor market is not made and better jobs not available at the end of college then we are in for more disenchantment and frustration from minority group members. Crossland
states that gradually the focus in minority education will be on the poor instead of on racial minorities. Noting that nothing much has been heard from lower middle class whites who substantially outnumber racial and ethnic minorities, if they decide to mobilize their power and begin competing for jobs and education, present programs may be in jeopardy.

Finally, the Carnegie Commission (1970a) recommended that to facilitate equal opportunity to enter higher education, institutions of higher education should utilize the summer to have activities for educationally disadvantaged students to familiarize them with a university atmosphere and reduce apprehension, distrust and hostility. The Commission also encouraged the development of programs to enhance verbal skills.

If equal educational opportunity does not materialize we may find all black schools teaching black consciousness, survival and traditional cognitive skills. The question is whether we can afford to bring another generation of angry and alienated Americans to adulthood (Harvard Educational Review, 1969).

Minority Students in College

Gibbs (1973) and Haettenschwiller (1971) have written about the foreign environment that the predominantly white
university presents to black students. One might go one step further and say that these comments would also apply to economically and educationally disadvantaged students from the lower class. Some of the differences cited are:

1. **Life style (dress, speech, food, music, etc.)**
   responses to situations which have enabled one to fare well in his home environment now become unusual behavior and not guarantee the minority student the reinforcement from others that he has had in the past. Thus he stands out as atypical and there is a loss of a reference group.

2. **Being in a labelled special program sometimes elicits negative responses or differential treatment from other students and faculty.**

3. **Unfamiliarity with behaviors and white middle class values.**

4. **The college student role, its associated social behaviors and culture may not fit for the particular student.**

   Gibbs (1973) lists problem areas which black students at Santa Clara University most frequently brought up in counseling sessions: establishing a meaningful personal identity, academic performance, interpersonal relationships between blacks and between blacks and whites, independence, sexuality, aggression and career plans. Some of these
were attributable to the different expectations black students and the administration had in a poorly planned program to recruit black students to a white university.

Mitchell (1970) adds some perspective to black students in higher education. He describes the group of blacks who entered colleges after the Supreme Court decision of 1954 as bright, able, low risk students. They sought to become assimilated into the white culture and really disassociated themselves from and rejected their black heritage. Hence, the hair straighteners, bleaching cream, etc. These students alienated themselves from their families and other blacks and in a way, from themselves. Once graduated, these students found racist and discriminatory practices in trying to be admitted to graduate and professional schools and in finding jobs. The students who came in the late 1960's were different. Because of the federal funds and wanting to be liberal, colleges began to recruit large numbers of black students. Many of these students were advocates of black pride, black separatism. They now had a new perspective.

Willie and McCord (1972) studied black students at four upstate New York colleges, and, based on surveys, interviews, forms and documentary records, found that the
first two years seemed to be the most difficult for black students, academically. By the time the students were seniors black students appeared to be doing a little better than white seniors. They conclude that those who make it to the fourth year appear to have made it academically and thus may have improved self concepts. Because of adjustment difficulties, self concept may actually get worse during the initial two years. The authors also found that the blacks experienced white racism and hostility, that other movements (feminism, consumerism, ecophilism) had diluted energy from the black problem, that blacks either withdrew or displayed aggressive behavior as a result of racist insensitivities, that whites felt blacks were being treated preferentially, that black females led more restricted social lives than black males, and that desire for some separate facilities was based on wanting experiences to better formulate identity.

Banks (1970) studied black students in college and compared them with black students of 1957. He found they indicated an increasing awareness of the racism they experience in college and of their blackness. This was shown in their increasing anti-white and decreased anti-black feelings as compared with blacks in 1957. Militance,
aggressiveness and demands have characterized much of black student involvement on today's college campuses. Black awareness has replaced black self-rejection and black inferiority which was accepted in 1957. Also, today's black movement suggests establishing own norms for blacks and stop comparisons with whites. Some call this separatism, others, ethnic togetherness.

Educational Opportunity Programs (EOP)

Educational Opportunity Programs came onto the American higher education scene in 1968 and were received with controversy due to the special treatment and lowering or bending of academic standards. Klingelhofer and Longacre (1972) say that since the Autumn of 1968 almost all urban institutions have had some kind of educational opportunity program for high risk, educationally and economically disadvantaged students. In fact, institutions are now going out to recruit such students and often have special staffs of professionals to work with them. These EOPs usually consist of: relaxed admissions requirements, special recruitment approaches to reach ghetto students, remedial and developmental programs to help students acquire basic skills for success, financial aid, and special courses and instructors according to needs. In many ways EOP students are supplied with many resources
of personnel and money in order to supposedly help them succeed. No conclusions about the effectiveness of these programs have reached consensus. Each program has its success stories; however, research needs to be done on both those who did not and those who did succeed.

Several educators have been vocal regarding the approaches and motivations of institutions which seek EOP students. Robert L. Clayton, Assistant Director in the American College Testing Program Southeastern Regional Office said to a meeting of the Tennessee Association of Collegiate Registrars and Admissions Officers, that many of the techniques presently being used to recruit minority college students are unhealthy. The "bounty hunter" and "slave ship captain" hiring admissions personnel to bring minority bodies to fill quotas were severely criticized. Clayton also cautioned mass busing of inner city youth merely to meet a minority quota, and the recruiting of black athletes to "serve as gladiators in huge arenas on Saturdays" for entertainment purposes. He charges that admissions officers and higher education must responsibly accommodate minority students—admission must be tied to a chance at graduation and success in college (ACTivity, 1973). Thus, the responsibility lies beyond procuring bodies to
get more state subsidy or meet government favorability.
It needs to be mentioned that the bounty hunter syndrome
is not restricted to blacks or other minority students.
As enrollments level and slightly decline in the 1980's
this should be a caution to admissions officers regarding
all prospective students. Where formulas for state subsidy
to institutions are based on number of full-time equivalent
students this may be a logical outcome in order to survive
or maintain current funding levels.

Klingelhofer and Longacre (1972) followed up 54 students
who were in an EOP in a public five year college in the West
in the Fall of 1968. Using interviews and other data and
controlling for sex and high school, they found those
students who persisted to somehow embrace a middle class
orientation. They seemed to be able to cope better with the
system. Those who were disqualified seemed more alienated
and rebellious. They found EOP students progressed toward
a degree similarly with the comparison group but had lower
grade achievement. Students generally agreed that at
least EOP gave them a chance to attend college but they had
mixed reactions to specific parts of the program.

Most of the EOPs have goals of skill development (reading,
math, verbal) and personality development (improve self-image)
Dispenzieri (1971) studying the 4650 students who were in the College Discovery Program at City University of New York, found that over 5½ years, special students did not succeed at the same level or rate and that 1/4 of them received a two-year degree while 1/6 received a four-year college degree. He found supportive services (reduced loads, remedial help, study skills help, counseling) necessary and concluded that some kind of post secondary education should be available to all those who want it.

DiCesare (1970) looked at attrition of black students at the University of Maryland who entered in 1969. He found returnees to have more self-confidence, realistic assessment of the university and how it fit with their goals, awareness of the racism at U.M., higher aspirations, lived on campus and used the facilities. The author indicates that self concept is an important factor in returning and achieving good grades.

Nelson and Johnson (1971) looked at attitude change, as measured by the College Student Questionnaire (CSQ), of 1520 students at five predominantly black Southeastern colleges over a period of one year. While pointing out psychometric limitations and further limitations in use with black students, they found that increases in cultural
sophistication (related to extracurricular involvement and close relationships with faculty), family independence, peer independence and liberalism take place. They point out the need for more longitudinal studies that can assess the development of these attitudes.

Lounsbury (1972) administered the satisfaction scales of the CSQ, a biographical instrument and conducted interviews with majority and minority group students with similar socioeconomic status. His findings were that the inner-city minority students were less satisfied with administrative procedures and the effects of rules and regulations. They felt the university was overly arbitrary and paternal. He also found that minority students were dissatisfied with their major fields. He explains that this was due to uncertainty of vocational choice and lack of commitment to a major. On the Satisfaction with Faculty and Students scales there were no differences between majority and minority group students. There were also no differences between females and males.

Freshmen in General

To add further perspective to the students in higher education, Bayer, Royer and Webb (1973) did a four-year follow up of a sample of freshman students who participated
in the 1967 American Council on Education Cooperative Institutional Research Program (CIRP). About 185,848 students at 252 junior/community colleges, four-year colleges and 51 universities participated as full time freshmen in 1967. In July 1971 a follow up of a sample of those involved in the original study was conducted to see what effect college attendance might have had. A total of 34,346 usable respondents provided data for studying student achievements, aspirations, future plans, perceptions, experiences, educational outcomes and academic standing.

The authors found increasing liberalism from time of entry on. This supports studies in Feldman and Newcomb (1969). About 45% of the students had received a bachelor's degree and 16% an associate degree (a total of 3/5 obtained a college degree of some kind). The study did not follow those who had interrupted their education which was a limitation. Eckland (1964), doing a ten year follow up of college males, found the completion rate close to 75%. The CIRP study found that given time, men and women complete degrees in equal numbers. Less than 10% of the students considered themselves permanently dropped out of college while 25% indicated they had dropped out temporarily. Also, 2/5 of those who first entered a two-year college and 1/5 of those
entering a four-year institution had transferred to another institution sometime during the four years. The study also found that women earned higher grades than men and that 2/3 of the students received financial support for their education from parents although over half earned some money through own employment. About 10% received support from federal scholarships, fellowships or grants while about 20% took out federal loans. Majors tended to increase in the social sciences and education while decreasing in the physical sciences, health and professional fields and engineering.
CHAPTER III

METHODOLOGY

The purpose of this study was to study the self concepts, attitudes and other behaviors of educationally and economically disadvantaged students as they prepared for, entered and proceeded through higher education at Ohio State University. It was hoped that the results would yield useful information on the self concepts and attitudes of these minority students at a given point in time as well as information on the development of these variables over a four year period. Finally, a comparison with regular or advantaged students was sought as well as additional information on persistence and future plans of all the students.

The general hypotheses stated in operational terms are:

1. There are no significant differences in self concept and attitudinal development of disadvantaged and advantaged students.

2. There are no significant differences in self concept and attitudes between disadvantaged and advantaged students at any given point in time.
3. There are no significant differences in self concept and attitudes between males and females of the same group at given points in time.

Specific hypotheses under each of the generally stated ones above precede the results in Chapter IV.

Samples

Higher Education Opportunity Program (HEOP)

The HEOP Program. The HEOP Program evolved in the Spring of 1968 from a need to provide post-secondary educational opportunity at The Ohio State University (OSU) in Columbus, Ohio for disadvantaged youth. This need was identified through a series of discussions among faculty and administrators at OSU. The program was funded by OSU's Provost's Office in the amount of $185,000 and was administered by University College, the entering academic home of freshmen and sophomores at OSU. The Columbus Board of Education joined the University in providing an assistant director and ten teachers for the program.

Basically, HEOP was a special, pre-college, compensatory education program which "was conceived as a major assault on a serious and tragic educational problem (Halverson, 1970, p. 2)." It was assumed that HEOPs had the potential
to do satisfactory college level work but had not acquired adequate skills to achieve. Therefore, the HEOP Program was intended to be an intensive, ten-week, Summer program to teach those skills.

The program's specific objectives were to:

1. improve skills in mathematics and language (reading, writing, speaking, listening) to enable students to qualify for and pass the freshman mathematics and English courses,
2. increase motivation for academic success,
3. increase positive self-image, and
4. acquaint the students with the university.

Elements of the program were:

1. living in a university residence hall for ten weeks (June 23–August 30, 1968) with other HEOPs as roommates but scattered throughout several halls and thus mixed with regular OSU Summer school students,
2. intensive small (approximately 17 students/class) classes in mathematics (2½ hours/day) and language/communications skills (2½ hours/day) with special teachers (classes went from 8 a.m. to 2 p.m. five days a week with an hour for lunch),
3. semi-weekly discussion groups led by students from similar cultural backgrounds to acquaint HEOPs with the
university and offer a vehicle for students to talk about the problems and opportunities facing disadvantaged students in society.

4. campus job under the College Work-Study Program (from 2 p.m. to 5 p.m. each day for 15 hours/week) as a means for students to acquire some saleable skills, work in the university environment and pay for their personal expenses and the $100 HEOP fee,

5. participation in the cultural and social life of the university on a voluntary basis,

6. access to academic and personal counseling (Halverson, 1970).

Halverson (1970) summarizes HEOPs' evaluations of the program elements. The living arrangements, classes and jobs were satisfactory and valuable. The discussion groups were poorly executed and were too much of a time commitment after a heavy class and work schedule. The need for more counseling staff was strongly emphasized.

At the conclusion of the HEOP Program instructors made recommendations on students who were most likely to succeed at OSU. These recommendations were much the basis for the students receiving financial aid assistance from the university to enter in the Autumn Quarter 1968.
Those students who did not receive high enough recommendations to receive university aid had to find their own resources for financing their education. University financial aid was usually a combination of an Educational Opportunity Grant ($200-750), National Defense Student Loan ($200-750) and a job under the College Work-Study Program ($450). A few students received OSU Grants and University Loans. The Cleveland Scholarship Program and a private individual sponsor were prominent outside sources which aided more HEOPs in order to attend OSU.

One hundred sixty-eight students participated in the HEOP Program. One hundred fifty-one completed the program. Of this latter group:

84 enrolled at OSU as first-quarter freshmen in Autumn 1968

27 enrolled at other colleges and universities as regular freshmen

40 had no plans to continue their education and 151 total HEOPs who completed the Program planned to go to work

All HEOPs did not necessarily want to attend OSU when they originally applied to HEOP so this reduced figure of 84 students should be viewed accordingly.

Halverson (1968), in a final report of HEOP, writes that similar compensatory education programs need to be
provided to salvage able students who have been deprived economically, educationally and culturally.

Once the HEOP Program concluded all program elements terminated. HEOPs who enrolled at OSU were essentially treated as regular entering freshmen. The HEOP administrative staff of University College attempted to make the students aware of resources and activities which might be helpful to them.

1. HEOPs were invited to take advantage of a free tutorial program sponsored by University College staff.

2. HEOPs were offered the opportunity to enroll in Psychology 120, a study skills and personal effectiveness course.

3. The Mathematics Department offered special tutoring to HEOPs.

4. Academic counselors for HEOPs were advised to keep their course loads reasonably light for the first quarter. No further programmatic efforts were made or have been made since the freshman year 1968-1969. Funds ran out. About one-fourth of the students lived in university residence halls their freshman year. The majority lived at home in Columbus.
The HEOP Students. Recruiting students for HEOP began late on May 1, 1968, and was done primarily by the Admissions Office at OSU. Many high school counselors, community agencies and other individuals assisted. The Columbus metropolitan area was the main focus of recruiters. Freshman applicants for Autumn 1968 who met the criteria for HEOP were also allowed to apply for it. The criteria were:

1. apparent potential for acceptable college-level work (based primarily on judgment of persons writing recommendations, not grades or test scores);

2. apparent need for further academic preparation before beginning regular baccalaureate studies (based on H. S. grades, available test scores, and judgment of persons writing recommendations; and

3. economic status - from low or moderate income families (able to qualify for Federal College Work-Study Program - based on confidential financial statement of parent or guardian) (Halverson, 1970, p. 3).

Two hundred thirty-five (235) persons applied for HEOP; 218 were accepted and 168 enrolled. This study will denote HEOP students as "educationally and economically disadvantaged" students.

Since most of the recruitment efforts were focused on metropolitan Columbus, Franklin County was heavily represented, especially inner-city areas. Students did come
from 14 Ohio counties and two other states (see Appendix D for geographical distribution). On the other hand very few students in the total Autumn 1968 entering freshman class came from inner-city areas (Thompson & Mahr, 1969).

**Family income.** HEOPs came from economically disadvantaged families, all of whom qualified for the Federal College Work-Study Program. Family income data was as follows:

<table>
<thead>
<tr>
<th>Family Income</th>
<th>No. of HEOP Families</th>
<th>Cumulative No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,000 or below</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>$3,001-4,000</td>
<td>21</td>
<td>41</td>
</tr>
<tr>
<td>$4,001-5,000</td>
<td>16</td>
<td>57</td>
</tr>
<tr>
<td>$5,001-6,000</td>
<td>19</td>
<td>76</td>
</tr>
<tr>
<td>$6,001-7,000</td>
<td>16</td>
<td>92</td>
</tr>
<tr>
<td>$7,001-8,000</td>
<td>17</td>
<td>109</td>
</tr>
<tr>
<td>$8,001-9,000</td>
<td>15</td>
<td>124</td>
</tr>
<tr>
<td>$9,001-10,000</td>
<td>12</td>
<td>136</td>
</tr>
<tr>
<td>$10,001-11,000</td>
<td>6</td>
<td>142</td>
</tr>
<tr>
<td>$11,001-12,000</td>
<td>5</td>
<td>147</td>
</tr>
<tr>
<td>Over $12,000</td>
<td>9</td>
<td>156</td>
</tr>
<tr>
<td>Unknown</td>
<td>12</td>
<td>168</td>
</tr>
</tbody>
</table>

Average family income (N=156) = $6,415

Average family size (including dependent children only): 5.4 persons

Average per capita family income = $1,188

Again, entering freshmen in Autumn 1968 came from primarily middle income groups with approximately 50% from families within the $8,000-$15,000 range. Only 6.4% came from families with income below $4,000 (Thompson & Mahr, 1969).
Race. Although race was not a criterion for admission to HEOP it is estimated that 80%+ of HEOPs were black.

Age. Practically all HEOPs were of the regular age of a graduating high school senior (17 to 18 years old).

High school academic performance. HEOPs were fair students in high school, however the quality of their schooling may have resulted in a lower achievement level. Specific performance data is in Appendix D.

Comparison Group Students (COMs)

No pure control group could be obtained for the study because all qualified applicants were accepted into HEOP. Thus it was determined that a comparison group of students would yield useful comparative information. A group of "majority" group students was desired. It was determined that the freshman English composition classes would be a good pool of regular, advantaged freshman subjects. Permission was obtained from an instructor to have access to students in three sections of the English 103 (third quarter) class. All freshmen at OSU must successfully complete three quarters of English composition. The only students who are exempted are those who have demonstrated their ability via a proficiency examination or transfer credit. Most of the students in English 103 are third-
quarter, 18 year old freshmen who have completed English 101 and 102. A few freshmen who entered Winter or Spring 1969 may have been placed there via proficiency or transfer credit.

No background data on these students were gathered. However, they were predominantly white, middle class, college age students from observation.

**Instruments**

The *Tennessee Self Concept Scale, Clinical and Research Form* (TSCS), Clinical and Research Form (C&R Form) (Fitts, 1965) was selected to measure self concept. The TSCS is a short, simple, paper-and-pencil, self-administering self report. Fitts points out the difficulty in assessing the self concept by using behavioral observation. He also notes the lack of a well standardized and developed instrument to describe the self concept. Therefore, he began to develop the TSCS in 1955 and has since devoted his professional career as clinician, counselor, humanist and researcher to continued and expansive research efforts on the TSCS. The TSCS was originally developed to help solve the difficult criterion problem in mental health research.
Fitts (1965) recommends that the TSCS be used with persons who have at least a sixth grade reading level and are 12 years or older in age. The instrument is largely self-administering except for a slightly confusing answer sheet format and may be used in individual or group settings. Two forms are available—a Counseling Form and a Clinical and Research Form. Both forms utilize the same test items. The C&R Form was chosen for this study since it yields more complex scoring and profile analyses of the self concept. The Counseling Form is intended for quick scoring and feedback to a client with scoring grids and profiles included in the answer sheet packet. The TSCS has no time limit but most persons take 10 to 20 minutes to complete the form. There are five response alternatives arranged on a Likert-type scale. They are: Completely False, Mostly False, Partly False and Partly True, Mostly True and Completely True.

Development of the Scale began when Fitts amassed a large pool of self-descriptive items from other self concept measures and self-descriptions of patients and non-patients. Seven clinical psychologists served as judges and classified 90 items with unanimous agreement into a two dimensional scheme. The first dimension was an internal
frame of reference and consisted of three categories: 1) identity (what I am), 2) self-satisfaction (how I feel about myself and 3) behavior (what I do or how I act).
The second classification dimension was an external frame of reference in which items were placed in five categories: 1) physical self, 2) moral-ethical self, 3) personal self, 4) family self and 5) social self. Judges also rated the positive or negative wording of the statements as they pertained to self-regard. A 3 x 5 grid resulted with each of the 15 boxes containing six items—three positively stated items and three negatively stated items—as they related to a specific aspect of the self (e.g. self-satisfaction-personal self, behavior-family self, identity of physical self). The other ten items of the 100-item TSCS came from the Minnesota Multiphasic Personality Inventory (MMPI) L-Scale to measure degree of self-criticism or defensiveness.

Other dimensions of the self concept measured by the TSCS are response bias, variability, certainty and conflict of the self concept. Six empirical scales which were developed from groups of persons seen in clinical settings were derived out of the 100 items as well. These scales resulted from item analyses and are comprised of
those items which best differentiated the various clinical
groups.

Brief descriptions of the TSCS scores follow
(Fitts, 1965, 1971):
1. **Self Criticism (SC):** 10 items from the MMPI L-Scale
   which are slightly derogatory and which most persons
   would agree describe them. Individuals with a high score
   are probably healthily open while those with extremely
   high (above the 99th percentile) scores are probably without
   defenses at all. Those persons who score low on SC are
   probably defensive and have overly elevated P scores.
2. **True-False Ratio (T/F):** Ratio of true to false responses
   for the 90 items of the TSCS and a measure of response set—
   that is, the tendency to agree or disagree without regard
   to content of the items. High scores indicate a tendency
   to agree.

Second, T/F may be used empirically to differentiate
patients from non-patients.

Third, from self theory, T/F indicates the way in
which an individual is approaching self-definition. High
T/F indicates more focus on what the individual is, while
a low T/F indicates definition by what one is not. T/F
scores in the middle range suggest an individual has a
balance between what he is and what he is not in achieving self-definition.

3. **Net Conflict** (NC): An indication of the amount and direction of contradiction between a person's responses to positively stated items and negatively stated items. Since responses to negative are subtracted from positive item responses a positive score indicates an "acquiescence conflict" or overly high affirmation of one's positive attributes. A negative score is just the opposite—a "denial conflict" where one overly denies negative attributes.

Eight additional subscores are available for NC (three for the internal frames of reference—NC Row 1, NC Row 2, NC Row 3—and five for the external frames of reference—NC Col A, NC Col B, NC Col C, NC Col D, NC Col E). This enables one to better specify the areas in which the conflict is occurring.

4. **Total Conflict** (TC): Indication of the general level of contradiction in self-perception regardless of direction. It is obtained by summing the differences between positive and negative items within the same area of self-perception without regard for the sign of the difference. High TC scores indicate confusion and conflict in the self concept while low scores indicate consistency. An overly low score
(below 13:5) represents a rigid, unchangeable self-description and may indicate defensive and false self-description. Too little conflict thus becomes suspicious.

Eight subscores for TC are available to better pinpoint the areas of conflict. These subscores are for the three internal and five external frames of reference.

5. **Total Positive Score** (P): The most important single score which indicates a person's overall level of self-esteem. High scorers feel worthwhile, confident and good about themselves. Low scorers have negative feelings about their worth and lack confidence in themselves.

6. **Row 1 Positive Score** (R1 P): This represents the level of self-esteem an individual has about his identity self—"what I am."

7. **Row 2 Positive Score** (R2 P): This represents how well a person judges or accepts himself taking into account his identity and his behavior. In other words, his self-satisfaction or self-acceptance.

8. **Row 3 Positive Score** (R3 P): Behavior—the level of esteem one has about one's actual behavior.

9. **Column A Positive Score** (CA P): Physical self—how an individual views his physical attributes, health, appearance and sexuality.
10. **Column B Positive Score (CB P): Moral-Ethical Self**—how an individual views his "goodness" or "badness," religiousness and moral worth.

11. **Column C Positive Score (CC P): Personal Self**—how a person feels about himself as a person and how he feels about his personality and personal worth.

12. **Column D Positive Score (CD P): Family Self**—how adequate one feels as a family member and how worthwhile in relationships with closest associates.

13. **Column E Positive Score (CE P): Social Self**—sense of adequacy or worth in relationships with other people in general, in social interaction.

14. **Total Variability Score (TV):** Indicates level of inconsistency between areas of self-perception on the whole TSCS. High scorers vary in their self concept from area to area and lack integration. They tend to compartmentalize certain aspects of the self and view them apart from others. Low scorers (but above the 1st percentile) are usually well integrated.

15. **Column Total Variability (CTV):** Indicates level of variability within the columns.

16. **Row Total Variability (RTV):** Indicates variability across the rows.
17. **Distribution Score** (D): Summary of the way one distributes his responses to the items over the five response alternatives. Additionally, high scorers indicate a degree of certainty about their self concepts (using many 1 and 5 responses) while low scorers indicate the opposite. This could also mean a person is being defensive and responding neutrally to most of the items. Extreme scores in either direction are undesirable.

18. **5's Score**: The count of "5" responses on the answer sheet.

19. **4's Score**: Number of "4" responses.

20. **3's Score**: Number of "3" responses.

21. **2's Score**: Number of "2" responses.

22. **1's Score**: Number of "1" responses.

The following six scores are the Empirical Scales:

23. **Defensive Positive Scale** (DP): A more subtle measure of defensiveness than SC. High scorers positively describe themselves using defensive distortion. Significantly low scorers lack minimal defenses for self-esteem.


25. **Psychosis Scale** (PSY): Scale which differentiates psychotic patients from other groups.
26. **Personality Disorder Scale** (PD): Scale which differentiates persons with this psychiatric classification from other groups used in developing the empirical scales.

27. **Neurosis Scale** (N): Scale which differentiates neurotic patients from other groups.

28. **Personality Integration Scale** (PI): Scale which is indicative of similarity with persons judged to have an above average level of adjustment.

29. **Number of Deviant Signs** (NDS): An index of psychological disturbance computed from counting the deviant aspects of the individual's TSCS scores and the profile.

30. **Time Score**: Length of time to complete the TSCS.

For this study the NDS and Time Score were not used. The Time Score has questionable significance. The NDS Score was not possible to computerize due to the lack of adequate information in the Manual. It is based on deviations among the T-scores on the profile sheet. Instead of the regular standard score formula, these T-scores are McCall's T-scores (Walker & Lev, 1958) which utilize the medians of ordered categories instead of the arithmetic mean of the distribution. While Fitts indicates this formula was used in developing the T-scores for the profile sheet, the Manual does not present these medians so that other
researchers may use them in converting raw scores. The T-score method used is debatable in any case because it forces a skewed distribution into a normal distribution and was probably used by Fitts to compensate for possible skewness in the standardization group. Fitts acknowledges the overrepresentation of whites and college students in the 626-person norm group.

**Norms.** A sample of 626 persons ranging in age from 12-68 years and from all parts of the United States constitutes the standardization group for the TSCS from which norms were developed. The group includes approximately equal numbers of males and females, blacks and whites and persons from all socioeconomic, intellectual and educational levels. The group is overrepresented with whites, college students and younger people (12-30 years old). Fitts (1965) indicates that this group has proven to be adequate in representing a cross section of people and that demographic variables such as age, sex, race, education and intelligence have little effect on the TSCS scores. Thus, there has been no effort to establish separate norms for such variables. Recent research findings utilizing the TSCS reported by Thompson (1972) indicate that age and race are, however, important factors in the
self concept, thus, separate norms for these variables should be strongly considered. The findings presented in Thompson's monograph (1972) are elaborated in Chapter II.

Reliability. Fitts (1965) indicates the test-retest reliability for all of the 46 possible scores and subscores, based on 60 college students over a 2 week period, ranged from .60 (Row Total Variability) to .92 (Total Positive and Psychosis). Fitts et al. (1971) report a .91 reliability coefficient for the Total Positive score using Kuder-Richardson split-halves technique. Admittedly, further research needs to be done to yield more data. Present longitudinal studies have presented only a few significant changes in self concept over time or experimental treatment which implicitly supports the TSCS' reliability over time.

Validity. Cronbach's (1960) four types of validity have been established for the TSCS in the following ways. Content validity was established by requiring that the judges unanimously agree on the placement of an item in the classification matrix of the TSCS.

Concurrent validity has been established by significantly correlating the TSCS with the Butler-Haigh Q Sort (Leake, 1970) and the MMPI and Edwards Personal Preference Schedule (Fitts, 1965).
Predictive validity has been established in studies where the TSCS has been effective in predicting successful teachers, good workers, effective persons, the amount of help needed in rehabilitation programs, whether blind students persist in special college preparatory programs, successful candidates for child care workers and degree of employment success among participants in vocational rehabilitation programs (Fitts, 1972). In all these areas the more optimal the individual's self concept the more optimal his/her performance and behavior. In the area of academic performance the TSCS has only a small relationship to academic achievement but is definitely a significant variable in the noncognitive aspects of academic behavior such as motivation, morale and satisfaction with school, attitudes toward school and teachers and assumption of responsibility for learning (Fitts, 1972).

Studies to examine the construct validity of the TSCS have used various methods to analyze the exact meaning of TSCS scores in terms of psychological concepts. In order to refine interpretations of the TSCS studies have utilized the following methods: 1) internal correlations of the TSCS, 2) discrimination between different groups, 3) factor analysis and 4) effects of treatment on scores.
Internal correlations of TSCS scores (Fitts, 1965) indicate logical groupings of related scores and distinct aspects of self-perception (self-esteem, self-criticism, variability, certainty and conflict).

The TSCS has significantly differentiated patient from non-patient populations (all but SC, RTV, D, & l's) and type and degree of disorder within patient groups (SC, Variability scores and Distribution scores) in the expected directions based on clinical judgments. There have also been predicted differences between delinquents and non-delinquents (delinquents having lower P scores and higher V scores), juvenile first and repeated offenders, unwed mothers, alcoholics, paratroopers, blacks and the elderly. These different groups have established TSCS profiles which differ from the norm group and from each other (Fitts et al., 1971).

Factor analytic studies have sought to determine what the TSCS measures. Vacchiano, Strauss and Schiffman (1968) and Vacchiano and Strauss (1968) have supported the multidimensionality of the TSCS through factor analysis. Rentz and White (1967) took the 12 scores of the TSCS most thought to measure self-esteem (P scores for rows and columns, SC, TV, D, TC) and applied a varimax rotation.
of a principal components solution. Two factors emerged: self-esteem (all P scores and D) and a conflict-integration aspect of self (TC, TV and SC). They concluded that the five major dimensions of the self concept are in fact elements of only two independent factors.

The Manual (Fitts, 1965) reports studies of self concept change due to certain treatments. Failure in paratroop training accounted for decrease in self-esteem and lack of therapy was related to lack of improvement in self concept. Anzivino (1972) found healthier self concepts among rehabilitated drug abusers than abusers in treatment agencies. Since the self concept is fairly established and formulated by the time a person reaches young adulthood further research needs to determine which significant experiences can have an impact on the self concept.

Response bias. The response style an individual manifests in personality measurement is one of the problems in psychological testing. Since the TSCS is a self report Fitts et al. (1971) reaffirm the importance of looking at the individual's responses and taking them for their face value—they being an aspect of the individual's self concept. The SC and DP scores provide some indication of response style though the latter is more subtle. Fitts et al. (1971)
report studies on response distortion and find that in asking-for-help situations honesty is greatest whereas it is lowest when the TSCS is used for employment purposes. In the latter situations SC scores are consistently low and DP scores high, supporting the validity of these scores and the importance of apprising subjects of the exact purpose for and uses of test data.

With regard to retesting, Fitts et al. (1971) indicate that upon analyzing control group data from many studies using the TSCS no systematic effects from retesting over various time intervals were found.

**Summary of the TSCS as an instrument.** The TSCS has been researched and evaluated against psychometric test standards in the areas of reliability, validity and response bias. Among the instruments available to measure self concept the TSCS appears to be technically superior (Leake, 1970). An added advantage to selecting it is that the criterion-centered research program (with the TSCS as the criterion) of the Dede Wallace (Mental Health) Center in Nashville, Tennessee serves as a focal point for collecting and communicating results of studies utilizing the TSCS to the public.

Thompson (1972) emphasizes the need to develop different
norms and gather more data on the variables of age, race and socioeconomic status. Cross-cultural studies have also indicated that value systems, semantics and stimuli differ between cultures. The TSCS has been translated and used in Spanish, French, Korean and Hebrew. Crites (1965) questions whether an instrument which does not allow a subject to use his own words can be accurate of the self concept. Thus, cross-cultural differences, instrument limitations, language and specificity of samples need continued work.

The College Student Questionnaire, Part 2

Besides a measure of self concept, some report of students' perceptions of the college experience was desired. The College Student Questionnaire (CSQ) (Peterson, 1968) was selected because it yields scores thought to be especially meaningful for generally describing attitudes and satisfactions of students as they progress through college at OSU. The CSQ-Part 2 is a part of the Institutional Research Program for Higher Education (IRPHE) of the Educational Testing Service (ETS) which is encouraging institutional self study and evaluation (Peterson, 1968). Richard E. Peterson developed the CSQ from a pool of questionnaire items drawn from a survey of many college student research questionnaires. Sociologist, Martin Trow, provided ETS with these items
and scales were constructed in a logical or a priori manner rather than through factor analysis or other empirical analysis. Preliminary experimental versions were administered to various groups of college students over four years with item analyses and many deliberations resulting in the present instrument. A sample of 700 students from a pool of 6,680 undergraduates involved with an experimental version of the CSQ-Part 2 in Spring 1963 serve as a standardization group and provide normative data for the CSQ-Part 2 which appear on the profile figures in Chapter IV except for the specially developed OSU scale.

The CSQ-Part 1 is intended for entering students. The CSQ-Part 2 is intended for administration to students after they have been at an institution for a while. It proposes to describe groups rather than individuals as in survey research and public opinion polling. Peterson (1968) supports use of the CSQ for the two purposes stated in this study: 1) to describe particular subgroups of college students, and 2) to study student change during the undergraduate years.

The total CSQ-Part 2 is a 200-item, multiple choice, paper-and-pencil, untimed, self-administering instrument and with a four-alternative format. The alternatives are
arranged in Likert-type from strong to weak agreement with the item. High scores on the scales represent strong attitudes or functioning in the area in question.

Before a final decision on utilizing the CSQ as a second instrument was made, several HEOPs were asked to take the CSQ-Part 2 as a pilot study. The purpose of this was to see if the items in the instrument were clear and appropriate for the sample in question. Because the CSQ was built for use with college students it was felt that it would be appropriate. Feedback from the students sampled was that the instrument was clear and appropriate for the other HEOPs. It was assumed that if this were so, regular freshmen would not have any problems with it either.

The CSQ-Part 2 consists of 11 scales of 10 items each. The remaining 90 items provide biographical and educational data which is not of primary interest in this study. Thus, the instrument was used in abbreviated form, using only the 11 scales—6 student functioning scales and 5 attitude scales. It was felt this would reduce the usual 90 minutes required for the test and make the time required of subjects more reasonable since they were also to take the TSCS.

The 11 scales utilized in this study and their descriptions are:
Student Functioning Scales (6)

1. **Satisfaction with Faculty** (SF): Esteem for relations between student and faculty. High scores indicate students' positive regard for faculty as competent, fair, accessible, and interested in student problems.

2. **Satisfaction with Administration** (SA): Satisfaction with administrative authority over students and with interaction with administration at an institution.

3. **Satisfaction with Major** (SM): Continued personal commitment to present major field and satisfaction with departmental procedures, quality of instruction, achievement.

4. **Satisfaction with Students** (SS): Attitude of approval in relation to various characteristics of the student body.

5. **Study Habits** (SH): Degree of serious, disciplined, planful orientation to customary academic obligations.

6. **Extracurricular Involvement** (EI): Degree to which one participates in organized extracurricular affairs and is interested and involved in them.

Attitude Measures (5)

7. **Family Independence** (FI): Degree of autonomy in relation to parents and parental family.


9. **Liberalism** (L): Degree to which individuals have
sympathy for an ideology for change or preservation—a political-economic-social value dimension.

10. **Social Conscience (SC):** Moral concern about perceived social injustice and institutional wrongdoing.

11. **Cultural Sophistication (CS):** Authentic sensibility

12. It was decided that a 12th scale which would globally yield an overall satisfaction with Ohio State University and the college experience there would be helpful to include. Therefore, this writer prepared items and selected the 10 best for the **Overall Positiveness with OSU (OSU)** scale.

Permission was obtained from IRPHE at ETS to utilize only 110 of the CSQ-Part 2 items. The modified instrument was mimeographed and a computer scoring answer sheet provided subjects for recording responses. A sample of the modified CSQ-Part 2 is located in Appendix A.

**Reliability.** The Manual (Peterson, 1968) does not include any test-retest reliability coefficients since temporal stability of biographical or survey items is of little concern. The data presented in the Manual are preliminary and represent different experimental forms of the CSQ-Part 2. There is also a question as to whether the individual scale scores are appropriate for analysis
since the instrument is best for group description. Modest reliability coefficients tentatively appear to range from .57 to .81 for the 11 scales used in this study.

Validity. Predictive validity has been tentatively established by intercorrelating CSQ scales and other demographic and situational CSQ items which are not on a scale (e.g. place of residence, year in school, major, Clark-Trow orientations) and it appears that on face value the definitions of the scales are supported by higher correlations with items which relate to that definition. For instance, Liberalism has a high correlation with having no religious preference and a negative correlation with belonging to a specific religious faith.

By analyzing profiles of special groups of students and comparing mean scores on various scales, high and low scores appear to correspond with expected peaks and valleys of the different subgroups under study (e.g. humanities vs. natural science majors, grade getters vs. grade non-getters).

In looking at intercorrelations among the scales of the CSQ-Part 2 and after performing a factor analysis, three principal factors emerged: 1) a satisfaction/morale factor (4 satisfaction scales and Study Habits having highest loadings), 2) a socio-cultural awareness factor
(Cultural Sophistication, Social Conscience & Liberalism), and 3) an independence factor (Family & Peer Independence & Extracurricular Involvement) (Peterson, 1968).

Gough (1972) suggests that results of factor analyses indicate a redundancy among the present scales, especially the satisfaction scales. In fact, these scales might be combined into one or two satisfaction scales. He further suggests that other scales be developed which would be useful to administrators in institutional research such as "creative potential," "professional aspirations," and "personal stability." More correlational data with other measures such as College and University Environment Scales and College Characteristics Index and personality instruments widely used with college students is needed. Additionally, he calls for correlations between scales in Parts 1 and 2 of the CSQ.

Nelson and Johnson (1971) performed intercorrelations and factor analyses of the five attitude scales. They found Liberalism to have low internal consistency and therefore questionable as a unidimensional attitude. The other four scales--Family Independence, Peer Independence, Cultural Sophistication and Social Conscience--were as reliable for black students as for the white ETS standardization
group. Their results indicate that the four attitudes are internally consistent, cohesive factors. Thus, changes in the Liberalism scores may not mean necessary change in this attitude. There were no significant differences between sexes and between the five predominantly black colleges they studied.

Dressel (1972) and Gough (1972) support the use of the CSQ as a valuable research instrument for assessing overall trends within large subgroups but not for individual diagnosis. It will give administrators at colleges an indication of the kinds of students being admitted. Improvements in shortening the length of the instruments and conducting more validity studies will add to the CSQ's value.

**Biographical Questionnaire**

Since HEOPs were a special group of students new in university settings it was felt that standardized and established instruments might miss some data which would be relevant in assessing their experiences from 1968 to 1972. Therefore, the author developed a short Biographical Questionnaire to assess patterns of enrollment, activities, future plans and other comments. Items were selected for inclusion after consultation with knowledgeable judges. This data plus enrollment data from the Registrar's Office
at OSU provided persistence information for the students studied. A sample is located in Appendix A.

Administration and Procedures

Summer 1968 Administration

In July 1968 permission was obtained from the Director of HEOP to administer the TSCS to the 168 students in the program. The TSCS was administered to all students in their Communications classes by the writer and the Counseling Coordinator of HEOP, a doctoral student in counseling psychology. Those students who were not in class for the testing were contacted individually and asked to make an appointment to take the test in a classroom setting.

Students were told that the TSCS was an inventory which would yield information hopefully valuable to future planners of programs similar to HEOP. From the Summer 1968 Administration data was gathered on 160 of the 168 students. The remaining students had either dropped out of the program or did not show up for testing in spite of numerous attempts to encourage them.

The purpose of this administration was to pilot the TSCS instrument and give preliminary data which could be used in determining whether the HEOP group would be appropriate for dissertation study. Two things were discovered.
First, the monitors found the answer sheet format used by the TSCS to be confusing to subjects and were especially careful to check to see that all items had been answered in the appropriate place. This was primarily caused by the light and shaded answer blanks on the answer sheet which correspond to every other page of the test booklet. This format requires that subjects skip every other space on the answer sheet in going down a page of items and then go back to the spaces left blank and use them for responses to the next page of items. Many students were filling in consecutive instead of alternate spaces. Therefore, instrument response format was changed for succeeding administrations. Second, the writer and adviser agreed that self concept data on these particular students would indeed be valuable for dissertation study on the basis of the lack of information on such persons.

Spring 1969 Administration

In April 1969 HEOPs who were enrolled at OSU or who had most recently been at the university but were not currently enrolled were contacted by letter on April 17, 1969 (sample in Appendix C) to ask for their cooperation in answering some questionnaires. This was done under the auspices of and with the support of University College,
the original co-sponsor of the HEOP Program in Summer 1968. Students were asked to come to a classroom one evening. A sizeable number did not show up for the evening session and were followed up and tested individually or in small groups until the end of the Spring Quarter (early June 1969). Sixty-eight students were found to be enrolled at OSU in Spring 1969. Of these 68, 57 participated in the follow up. The others did not wish to participate or had left school in the meantime.

The two instruments administered were the TSCS, in a modified format, and the CSQ-Part 2 modified as described in the instrumentation section of this chapter. Since the TSCS answer sheet had confused many subjects in Summer 1968 it was determined that another answer sheet format might reduce the confusion and obtain the necessary responses more accurately. Item order of the original TSCS was preserved but the items were numbered in consecutive order and mimeographed so that a subject could answer the 100 items in the exact order as they appeared. A computer scoring answer sheet was used on which responses could also be entered in consecutive order. The above procedure necessitated a new computer scoring program for the TSCS.

The author worked with Thomas G. Whitney of the Instruction
and Research Computer Center at OSU to develop a scoring program for the C&R Form of the TSCS. It was expected that this mechanized scoring system would eliminate errors made by hand scoring the instruments. Several other users of the TSCS in research attested to the difficulty of hand scoring large quantities of the instrument due to human errors. The instrument's answer sheet and profile packet are convenient for the clinician attempting to quickly assess one individual. However, when used for research the scoring becomes an unwieldy task subject to errors due to the reversals of values of responses, inversion of some raw scores on the profiles and the number of summing and counting tasks. In checking the accuracy of TSCS scoring which had been done by a reliable, paid, work-study student, the author found three errors among the first four persons randomly picked to have their tests checked with the computer scoring program which substantiated the need for mechanized scoring.

At the same time in Spring 1969, Comparison Group students (COMs) were approached by doctoral students in counseling psychology and administered the TSCS and CSQ-Part 2 modified. Students were told that we were attempting to collect data on college students against which we
could compare other groups of students. They were told
the information would be strictly confidential. For both
HEOPs and COMs, instrument order was varied so that some
took the CSQ first, then the TSCS, and vice versa. Sixty-
five (65) COMs were measured on the TSCS and CSQ.

Spring 1972 Administration

A three-year follow up of HEOPs and COMs was made in
Spring 1972 to collect information on self concept change
and change of attitudes and student functioning. For HEOPs
who were also measured in Summer 1968, the 1972 administration
provided four year follow up data.

As many students as possible from both HEOP and COM
groups were identified and located. Most subjects were
currently enrolled at OSU but some had recently severed
enrollment and were still in the area. All original
HEOPs were searched in order to identify those HEOPs who may
not have attended OSU initially. Letters were sent to all
students requesting that they participate in the follow
up study (sample in Appendix C). Some subjects had grad-
uated and were attending graduate school at OSU or were
working. Others were not in school at the moment; some had
plans to return; some did not. It was felt that current
enrollment at OSU was not a necessary criterion since the
data sought was not directly related to it. That is, changes or development of self concept and attitudes after three and four years were more important to observe regardless of whether the subject was enrolled or not. Likewise, the biographical information would show a trend of activity and future plans and its meaningfulness was not contingent upon enrollment.

From April 24, 1972 through early July 1972 subjects came to a classroom setting to be tested by the researcher and trained assistants. In some cases allowance was made for the subject to take the instruments home and return them by mail or in person. Instrument order was varied again. A vigorous attempt was made to contact and recontact subjects since every subject was a valuable source of longitudinal information. In July a reasonably exhaustive attempt had been made and it was determined that the peak response period had passed.

On the basis of these follow up efforts, usable data was gathered on the following subjects:

13 HEOPs who had participated in Summer 1968 (TSCS) and Spring 1969 (TSCS & CSQ)

10 HEOPs who had participated in Summer 1968 (TSCS) but were either not at OSU or did not show up to be tested in Spring 1969

34 COMs who had participated in Spring 1969 (TSCS & CSQ).
In addition to the above, data was available on the 42 HEOPs who were measured in Summer 1968 (TSCS) and Spring 1969 (TSCS & CSQ). These students either did not show up for follow up in 1972 or were not in the OSU area at that time. Longitudinal information on self concept during the 1968-69 freshman year and CSQ measures during the supposed third quarter of the freshman experience was available.

**Treatment of the Data—Statistical Analyses**

Nonparametric statistical tests were employed to test the hypotheses because the data on both instruments (TSCS & CSQ) are ordinal and not necessarily normally distributed. Practically all the studies reviewed on the two instruments employ parametric tests. There is dubious validity to using these tests since the data do not always meet the assumptions of interval scaling and normality of underlying populations. Many researchers utilize parametric techniques because it has only been within the past 25 years that nonparametric statistical methods have evolved into having a significant role in our statistics arsenal. Hollander and Wolfe (1973), Whitney (1948), Siegel (1959) and Aitkin (1971) attest to the efficiency and power of nonparametric statistical tests. Whitney even shows that in some instances nonparametric tests are superior even
for data which have met parametric assumptions. Hollander and Wolfe acknowledge that much of the reservation in using these methods stems from the seeming ignorance of the raw data in favor of ranks. However, theoretical examination has substantiated the near-equal efficiency of these methods when there is normality and the superior efficiency of non-parametric methods when the normal distribution assumption cannot be met. Peterson (1968) makes special note that the CSQ scales are ordinal measures and should not be treated as interval measures.

Measures used to test hypotheses were:

1. The Wilcoxon Matched-Pairs Signed-Ranks Test (Siegel, 1959) will be used to test differences in self concept and CSQ scores of HEOPs and COMs in 1968, 1969 and 1972.

2. The Mann-Whitney U Test (Siegel, 1959) will be used to test differences in TSCS and CSQ scores between HEOPs and COMs at different points in time.

3. The Mann-Whitney U Test will be used to test differences on TSCS and CSQ scores between females and males of the same group at different points in time.

Biographical information and persistence data will be collected and presented descriptively.
CHAPTER IV

RESULTS AND DISCUSSION

Groups Involved in Statistical Analyses

Because the study covered a period of four years attrition accounted for reduction in the number of subjects available. Subgroups of subjects utilized in the analyses are described in detail in Table 1. Every attempt was made to preserve the maximum number of usable subjects and therefore the n's may vary as some instruments were voided.

Graphically, the groups used in longitudinal and one-point-in-time analyses may be viewed as follows:

<table>
<thead>
<tr>
<th>1968</th>
<th>1969</th>
<th>1972</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ha68</td>
<td>---</td>
<td>Ha69</td>
</tr>
<tr>
<td>Hb68</td>
<td>---</td>
<td>Hb69</td>
</tr>
<tr>
<td>Hc68</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Hc*68</td>
<td>---</td>
<td>Hc*72</td>
</tr>
<tr>
<td>Hd68</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Ce69</td>
<td>---</td>
<td>Ce*72</td>
</tr>
<tr>
<td>Ce*69</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Longitudinal analyses were made on those groups with more than one measure. One-shot analyses were made
between groups at the three given points in time, 1968, 1969 and 1972. The code used in labelling groups is:

H = HEOP

a = Ss measured in 1968, 1969 and 1972
b = Ss measured in 1968 and 1969
c = Ss measured in 1968
c* = Ss of Hc and Hd measured in 1968 and 1972
d = Ss measured in 1968

C = COM

e = Ss measured in 1969
e* = Ss of Ce measured in 1969 and 1972

68 = 1968
69 = 1969
72 = 1972

Briefly, the groups are of three basic types—1968 measures, 1969 measures and 1972 measures. In 1968 there were only HEOPs but they were subdivided into three groups according to what they did after HEOP. Ha68 Ss went on to OSU and had 1969 and 1972 measures—they were followed the most extensively. Hb68 Ss went on to OSU and had a 1969 measure. Hc68 Ss went on to OSU but did not have a 1969 measure. Hd68 Ss did not go to OSU in the Fall. In 1969 there were HEOP and COM groups. Ha69 and Hb69 Ss had the 1968 measure. Ce69 Ss were COMs being measured for the first time. In 1972 Ce*72 Ss were COMs who had a 1969 measure; Ha72 Ss
had 1968 and 1969 measures; Hc*72 Ss had a 1968 measure
and had belonged to Hc68 or Hd68.

Table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
<th>TSCS/MWU</th>
<th>TSCS/WSR</th>
<th>CSQ/MWU</th>
<th>CSQ/WSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ha</td>
<td>HEOPs who have 1968 TSCS &amp; TSCS &amp; CSQ in 1969 &amp; 1972</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Hb</td>
<td>HEOPs who have 1968 TSCS &amp; 1969 TSCS &amp; CSQ</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>--</td>
</tr>
<tr>
<td>Ha+b68</td>
<td>HEOPs of Ha &amp; Hb in 1968</td>
<td>55</td>
<td>55</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Ha+b69</td>
<td>HEOPs of Ha &amp; Hb in 1969</td>
<td>57</td>
<td>55</td>
<td>56</td>
<td>--</td>
</tr>
<tr>
<td>Hc</td>
<td>HEOPs who have 1968 TSCS &amp; entered OSU but did not come in 1969</td>
<td>11</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Hc*</td>
<td>HEOPs of Hc or Hd who have 1968 TSCS and 1972 TSCS &amp; CSQ</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>--</td>
</tr>
<tr>
<td>Ha+c*72</td>
<td>HEOPs of Ha &amp; Hc* in 1972</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>--</td>
</tr>
<tr>
<td>Hd</td>
<td>HEOPs who have 1968 TSCS but did not go to OSU in Autumn 1968</td>
<td>94</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Ce</td>
<td>COMs who have 1969 TSCS and CSQ</td>
<td>65</td>
<td>--</td>
<td>64</td>
<td>--</td>
</tr>
<tr>
<td>Ce*</td>
<td>COMs of Ce who have 1969 &amp; 1972 TSCS &amp; CSQ</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>33</td>
</tr>
</tbody>
</table>
Specific Hypotheses Tested and Results

In testing the hypotheses alpha level was set at $p < .10$ for all hypotheses so that more results indicating differences could be gathered. Because this research is exploratory it was felt that future studies could require higher alpha levels. Complete tabular presentation of comparisons made in this Chapter on the TSCS and CSQ using the Mann-Whitney U test (MWU) and the Wilcoxon Matched-Pairs Signed-Ranks test (WSR) are found in Appendix B.

Longitudinal Analysis of the Self Concept

All longitudinal analyses utilized the WSR on the TSCS.

1.1 $H_0$: Self concept of HEOPs as measured by the TSCS does not differ for the same individuals between Summer 1968 and Spring 1969.

$H_1$: Self concept of HEOPs as measured by the TSCS does differ for the same individuals between Summer 1968 and Spring 1969.

Table 2 presents a summary of TSCS variables on which there was a significant difference over the time period of one year. The groups studied are explained at the beginning of this Chapter.

A. For the 13 HEOPs who were followed most over the four year period (Group Ha) the amount of change taking place during the first year at OSU (Ha68 vs. Ha69) indicates
Longitudinal Significant Offerances and correlation of Change within REO and CONBatman 1968, 1969, and 1972 on TSC Variables Using the Wilcoxon-Mann-Whitney Rank Test

Summary of Longitudinal Significant Differences and Direction of Change Within TSC and CON Between 1969 and 1972

Table 3
significant differences on the following:

\[ p < .05 \] on Net Conflict Column C (personal self)

\[ p < .10 \] on True/False Ratio, Column C P (personal self), Defensive Positive, Net Conflict Row 2 (self-satisfaction), Total Conflict Row 2, and Total Conflict Column D (family self)

Figure 1 graphically presents the profiles of these 13 Ss in 1968 and 1969 and should be referred to in order to get a composite view of this group. The specific significant differences indicate that:

HEOPs in 1968 had a higher tendency to agree with items (response set). The actual levels of T/F in 1969 showed HEOPs with a more balanced self-definition of affirming what one is and eliminating what one is not \((p < .10)\).

HEOPs in 1969 had more positive regard for their personal worth and adequacy than in 1968 \((CC P, p < .10)\).

HEOPs in 1969 became less defensive \((DP, p < .10)\) although in both 1968 and 1969 HEOPs had a normal amount of defensiveness.

HEOPs in 1969 reported less conflict, contradiction and confusion in self-satisfaction \((NC R2, TC R2, p < .10)\), personal self \((NC CC, p < .05)\), and family self \((TC CD, p < .05)\).

B. Considering the 42 HEOPs who were followed for one year from 1968 to 1969 \((Hb68 vs. Hb69)\) as they entered OSU, significant differences occurred as follows:

\[ p < .001 \] on Personality Integration, Total Conflict Row 2 (self-satisfaction) and 2's
Figure 1.—Longitudinal Profiles of Ha HEOPs in 1968, 1969 and 1972 (n=13)
p < .01 on Total Conflict, Total Variability, Column Total Variability and 5's

p < .05 on Row 1 P (identity), Distribution, and Total Conflict Column A (physical self), Column C (personal self) and Column E (social self)

Figure 2 presents profiles of these 42 Ss of Group Hb. The significant differences indicate that:

HEOPs in 1969 reported less conflict, contradiction and confusion in their total self-perception (TC, p < .001), and in their self-satisfaction (TC R2, p < .001), and self-perceptions in the areas of family self (TC CA, p < .05), personal self (TC CC, p < .05) and social self (TC CE, p < .05).

HEOPs in 1969 significantly increased their level of adjustment (PI, p < .001).

HEOPs in 1969 became less variable in their self-concepts and were moving toward more unity and integration instead of compartmentalization of the self for their total self concept (TV, p < .01) and for their self-perceptions within the columns (CTV, p < .01). Well integrated persons usually score well below the mean on the V scores.

HEOPs in 1969 became less certain or less rigid about their self-perceptions (D, p < .05; 5's, p < .01; 1's, p < .05; 2's, p < .001).

HEOPs in 1969 decreased in their level of self-esteem on the identity score (R1 P, p < .05).

A general look at the profiles of the two groups (Ha & Hb) in 1968 and 1969 indicates that they both show some confusion and contradiction in the self concept, fairly low self-esteem, variability between areas of self-perception and some resemblance to maladjusted persons.
Figure 2.—Longitudinal Profiles of Hb HEOPs in 1968 and 1969 (n=42)
C. Looking at the total of 55 HEOPs who were followed for one year, 1968 to 1969 (Ha+b68 vs. Ha+b69) we find similar differences for the group as a whole as for the Hb group discussed in section B. above. Table 2, Column 3 lists the specific significant differences.

2.1 $H_0$: Self concept of HEOPs as measured by the TSCS does not differ between Spring 1969 and Spring 1972.

$H_1$: Self concept of HEOPs as measured by the TSCS does differ between Spring 1969 and Spring 1972.

Table 2, column 4 presents a summary of the significant differences and direction of change over the three year time period. The Ss on whom data is available are the 13 HEOPs of Group Ha. The comparison of their self concept scores over the 1968-1969 time period is discussed under Hypothesis 1.1 of this chapter. This comparison will be concerned with the three year time period which followed. The specific comparison will be between Spring 1969 data (Ha69) and Spring 1972 data (Ha72). Significant differences occurred on the following:

- $p < .01$ on Total P, Row 2 P (self-satisfaction), Row 3 P (behavior), Column B P (moral-ethical self), Column D P (family self), General Maladjustment, and Total Conflict Row 3 (behavior)
p < .05 on Row 1 P (identity), Column C P (personal self), Column E P (social self), Total Variability, Distribution, Defensive Positive, Personality Disorder, and Net Conflict Column D (family self)

p < .10 on Self Criticism, True/False Ratio, Total Net Conflict, Column A P (physical self), Column Total Variability, Net Conflict Row 1 (identity)

Figure 1 presents profiles of these 13 Ss of Group Ha. The significant differences indicate that from 1969 to 1972:

HEOPs in 1972 reported less conflict, contradiction and confusion in their overall self-perception (TNC, p < .10), and in areas of identity (NC R1, p < .10), family self (NC CD, p < .05), and behavior (TC R3, p < .01). Actual levels were within the normal range for both years.

HEOPs in 1972 reported greater self-esteem in their overall self-concept (TP, p < .01), the three positive scores for internal frames of reference (identity, R1 P, p < .05; self-satisfaction, R2 P, p < .01; and behavior, R3 P, p < .01) and the positive scores for all five external frames of reference (physical self, CA P, p < .10; moral-ethical self, CB P, p < .01; personal self, CC P, p < .05; family self, CD P, p < .01; and social self, CE P, p < .05).

HEOPs in 1972 became less defensive (DP, p < .05).

HEOPs in 1972 were more normally adjusted on a general index of adjustment-maladjustment (GM, p < .01). Note that an increase in DP, GM and PD is inverted on the profile sheet.

HEOPs in 1972 decreased in their score on the personality disorder scale which is an index of personality defects and weaknesses (PD, p < .05).
HEOPs in 1972 increased in their capacity for openness and self-criticism \( (SC, p < .10) \).

HEOPs in 1969 had a higher tendency to agree with items \( (T/F, p < .10) \) although the actual T/F levels in 1969 and 1972 indicated a balanced process of self-definition, affirming and dis-affirming.

HEOPs in 1972 had less variable self concepts \( (TV, p < .05; CTV, p < .10; RTV, p < .05) \).

HEOPs in 1972 were more certain about their self concepts \( (D, p < .05; 3's, p < .05; 1's, p < .10) \).

3.1 \( H_0 \): Self concept of COMs as measured by the TSCS does not differ between Spring 1969 and Spring 1972.

\( H_1 \): Self concept of COMs as measured by the TSCS does differ between Spring 1969 and Spring 1972.

Table 2, column 5 presents a summary of the significant differences and direction of change over the three year time period for the same individuals. Ss were the 34 COMs of Group Ce* who were followed up in 1972 \( (Ce^*69 \text{ vs. Ce}^*72) \). Significant differences occurred on the following:

\[ p < .01 \text{ on Column D P (family self)} \]

\[ p < .05 \text{ on Total P, Column B P (moral-ethical self), General Maladjustment, Psychosis, and Personality Disorder} \]

\[ p < .10 \text{ on Row 2 P (self-satisfaction), Row 3 P (behavior), and Net Conflict Row 3 (behavior)} \]

Figure 3 presents profiles of the 34 COMs of Group Ce*. The significant differences indicate that from
1969 to 1972:

COMs in 1972 reported greater self-esteem in their overall self concepts (TP, \( p < .05 \)), Row 2 (self-satisfaction, \( p < .10 \)), Row 3 (behavior, \( p < .10 \)), Column B (moral-ethical self, \( p < .10 \)), and Column D (family self, \( p < .01 \)).

COMs in 1972 were more normally adjusted on a general index of adjustment-maladjustment (GM, \( p < .05 \)).

COMs in 1972 decreased their score on the psychosis scale which differentiates psychotic patients from other groups (PSY, \( p < .05 \)). Both 1969 and 1972 levels were within the normal range.

COMs in 1972 decreased their score on the personality disorder scale which is an index of personality defects and weaknesses (PD, \( p < .05 \)).

COMs in 1972 decreased in the amount of conflict in the area of behavior (NC R3, \( p < .10 \)).

4.1 \( H_0 \): Self concept of HEOPs as measured by the TSCS does not differ between Summer 1968 and Spring 1972.

\( H_1 \): Self concept of HEOPs as measured by the TSCS does differ between Summer 1968 and Spring 1972.

A. Table 2, column 6 presents a summary of the significant differences and direction of change over the almost four year period from Summer 1968 to Spring 1972. Ss were the 13 HEOPs of Group Ha who were followed up in 1972 (Ha68 vs. Ha72). Significant differences occurred on the following scales:
Figure 3.—Longitudinal Profiles of Ce* COMs in 1969 and 1972 (n=34)
p < .01 on Column D P (family self), Row Total Variability, General Maladjustment, Total Conflict Row 2 (self-satisfaction), Total Conflict Column D (family self)

p < .05 on True/False Ratio, Total Net Conflict, Total Conflict, Total P, Row 2 P (self-satisfaction), Row 3 P (behavior), Column C P (personal self), Total Variability, Column Total Variability, Personality Disorder, Net Conflict Row 2 (self-satisfaction), Net Conflict Column A (physical self), Net Conflict Column B (moral-ethical self), and Net Conflict Column D (family self)

p < .10 on Row 1 P (identity), Column B P (moral-ethical self), Psychosis, Net Conflict Row 3 (behavior), Total Conflict Row 3 (behavior), Total Conflict Column A (physical self), Total Conflict Column B (moral-ethical self)

Figure 1 presents profiles of the 13 HEOPs in Group Ha for 1968 and 1972. The significant differences indicate that:

HEOPs in 1972 reported significantly less conflict, contradiction and confusion in their overall self-perception (TNC, p < .05 & TC, p < .05), and in the particular conflict subscores related to self-satisfaction (NC R2, p < .05; TC R2, p < .01), behavior (NC R3, p < .10; TC R3, p < .10), physical self (NC CA, p < .05; TC CA, p < .10), moral-ethical self (NC CB, p < .05; TC CB, p < .10), and family self (NC CD, p < .05; TC CD, p < .01).

HEOPs in 1972 reported greater self-esteem in their overall self concept (TP, p < .05), the three positive scores for internal frames of reference (identity, R1 P, p < .10; self-satisfaction, R2 P, p < .05; behavior, R3 P, p < .05), and three external frames of reference (moral-ethical self, CB P, p < .10; personal self, CC P, p < .05; family self, CD P, p < .01).
HEOPs in 1968 had a higher tendency to agree with items (T/F, p < .05) although actual levels of T/F for 1968 and 1972 show reasonably balanced processes of self-definition.

HEOPs in 1972 were much less variable in their self concepts and were moving toward more unity and integration instead of segmentation of the self. Well integrated persons usually score well below the mean (TV, p < .05; CTV, p < .05; RTV, p < .01).

HEOPs in 1972 used fewer 3's (p < .05) and more 1's (p < .10).

HEOPs in 1972 were significantly more adjusted on the GM scale (p < .01).

HEOPs in 1972 significantly decreased their scores on the psychosis scale (p < .05) although the 1968 level was within the normal range.

HEOPs in 1972 decreased their score on the personality disorder scale (p < .05) which is an index of personality defects and weaknesses.

B. Table 2, column 7 presents a summary of significant differences and direction of change over the four year period for 10 HEOPs of Group Hc* who were originally in Groups Hc68 or Hd68 and who were followed up in 1972 and became labelled Group Hc*72. Many similar changes occurred with the Hc*68 vs. Hc*72 comparison as did with the Ha68 vs. Ha72 comparison. The only difference between Ha and Hc* is that the Ha group also had a Spring 1969 measure whereas Group Hc* persons either were not at OSU during Spring 1969 or did not show up for measurement.
Both groups are HEOPs and these two comparisons of Hypothesis 4.1 intend to cover the 1968-1972 period. The 10 Ss in the Group Hc*68 vs. Hc*72 comparison showed significant differences on the following scales:

- \( p < .01 \) on True/False Ratio, Total Net Conflict, Total Conflict, Row 2 P (self-satisfaction), Column C P (personal self), Total Variability, and Column Total Variability

- \( p < .05 \) on Total P, Column B P (moral-ethical self), General Maladjustment, Personality Disorder, Net Conflict Column B (moral-ethical self), Total Conflict Row 2 (self-satisfaction), Total Conflict Column C (personal self), Total Conflict Column D (family self), Total Conflict Column E (social self)

- \( p < .10 \) on Row 1 P (identity), Row Total Variability, Defensive Positive and Neurosis

Figure 4 presents profiles of the 10 HEOPs of Hc*. The significant differences indicate that from 1968 to 1972:

- HEOPs in 1972 reported significantly less conflict, contradiction and confusion in their overall self-perception (TNC, TC, \( p < .01 \)).

- HEOPs in 1972 also reported less conflict in specific areas such as moral-ethical self (NC CB, \( p < .05 \)), self-satisfaction (TC R2, \( p < .05 \)), personal self (TC CC, \( p < .05 \)), family self (TC CD, \( p < .05 \)), and social self (TC CE, \( p < .10 \)).

- HEOPs in 1972 reported greater self-esteem in their overall self concept (TP, \( p < .05 \)), and in certain areas (identity, R1 P, \( p < .10 \); self-satisfaction, R2 P, \( p < .01 \); moral-ethical self, CB P, \( p < .05 \); personal self, CC P, \( p < .01 \)).
Figure 4. Longitudinal Profiles of Hc* HROPs in 1968 and 1972 (n=10)
HEOPs in 1968 had a higher tendency to agree with items (T/F, $p < .01$).

HEOPs in 1972 were less variable in their self concepts and were moving toward better integration of the self (TV, CTV, $p < .01$; RTV, $p < .10$).

HEOPs in 1972 became less defensive (DP, $p < .10$).

HEOPs in 1972 were more adjusted (GM, $p < .05$).

HEOPs in 1972 decreased their score on the personality disorder score (PD, $p < .05$).

HEOPs in 1972 responded less like neurotic patients ($N$, $p < .10$).

**One-shot Comparisons Between COMs and HEOPs and Within HEOPs**

All one-shot-in-time comparisons utilized the MWU on the TSCS.

5.1 **$H_0$**: There will be no significant differences in self concept between HEOPs and COMs in Spring 1969 on the TSCS.

**$H_1$**: There will be significant differences in self concept between HEOPs and COMs in Spring 1969 on the TSCS.

Table 3 presents a summary of TSCS variables on which there was a significant difference between HEOPs and COMs in Spring 1969. Column 1 shows the Ha+b69 vs. Ce69 significant differences and Figure 5 illustrates TSCS profiles of the groups. Surprisingly, the two groups were fairly similar with significant differences on the following:
Table 3
Summary of Significant Differences and Group with Higher Score on TSCS Variables Using the Mann-Whitney U Test for One-Shot Comparisons Between HEOPs and COKs and Within HEOPs

<table>
<thead>
<tr>
<th>TSC Score</th>
<th>Ha+b69 (n=57) v. Ce69 (n=65)</th>
<th>Ha+b68 (n=55) v. Ha+b68 (n=94)</th>
<th>Ro68 (n=11) v. Ro68 (n=94)</th>
<th>Ro72 (n=10) v. Ce72 (n=34)</th>
<th>Ce72 (n=14) v. Ce72 (n=14)</th>
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P<.10, *p<.05, **p<.01, ***p<.001, two-tailed probabilities
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Figure 5.—Comparison of 1969 KEOPs and COKs
p < .01 on Total Conflict Column D (family self)

p < .05 on Row 2 P (self-satisfaction), Column D P (family self), Column E P (social self), Neurosis, and Net Conflict Row 3 (behavior)

p < .10 on Total P

The significant differences indicate that in 1969:

COMs reported greater self-esteem in their overall self concept than HEOPs (TP, p < .10).

COMs reported greater positive scores on the self-satisfaction frame of reference than HEOPs (R2 P, p < .05).

COMs reported greater positive scores on the family self external frame of reference than HEOPs (CD P, p < .05) indicating perhaps greater feeling of adequacy as a family member and with close friends.

COMs reported greater positive scores on the social self external frame of reference than HEOPs (CE P, p < .05) indicating a greater sense of worth and adequacy in interaction with others in general.

HEOPs scored significantly higher on the Neurosis Scale (p < .05) than COMs which indicates greater similarity to the neurotic patient group than COMs. However, both groups' scores are within the normal range—they are just significantly different from each other.

HEOPs were more contradictory on responses regarding their behavior (NC R3, p < .05) and their family selves (TC CD, p < .01).

6.1 H₀: There will be no significant differences in self concept between HEOPs and COMs in Spring 1972 on the TSCS.
H₁: There will be significant differences in self concept between HEOPs and COMs in Spring 1972 on the TSCS.

Table 3, columns 5, 6 and 7 presents a summary of TSCS variables on which there was a significant difference between HEOPs and COMs in Spring 1972. Figure 6 illustrates the profiles of the groups. Since there were two subgroups of HEOPs in 1972 (Ha72 & Hc*72) analyses were run comparing each with the COMs (Ce*72) separately. Also all HEOPs (Ha+c*72) were compared with COMs in 1972 (Ce*72) which is graphically shown on Figure 7. Significant differences between Hc*72 and Ce*72 were:

\[ p < .01 \] on Total Conflict Column C (personal self)

\[ p < .05 \] on Row 1 P (identity)

\[ p < .10 \] on Net Conflict Column A (physical self) and Net Conflict Column C (personal self)

Between Ha72 and Ce*72, differences occurred on:

\[ p < .01 \] on Row Total Variability

\[ p < .10 \] on Total Variability

Between Ha+c*72 and Ce*72, differences occurred on:

\[ p < .05 \] on Row 1 P (identity), Row Total Variability and Total Conflict Column C (personal self)

\[ p < .10 \] on Total Conflict and Total Conflict Row 3 (behavior)
Figure 6: Comparison of 1972 COMs and Two HEOP Groups.
Figure 7.—Comparison of 1972 COMs and All HEOPs
The significant differences between HEOPs and COMs in 1972 indicated that:

HEOPs in Hc*72 and all HEOPs (Ha+c*72) had significantly higher positive scores for identity (R1 P, p < .05) than COMs.

COMs had significantly higher variability in their total self concept (TV, p < .10) and across the rows (RTV, p < .01) than HEOPs in Ha72. The latter also held when COMs were compared with all HEOPs (Ha+c*72, p < .01).

COMs were more confused about their self concepts as a whole (TC, p < .10), regarding their behavior (TC R3, p < .10) and their personal selves (TC CC, p < .05). Confusion also appeared when COMs were compared with Hc*72 (NC CA, p < .10; NC CC, p < .10; TC CC, p < .01).

7.1 \( H_0 \): There will be no significant differences in self concept between HEOP groups Ha+b68, Hc68 and Hd68 in Summer 1968 on the TSCS.

\( H_1 \): There will be significant differences in self concept between HEOP groups Ha+b68, Hc68 and Hd68 in Summer 1968 on the TSCS.

Table 3, columns 2, 3 and 4 presents a summary of TSCS variables on which there was a significant difference between groups Ha+b68, Hc68 and Hd68. Figure 8 illustrates profiles of the groups. This analysis was made in order to confirm the HEOP Program's description of the types of students who went on to OSU in Autumn 1968. Halverson (1970), indicates that those who did not go on to OSU may have gone to another institution or to work. Since
Tennessee Self Concept Scale

PROFILE SHEET

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Figure 8.--Comparisons Within 1968 HEOPs
it was not possible to differentiate these two subgroups within group Hd68, the writer wished to find out whether these groups were fairly alike in self concepts initially. The findings substantiate the fact that HEOPs in 1968 were fairly similar in terms of self concepts.

There were no significant differences on TSCS variables between HEOPs who went on to OSU in Autumn 1968 and had a Spring 1969 measure (Ha+b68) and HEOPs who did not attend OSU in Autumn 1968 (Hd68).

Between Hc68 and Ha+b68 differences were:

p < .05 on Column A P (physical self), 3's, and the Neurosis scale

p < .10 on Total P, Column E P (social self), Distribution, 1's, and Defensive Positive

This indicated that:

Hc68 Ss had a greater level of overall self-esteem than Ha+b68 Ss (TP, p < .10).

Hc68 Ss had higher positive scores on physical self than Ha+b68 Ss (CA P, p < .05).

Hc68 Ss had higher social self scores than Ha+b68 Ss (CE P, p < .10).

Hc68 Ss had higher distribution scores than Ha+b68 Ss (D, p < .10) indicating more certainty in the self concept.

Hc68 Ss had less "3" responses to items than Ha+b68 Ss (p < .05).
Hc68 Ss had more "1" responses to items than Ha+b68 Ss (p < .10).

Hc68 Ss were more defensive than Ha+b68 Ss (DP, p < .10).

Hc68 Ss had higher scores on Neurosis than Ha+b68 Ss (p < .05).

Between Hc68 and Hd68 differences were:

p < .05 on 3's

p < .10 on Column A P (physical self)

This indicated that:

Hc68 Ss had higher esteem regarding their physical selves than Hd68 Ss (CA P, p < .10).

Hc68 Ss had less "3" responses to items than Hd68 Ss (p < .05).

Comparisons Between Males and Females Within Various Groups

All comparisons of females and males utilized the MWU on the TSCS.

8.1 H₀: There will be no significant differences in self concepts of females and males in the Summer 1968 HEOP groups on the TSCS.

H₁: There will be significant differences in self concepts of females and males in the Summer 1968 HEOP groups on the TSCS.

Table 4 presents a summary of TSCS variables on which there was a significant difference between females and males in HEOP groups of 1968 (Ha+b68, Hc68, Hd68). Figure 9 graphs group profiles.
Table 4
Summary of Significant Differences Between Females and Males and Sex with Higher Score on TCS Variables Using the Mann-Whitney U Test

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</tbody>
</table>

*p<.10, *p<.05, **p<.01, ***p<.001, two-tailed probabilities
Figure 9.—Comparisons Between Males and Females Within 1968 HEOP Groups
Groups Hc68 and Hd68 showed few significant differences between females and males:

Females had higher Moral-Ethical self scores than Males in Hc68 and Hd68 (CB $p < .10$).

Females were lower on the Personality Disorder scale than Males of Hc68 ($p < .05$) and Hd68 ($p < .10$).

Males of Hd68 scored higher on the Psychosis scale than Females ($p < .10$).

Females of Hd68 showed more contradiction in their behavior (NC R3, $p < .10$) and personal selves (NC CC, $p < .05$).

Within Ha+b68 there were quite a few significant differences between females and males:

Females had a higher level of overall self-esteem (TP, $p < .05$) and higher positive scores on Identity (R1 P, $p < .01$), Behavior (R3 P, $p < .01$) and Moral-Ethical Self (CB P, $p < .01$).

Males indicated more variability of self concept across the rows (RTV, $p < .10$), while Females used "4" responses to items more frequently ($p < .10$).

Females were less similar to patients with personality defects and weaknesses (PD, $p < .01$) and maladjusted persons (GM, $p < .01$) than Males.

Females scored higher on the Personality Integration scale ($p < .05$).

Males showed more conflict in their personal selves (NC CC, $p < .05$) and physical selves (TC CA, $p < .01$).

Females were more conflicting regarding their family selves (NC CD, $p < .10$).
9.1 $H_0$: There will be no significant differences in self concepts of females and males in the Spring 1969 HEOP groups on the TSCS.

$H_1$: There will be significant differences in self concepts of females and males in the Spring 1969 HEOP groups on the TSCS.

Table 4, column 4 indicates that within the Spring 1969 HEOPs (Ha+b69) females only differed from males on five variables:

- Females had higher positive scores regarding their identity (Rl P, $p < .10$).
- Males had higher Row Total Variability scores (RTV, $p < .10$).
- Females showed more conflict regarding their family selves (NC CD, $p < .01$) and personal selves (TC CC, $p < .10$), but males had more conflict on the Net Conflict Column C score (personal self, $p < .05$).

Figure 10 charts the profiles of these two groups.

10.1 $H_0$: There will be no significant differences in self concept between female and male COMs in Spring 1969 on the TSCS.

$H_1$: There will be significant differences in self concept between female and male COMs in Spring 1969 on the TSCS.

Table 4, column 5 indicates that the 1969 COMs were very similar also. Only three scales showed significant differences for females vs. males:
Figure 10.—Comparisons Between Males and Females Within 1969 HEDPs
Females used more "3" item responses than males (p < .10).
Males scored higher on the Psychosis scale (p < .01).
Males were more confused about their self-satisfaction (TC R2, p < .10).

Figure 11 illustrates profiles of males and females in this 1969 COM group. (Ce69).

11.1 $H_0$: There will be no significant differences in self concept between females and males in the COM group in Spring 1972 on the TSCS.

$H_1$: There will be significant differences on the TSCS and in self concept between females and males in the Spring 1972 COM group.

Table 4, column 6 indicates that the 1972 COMs (Ce*72) had few sex differences. Figure 12 indicates the profiles for males and females. Differences indicated:

Males were higher on positive scores on Behavior (R3 P, p < .05) and Personal Self (CC P, p < .05).

Males had greater certainty about their self concepts as witnessed by a higher Distribution score (p < .05) and more responses of "5" (p < .10). Females used more "4" (p < .10) and "3" (p < .05) responses.

Females fell higher on the Neurosis scale (p < .10).

12.1 $H_0$: There will be no significant differences in self concept between female and male HEOPs in Spring 1972 on the TSCS.

$H_1$: There will be significant differences in self concept between female and male HEOPs in Spring 1972 on the TSCS.
**Tennessee Self Concept Scale**

**PROFILE SHEET**

<table>
<thead>
<tr>
<th>T SCORE</th>
<th>POSITIVE SCORES</th>
<th>TOT.</th>
<th>EMPirical Scales</th>
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</thead>
<tbody>
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</tbody>
</table>

**Figure 11:** Comparisons between females and males within 1969 COMs

Ce69:
- Males (n=39)
- Females (n=26)
<table>
<thead>
<tr>
<th>COLUMN</th>
<th>SCORE</th>
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<tbody>
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<td>C</td>
<td>M</td>
</tr>
<tr>
<td>M</td>
<td>POSITIVE SCORES DISTRIBUTION EMPIRICAL SCALES</td>
</tr>
</tbody>
</table>

Figure 12 - Comparison between Females and Males within 1972 CoE
Table 4, column 7 indicates that within group Ha72:

Males had higher esteem of their moral-ethical selves (CB P, p<.10).

Males showed more variability across the rows (the external frames of reference) (RTV, p <.10).

Males also had more certainty in their self concepts (D, p <.10) and used more "5" (p <.05) and "1" (p<.10) responses.

Females were more well adjusted and scored higher on the Personality Integration scale (p<.05).

Females showed more confusion in their self-acceptance (NC R2, p<.10) and behavior (NC R3, p <.05).

Table 4, column 8 indicates that within group Hc*72:

Males had more positive scores on Behavior (p<.10) and Physical Self (p<.10).

Males had more certainty of self concepts (D, p <.10). Females used more "4" (p <.05) and "2" (p<.10) responses. Males used more "5" (p <.10) and "1" (p<.05) responses.

Males were more defensive (DP, p <.10) and less well adjusted (GM, p <.10).

Females were more well adjusted and integrated (PI, p <.01).

Females were more confused about their physical selves (NC CA, p <.05).

Looking at all the 1972 HEOPs together (Ha+c*72, n=23) we find the following differences which are from Table 4, column 9 and which may be viewed in Figure 13:
Figure 13.—Comparisons Between Females and Males Within 1972 HEOPs
Males had much higher overall self-esteem (TP, p < .10) and higher positive scores in practically all the areas of self-esteem—identity (R1 P, p < .10), self-satisfaction (R2 P, p < .05), behavior (R3 P, p < .10), physical self (CA P, p < .05), moral-ethical self (CB P, p < .10), personal self (CC P, p < .10), family self (CD P, p < .05).

Males were also more certain of their self concepts (D, p < .01) and used more "5" and "1" (p < .01) responses while females used more "2" and "4" (p < .05) responses.

Males, however, were more subtly defensive (DP, p < .05).

Females resembled the general maladjustment and neurotic patient groups more (GM, p < .05; N, p < .10) but were also more similar to the personality integration group (PI, p < .001).

Females showed more conflict in their behavior (NC R3, p < .05) and their physical self perception (NC CA, p < .05).

The high level of self-esteem reported by males could be distorted by defenses since the SC score is low and DP is high.

Longitudinal Analysis of the College Student Questionnaire

All longitudinal analyses used the WSR on the CSQ.

13.1 H₀: CSQ scores of the same HEOPs do not differ significantly between Spring 1969 and Spring 1972.

H₁: CSQ scores of the same HEOPs do differ significantly between Spring 1969 and Spring 1972.

Table 5 presents the significant differences and the direction of change for the 12 HEOPs (Ha69 vs. Ha72)
Table 5
Summary of Significant Differences and Direction of Change on CSQ Variables Within HEOPs and COMs Between 1969 and 1972 Using the Wilcoxon Matched-Pairs Signed-Ranks Test

<table>
<thead>
<tr>
<th>CSQ Scale</th>
<th>Ce<em>69 v. Ce</em>72 (n=33)</th>
<th>Ha69 v. Ha72 (n=12)</th>
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<td>69 &gt; 72*</td>
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<td>2. SA</td>
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<td>3. SM</td>
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<td>5. SH</td>
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<td>6. EI</td>
<td>69 &gt; 72**</td>
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<td>7. FI</td>
<td>72 &gt; 69</td>
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<td>8. PI</td>
<td>72 &gt; 69***</td>
<td>72 &gt; 69</td>
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<td>9. L</td>
<td>72 &gt; 69***</td>
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</tr>
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<td>10. SC</td>
<td>72 &gt; 69***</td>
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<td>11. CS</td>
<td>69 &gt; 72*</td>
<td></td>
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<tr>
<td>12. OSU</td>
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</tbody>
</table>

p < .10, *p < .05, **p < .01, ***p < .001 two-tailed probabilities
followed on the CSQ from 1969 to 1972. Figure 14 illustrates profiles of the two years. Results indicate:

There was a significant decrease in Satisfaction with Administration from 1969 to 1972 (p < .05).

There was a significant increase in Liberalism from 1969 to 1972 (p < .10).

There was a significant decrease in Overall Positive-ness toward OSU from 1969 to 1972 (p < .05).

14.1 H₀: CSQ scores of the same COMs do not differ significantly between Spring 1969 and Spring 1972.

H₁: CSQ scores of the same COMs do differ significantly between Spring 1969 and Spring 1972.

Table 5 presents the direction of change and the significant changes that took place with the 33 COMs who were measured twice with the CSQ (Ce*69 vs. Ce*72).
Figure 15 illustrates profiles for the two years. Results indicate:

COMs significantly decreased their Extracurricular Involvement from 1969 to 1972 (p < .01).

COMs became more independent of their families from 1969 to 1972 (FI, p < .10).

COMs significantly increased on the Liberalism dimension from 1969 to 1972 (p < .001).

COMs significantly increased on the Social Conscience dimension from 1969 to 1972 (p < .001).
Figure 14.—Longitudinal CSQ Profiles of HEOPs in 1969 and 1972

--- Ha69
--- Ha72

(n=12)
Figure 15.—Longitudinal CSQ Profiles of COMs in 1969 and 1972

- - - Ce*69  
- - - Ce*72  
(n=33)
One-shot Comparisons on the CSQ

One-shot comparisons on the CSQ utilized the MWU.

15.1 \( H_0 \): CSQ scores of COMs and HEOPs in Spring 1969 do not differ significantly.

\( H_1 \): CSQ scores of COMs and HEOPs in Spring 1969 do differ significantly.

Besides the longitudinal comparisons on the CSQ, a comparison between HEOP and COM groups was desired to see whether these disadvantaged students, at the end of approximately three quarters of college work, would have similar attitudes and satisfactions with the advantaged students.

Table 6 and Figure 16 illustrate the significant differences and profiles of the two groups (Ha+b69 vs. Ce69).

COMs had higher Satisfaction with Faculty and Satisfaction with Major scores (\( p < .01 \)).

COMs were more involved in extracurricular affairs (EI, \( p < .05 \)).

HEOPs were more independent of their peers (PI, \( p < .05 \)).

HEOPs were more socially concerned (SC, \( p < .001 \)).

COMs were more positive towards OSU (OSU, \( p < .01 \)).

16.1 \( H_0 \): CSQ scores of COMs and HEOPs in Spring 1972 do not differ significantly.

\( H_1 \): CSQ scores of COMs and HEOPs in Spring 1972 do differ significantly.
Table 6

Summary of Significant Differences and Group with Higher Score on CSQ Variables Using the Mann-Whitney U Test on HEOPs and COMs

<table>
<thead>
<tr>
<th>CSQ Scale</th>
<th>Ce69 v. Ha+b69</th>
<th>Ce<em>72 v. Hc</em>72</th>
<th>Ce*72 v. Ha72</th>
<th>Ce<em>72 v. Ha+c</em>72</th>
<th>Ha72 v. Hc*72</th>
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<td>8. PI</td>
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<td>H &gt; C</td>
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<tr>
<td>10. SC</td>
<td>H &gt; C***</td>
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<td>12. OSU</td>
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<td>C &gt; H*</td>
<td>C &gt; H**</td>
<td>C &gt; H**</td>
<td></td>
</tr>
</tbody>
</table>

p < .10, *p < .05, **p < .01, ***p < .001
two-tailed probabilities
Figure 16.—1969 CSQ Profiles of HEOPs and COMs

- Ce69 (n=64)
- Ha+b69 (n=56)
Reference to Table 6, columns 2, 3 and 4 indicates that in 1972 there were not as many differences between the students of both groups who were still at OSU as there were in Spring 1969. Figures 17 and 18 illustrate the group profiles.

COMs were still more positive towards OSU than HEOPs of group Hc*72 (p < .05) and group Ha72 (p < .01).

HEOPs of Ha72 were more satisfied with students (SS, p < .05).

HEOPs of Ha72 were independent of their peers (PI, p < .10).

Comparing COMs with all 1972 HEOPs (Ce*72 vs. Ha+c*72):

HEOPs were more satisfied with students (SS, p < .10).

COMs were more independent of their families (FI, p < .10).

COMs were more satisfied with OSU (OSU, p < .01).

There were no significant differences between the two HEOP groups (Ha72 vs. Hc*72) on any of the CSQ scales.

CSQ Comparisons of Females and Males Within Groups

17.1 $H_0$: CSQ scores of female and male HEOPs in Spring 1969 do not significantly differ.

$H_1$: CSQ scores of female and male HEOPs in Spring 1969 do significantly differ.

Table 7 summarizes the findings of sex comparisons
Figure 17.--1972 CSQ Profiles of HEOPs and COMs

--- Ce*72 (n=34)
--- Ha72 (n=13)
--- Ho*72 (n=10)
Figure 18.—1972 CSQ Profiles of HEOPs and COMs

--- Ce*72 (n=34)
--- Ha+c*72 (n=23)
for CSQ scores. Figure 19 graphs the profiles of males and females. Results for the 1969 HEOPs (Ha+b69) indicate:

Females had a more serious, disciplined orientation to customary academic obligations (SH, p < .05).

Males were more autonomous in relation to parents and parental family (FI, p < .10).

Females had more moral concern about social injustice (SC, p < .10).

18.1 $H_0$: CSQ scores of female and male COMs in Spring 1969 do not significantly differ.

$H_1$: CSQ scores of female and male COMs in Spring 1969 do significantly differ.

Table 7, column 2 and Figure 19 indicate that for Ce69 Ss:

Males were more satisfied with faculty (SF, p < .05) and with their majors (SM, p < .10).

Males were more involved in extracurricular affairs (EI, p < .05).

19.1 $H_0$: CSQ scores of female and male COMs in Spring 1972 do not significantly differ.

$H_1$: CSQ scores of female and male COMs in Spring 1972 do significantly differ.

Table 7, column 3 and Figure 20 indicate that for Ce*72 Ss:

Females were more culturally sophisticated (CS, p < .10).
Table 7
Summary of Significant Differences Between Males and Females in HEOP and COM Groups and Sex with Higher Score on CSQ Variables Using the Mann-Whitney U Test

<table>
<thead>
<tr>
<th>CSQ Scale</th>
<th>Ha+b69</th>
<th>Ce69</th>
<th>Ce*72</th>
<th>Hc*72</th>
<th>Ha72</th>
<th>Ha+c*72</th>
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</tbody>
</table>

M > F

F > M*

M > F*

F > M

M > F

F > M

M > F**

M > F*

p < .10, *p < .05, **p < .01, ***p < .001, two-tailed probabilities
Figure 19.—1969 CSQ Profiles of Male and Female HEOPs and COMs

--- Ha+b69 (31 females, 25 males)

--- Ce69 (25 females, 39 males)
Figure 20.—1972 CSQ Profiles of Male and Female HEOPs and COMs

--- Ha+c*72  (14 females, 9 males)
--- Ce*72    (14 females, 20 males)
20.1 $H_0$: CSQ scores of female and male HEOPs in Spring 1972 do not significantly differ.

$H_1$: CSQ scores of female and male HEOPs in Spring 1972 do significantly differ.

Table 7, columns 4, 5 and 5 and Figure 20 indicate that within groups Hc*72, Ha72 and Ha+c*72:

Males in Hc*72 and in Ha+c*72 were more culturally sophisticated (CS, $p < .01; p < .05$).

Males in Hc*72 and in Ha+c*72 were more involved in extracurricular activities (EI, $p < .05$).

Males in Hc*72 were more satisfied with the student body (SS, $p < .10$).

Males in Ha72 were more independent of their families (FI, $p < .10$).

Results of Biographical Questionnaire

HEOP Group

Twenty-three (23) HEOPs participated in the 1972 follow up (Ha+c*72). Analysis of their responses on the Biographical Questionnaire indicate the following:

1. Enrollment Pattern: A fairly regular enrollment pattern was observed with a range of 15 to 20 of the 23 students in school during each of the three primary academic quarters of the year (Autumn, Winter, Spring) from Autumn 1968 through Winter 1972. In the Summer quarters from 2 to 12 HEOPs were in school. The 4 students who did
not enter OSU in Autumn 1968 were at another university (1), working (2) and in the armed services (1).

2. Non-enrolled Quarters: Fifteen (15) HEOPs were working during quarters in which they were not enrolled. This was primarily at summer jobs. Four were attending another institution. Four did other things such as getting married (1), armed services (2) and reading (1).

3. Reasons for Returning to OSU: Four wanted to complete their education; 3 said OSU was cheaper than other schools.

4. Activities as a Student at OSU:

   8 were involved in extracurricular activities (black choir, choral groups, fraternity/sorority, church work, residence hall committees, various departmental and university committees)

   15 had jobs, primarily in various university offices

   3 were not doing either of the above

   1 had graduated and was already teaching

5. Future Plans:

   2 planned to continue at OSU but had not decided whether they would graduate

   18 planned to graduate from OSU

   12 planned to work after graduation

   10 planned to go on for more education after the bachelor's degree

   1 had no plans in mind at the time
Comparison Group

Thirty-four (34) Comparison Group students participated in the 1972 follow up (Ce*72). Analysis of their responses on the Biographical Questionnaire indicated:

1. **Enrollment Pattern**: A regular enrollment pattern was reported with 31 to 34 of the students enrolled during Autumn, Winter and Spring quarters and 1 to 9 enrolled during the Summers. The one student who had not entered OSU in Autumn 1968 was at another institution.

2. **Non-enrolled Quarters**: Thirty-one (31) students worked primarily at summer jobs during the quarters they were not at OSU. Four students attended another institution for a while and six traveled, played or had an illness.

3. **Reason for Returning to OSU**: Two wanted to complete their education and another's family relocated so OSU was the most reasonable choice in terms of distance.

4. **Activities as a Student at OSU**:

13 were involved in extracurricular activities (fraternity/sorority, sports, college, departmental and university committees, college councils, academic honor and professional student societies, other student organizations).
20 had jobs in various university offices and agencies as well as off-campus

6 were not doing either of the above

2 were doing other things which were volunteer activities

5. Future Plans:

1 planned to continue at OSU but had not decided whether to graduate

32 planned to graduate from OSU

1 did not plan to continue at OSU (marriage—work—travel—graduate school were planned)

27 planned to work after graduation

1 planned to do nothing

16 planned to go on for more education after the bachelor's degree

1 had no plans in mind at the time

6 had "other" things planned (military service, travel, missionary work, marriage).

Results of Persistence at OSU

Appendix E presents a chart reflecting HEOPs' most recent association with OSU as of Spring Quarter 1973. While no comprehensive study was made of HEOPs' and COMs' persistence at OSU the data indicate that HEOPs who were followed for 18 quarters could be compared with the Thompson and Mahr (no date) study of OSU students who
entered in 1964 in the following ways: 33% HEOP and 29% Thompson and Mahr were out under rules; 13% HEOP vs. 9% Thompson and Mahr withdrew; 28% HEOP vs. 19% Thompson and Mahr left without a degree; 13% HEOP vs. 8% Thompson and Mahr were still enrolled; 14% HEOP vs. 36% Thompson and Mahr graduated.

Appendix E indicates that 109 of the 168 HEOPs (65%) did attend OSU at some time. Halverson (1970) reports that during the first three quarters of enrollment the retention rate for HEOPs was almost identical to that for all freshmen entering University College in Autumn 1968 (85% HEOP and 80% of all UVC students returned Winter 1969; 63% HEOP and 64% of all UVC students returned Spring 1969).

HEOP academic performance in Spring 1969 approached that of all freshmen with 70% of HEOPs and 73% of all UVC freshmen having a 1.7 or above. The 1.7 cumulative point-hour ratio is the usual requirement for a third quarter freshman to enroll the fourth quarter.

Discussion

Self Concept Change over Time

Results indicate that self concept does change
significantly over time with disadvantaged college students and with advantaged students. With increased time, self concept appears to change more. Self concepts of disadvantaged students who enter college appear to change more than self concepts of advantaged students. Finally, the self concepts of both HEOPs and COMs resemble those of college students and resemble the norm group on which the TSCS was standardized. While many scores changed significantly they were within the plus or minus one standard deviation range.

Following the 13 HEOPs who were measured in 1968, 1969 and 1972 (Ha, Figure 1), self concept remained fairly stable from 1968 to 1969. However, over the three and four year periods from 1969-1972 and 1968-1972 significant changed occurred. Particularly, self-esteem increased in all areas with peaks on self-acceptance (self-satisfaction) and personal sense of adequacy and worth (personal self). There was a reduction in conflict and confusion of the self concept (conflict scores) and in variability among the areas of self-perception (variability scores). More balance was achieved in affirming and disaffirming attributes to oneself (lowered T/F). Finally, the Empirical Scales indicated more adjustment
(GM), lowered resemblance to psychotic, personality disorder and neurotic patient groups, and acquisition of more subtle defenses.

HEOPs followed for only one year (Hb68 vs. Hb69) showed a few changes in reducing conflict in self-perception, reducing variability and becoming more well adjusted (PI), but having lowered esteem for their identity selves.

HEOPs followed for four years only (Hc*69 vs. Hc*72, Figure 4) indicated similar changes in self concept over the four year period as did those in group Ha.

Following the 34 COMs of group Ce* (Figure 3) indicates self concept for this group remained more stable over the three year period from 1969 to 1972 than for HEOPs. Significant changes indicated increase in self-esteem overall and in various areas with peaks on self-acceptance and increased moral-ethical and family selves. Reduction in levels on the Empirical Scales indicated more adjustment (GM) and less similarity with psychotic and personality disorder patient groups.

While this study adds new information on self concept development similar studies utilizing persons other than college students should be strongly considered
since college students may have a more complex factor and personality structure.

The lack of a control group leaves unanswered the question of whether similar changes in self concept would have occurred with students or persons who had not had a summer compensatory education program like HEOP or who had not had an opportunity to attend college.

One-shot Comparisons of Self Concept between Different Groups

As a whole, HEOP and COM groups were fairly similar to each other. In 1969 COMs appeared to have a slightly better self-esteem score but by 1972 HEOPs had significantly healthier self concepts.

In Spring 1969 (Figure 5) COMs reported greater self-esteem overall, in self-satisfaction and in family and social relationships. HEOPs scored higher on the Neurosis Scale.

In Spring 1972 (Figures 6 & 7) HEOPs had a higher positive score for identity while COMs had more variability in their self-perceptions.

Looking at the original HEOP group at OSU in the Summer 1968 (Figure 8) there were no differences between the majority of HEOPs who went on to OSU in the Autumn (Ha+b68)
and those who did not (Hd68). Hc68 Ss did differ slightly from Ha+b68 Ss in having higher overall self-esteem, positive scores on physical and social selves, being more certain about their self concepts and scoring lower on the Neurosis Scale. However, since sample size is small (n=11) this must be viewed cautiously.

Comparisons of Self Concepts of Females and Males

A few significant differences between females and males were found at different points in time; however, there does not seem to be a marked discrepancy between the sexes in self concept.

Among the Summer 1968 HEOPs greatest discrepancies occurred between females and males who entered OSU in Autumn with females having a higher level of self-esteem (overall, identity, behavior and moral-ethical self), less variability in self-perception and greater level of adjustment (Ha+b68, Figure 9).

Males and females in the 1969 COM and HEOP groups were essentially similar.

In Spring 1972 sexes in the COM group had a few more differences with males having greater esteem regarding their behavior and personal selves and also being more
certain about their self concepts (Ce*72, Figure 12).

Among the Spring 1972 sexes in the HEOP group it appears that the females were more well adjusted (PI) than males.

This study does not identify those elements of the college experience which may have helped improve self concept. If self-acceptance and a healthy self concept are necessary for successful performance (e.g. graduation from college) the potent and predictive variables need to be identified.

A follow up in five to ten years would add needed information on the stability or changing nature of self concepts as these particular individuals studied age.

**CSQ Change Over Time**

HEOPs became less satisfied with administrative policies and procedures and less satisfied with OSU as a whole from 1969 to 1972. They did become more liberal which is not unlike what occurs with most college students as they near graduation. Because most of these students were on financial aid and had to work, they may have encountered more administrative red tape than the normal student. The growing awareness of minority
underrepresentation at OSU as well as at colleges throughout the nation may have accounted for some of the decreases and the increase in liberalism as well.

COMs became more independent of their families, less involved in extracurricular life, more liberal and socially aware as they changed from 1969 to 1972. Much of this is normal maturation of young adults as they receive education and enter young adulthood. The liberalism and social conscience dimensions usually increase for college educated persons as they spend more time at the institution.

**CSQ One-Shot Comparisons**

In Spring 1969 COMs were more satisfied with college attendance than HEOPs (satisfaction with faculty and major) and were more involved in extracurricular activities. COMs also were much more positive towards OSU. HEOPs were more independent of peers and socially concerned. This reflects the backgrounds and purposes for the two groups being at OSU. HEOPs had to work and did not probably have time to participate in extracurricular activities. They were trying to survive in a more foreign environment than COMs at a time when minority
students were beginning to be brought into higher education. Thus, their sense of minority identity was just beginning to develop.

In Spring 1972, of those HEOPs and COMs who were still around the OSU area, there were not as many differences. COMs were still more positive towards OSU. HEOPs were more satisfied with the student body and independent of their peers.

**CSQ Comparisons by Sex**

A few differences were found between females and males but no significant trends were indicated.

Final limitations deserve mention. The instruments employed are paper-and-pencil, self-administering self-reports subject to the limitation of such techniques for valid data. Additionally, the specific instruments may not be best suited for culturally different persons for whom different items or different norms may need to be established.

The results, while reported and interpreted by a culturally different person, may still be subject to researcher bias. Perhaps a researcher from the black or economically and educationally disadvantaged community
would have other interpretations.

Because educational opportunity programs were just beginning in 1968 sample size is small. Today, institutions are bringing many more minority and disadvantaged students to college. Thus, similar studies of these persons may help substantiate conclusions drawn by this study. The effects of maturation and retesting must also be considered in viewing the results.
Summary

This study was an exploratory attempt to gather longitudinal information on a group of students new to higher education—educationally and economically disadvantaged students.

Educationally and economically disadvantaged students who were enrolled in the Higher Education Opportunity Program (HEOP) sponsored by The Ohio State University and who went on to attend Ohio State University were studied over a period of four years, 1968 to 1972.

Self concept as measured by the Tennessee Self Concept Scale (TSCS) was the primary construct studied. As the students progressed through college measures of satisfactions with and attitudes toward the college experience were obtained utilizing the College Student Questionnaire, Part 2 modified (CSQ). Biographical information utilizing a Biographical Questionnaire and
data on persistence at OSU were obtained in Spring 1972.

In addition, self concept data on HEOPs who did not attend OSU was gathered in the Summer of 1968.

A comparison group of students from three freshman English classes served as an "advantaged group" sample (COM). They were administered the TSCS and CSQ in Spring 1969 and Spring 1972 with the Biographical Questionnaire and persistence data gathered in Spring 1972. Null hypotheses were formulated to show no difference since there was a lack of definitive research to state directionality.

Longitudinal analysis of TSCS and CSQ data for both groups was made utilizing the Wilcoxon Matched-Pairs Signed-Ranks test. One-shot comparisons between HEOPs and COMs, within HEOPs and between females and males were made utilizing the Mann-Whitney U Test.

**Conclusions**

The results indicate that self concept for HEOPs remaining at OSU changed significantly over time. Over the four year period from 1968 to 1972 HEOPs who were still at OSU appeared to increase their self-esteem in all areas, especially in
being more accepting and satisfied with themselves and feeling a sense of personal worth. They were more consistent and balanced in the way they viewed themselves and were more adjusted and healthier when compared to psychiatrically diagnosed groups.

For those HEOPs who were followed for one year only (Hb68 vs. Hb69) self concept did not change as markedly. However, contradiction and variability in self-perception were reduced and they scored more like the well adjusted criterion group. Esteem for their identity selves was lowered. This may be accounted for by the identity crisis that beginning college students sometimes go through.

Results of the comparison group (COMs) indicated change in self concept over the three years from 1969 to 1972 (Ce*69 vs. Ce*72). However, the self concepts of this group remained more stable than the HEOPs'. Overall self-esteem increased with special significant changes on increased self-acceptance, moral-ethical and familial selves. This group also became more adjusted when compared with psychiatric criterion groups.

Therefore, self concept appears to change more given a longer period of time, with more changes occurring
over the three and four year periods versus the one year period for HEOPs. Self concepts of these college students seem to resemble the optimal self concept, described by Fitts and his associates, by the time they have spent four years around an educational institution and are approaching 21 and 22 years of age. Compared with the self-actualized person which the TSCS would describe, these students still remain slightly defensive, variable and confused. They are average in overall self-esteem. This may be a function of their age and stage of development. However, they do resemble the norm group for the TSCS very closely and other college students. This adds new longitudinal developmental data previously lacking in self concept research.

In general, HEOPs and COMs were similar in their self concepts. At the outset of this study it was not known whether high-risk, disadvantaged students would demonstrate a unique self concept or be similar to the self concept of college students. The results indicate they perceive themselves similarly to college students in general. Within the original HEOP group there were no marked differences between those who were found at OSU in ensuing years and those who went
elsewhere or did other things.

Comparing females with males only a few significant differences were found. In general, females in the HEOP group were more well adjusted and had a higher level of self-esteem. Among the COMs, males had slightly greater esteem regarding their behavior and personal selves and also had more certainty about their self concepts.

**College Student Questionnaire.** Over the three year period from 1969 to 1972, HEOPs became less satisfied with administrative practices and with OSU as a whole. They became more liberal also. COMs became more liberal and socially aware and also indicated more independence of their families and less involvement in extracurricular life. Much of these changes occurs with other college students due to maturation and the effects of education.

In 1969 COMs were more satisfied with OSU and various aspects of the college experience while HEOPs were more independent and socially concerned. Three years later there were not as many differences between the groups although COMs were still more positive towards OSU. HEOPs were more satisfied with the students and more independent of their peers than COMs. No notable
differences between males and females were found.

Biographical Questionnaire. No notable differences were found between HEOPs and COMs in their enrollment pattern, activities while a student and future plans. This may be due to the fact that those HEOPs who were followed up in 1972 may have been those who succeeded because of their similarity to the "regular college student."

Persistence at OSU. Results indicate that the high-risk HEOPs persisted at OSU during the first year almost identically to UVC freshmen. Since the time period covered was only four years and since enrollment patterns varied for the HEOP group no conclusions on their success as measured by graduation can be drawn yet. The lack of comparative data between HEOPs and COMs adds to the inability to make further judgments.

Thus, it can be concluded that significant self concept changes occur over time periods of three and four years when disadvantaged and advantaged students are in college. Specific patterns of self concept exist for these groups. While writers have posited that the self concept is fairly stable by preadolescence
as a result of potent family, social class and other early interactions with others, this study indicates that certain aspects of the self concept among college bound students from disadvantaged and advantaged backgrounds do change significantly during the young adult years (ages 17-21). Over the college years both groups of HEOPs and COMs who persisted became more liberal as do most college students. However, HEOPs were less satisfied with administrative practices and OSU as a whole. Part of this may be due to the growing awareness on the part of students and other members of the university community that OSU was too predominantly white middle class in a state which had great numbers of economically and educationally disadvantaged students. In the ensuing years more minority recruitment programs specifically focused on blacks, were begun at the university with a special office of minority affairs and a division of black studies established. More overt attention was paid to minority students partially as a result of numerous protests and campus disturbances especially in 1970. Since that time OSU had changed its stance regarding minority students who now have a respected place in the admissions, academic and student affairs
practices of the university.

**Implications for Further Research**

The findings of this study raise the following questions which need further testing:

1. Will more longitudinal studies with larger samples and better controls validate or support self concept change during the college years?

2. Will longitudinal instead of cross-sectional studies with different subgroups of persons (e.g. children, adolescents (13-16 years), adults, elderly, non-college high school graduates, college students from minority and majority groups, college students with different orientations such as in the Clark-Trow typology) indicate differential patterns of self concept change over time?

3. What are the potential variables which may be related to development of a healthier self concept, in particular, with educational opportunity program students? Included among the variables to be studied should be behavioral indices such as graduation from college, job placement, income, participation in extracurricular activities and results of achievement tests. Or, instead of self concept being the dependent variable, perhaps obtaining
a good paying job should be that outcome variable. The author assumes that given a choice, disadvantaged persons would prefer to achieve the latter—a good, satisfying job than have one standard deviation rise in overall self-esteem on a psychological measure.

4. What would longitudinal studies on the self concepts of successes versus failures find? This study looked at a disadvantaged group as a whole.

**Final Comment**

This study represents an attempt to fill the voids in information on the development of self concept over time and the nature of the college experience on disadvantaged, high-risk students who are being admitted into higher education in increased numbers. Tentative findings indicate that the development of these students closely parallels that of regular college students. However, they do have special needs which, if met, can bring them to the level of and even put them at an advantage when compared with their peers in seeking positions of employment in a society which is slowly but gradually recognizing the necessity of granting special consideration to individuals heretofore discriminated.
APPENDIX A

INSTRUMENTS

Tennessee Self Concept Scale
College Student Questionnaire
Biographical Questionnaire
TENNESSEE SELF CONCEPT SCALE
William H. Fitts, 1964

INSTRUCTIONS

In the upper right-hand corner of the answer sheet, print your name in the appropriate boxes. Under each letter box is a column of grids for the letters a, b, c, etc. Go down the column under the first letter of your last name, locate the letter grid that corresponds to that letter, and blacken that grid space. Do the same for the remaining letters of your last and first names, and your middle initial.

The statements in this scale are to help you describe yourself as you see yourself. Please respond to them as if you were describing yourself to yourself. Do not omit any item! Read each statement carefully; then select one of the five responses listed below. On your answer sheet, blacken the grid space of the response you chose. If you want to change an answer after you have blackened it, erase it completely and blacken the desired response grid.

When you are ready to start, record the time in the bottom right-hand corner of the answer sheet. When you are finished, record the time finished right next to the time started.

RESPONSES— Completely Mostly Partly false false false and partly true true

1 2 3 4 5

You will find these response numbers repeated at the bottom of each page to help you remember them.

Please be sure to mark all answers on the answer sheet provided and to answer all items.
1. I have a healthy body...................................... 1
2. I am an attractive person........................................ 2
3. I consider myself a sloppy person............................. 3
4. I am a decent sort of person.................................... 4
5. I am an honest person.............................................. 5
6. I am a bad person.................................................. 6
7. I am a cheerful person.......................................... 7
8. I am a clam and easy going person............................ 8
9. I am a nobody....................................................... 9
10. I have a family that would always help me in any kind of trouble.... 10
11. I am a member of a happy family............................... 11
12. My friends have no confidence in me.......................... 12
13. I am a friendly person........................................... 13
14. I am popular with men............................................ 14
15. I am not interested in what other people do.................... 15
16. I do not always tell the truth.................................. 16
17. I get angry sometimes........................................... 17
18. I like to look nice and neat all the time..................... 18
19. I am full of aches and pains................................... 19
20. I am a sick person............................................... 20
21. I am a religious person.......................................... 21
22. I am a moral failure............................................. 22
23. I am a morally weak person..................................... 23
24. I have a lot of self-control.................................... 24
25. I am a hateful person............................................ 25

RESPONSES— Completely Mostly Partly Mostly Completely
false false and partly true true true

1 2 3 4 5
26. I am losing my mind............................................. 26
27. I am an important person to my friends and family. .......................... 27
28. I am not loved by my family. ........................................... 28
29. I feel that my family doesn't trust me. ...................................... 29
30. I am popular with women. .................................................. 30
31. I am mad at the whole world. ............................................. 31
32. I am hard to be friendly with. ............................................. 32
33. Once in a while I think of things too bad to talk about. ...................... 33
34. Sometimes, when I am not feeling well, I am cross. .......................... 34
35. I am neither too fat nor too thin. ........................................... 35
36. I like my looks just the way they are. ...................................... 36
37. I would like to change some parts of my body. .................................. 37
38. I am satisfied with my moral behavior. ....................................... 38
39. I am satisfied with my relationship to God. ................................... 39
40. I ought to go to church more. ........................................... 40
41. I am satisfied to be just what I am. ......................................... 41
42. I am just as nice as I should be. ........................................... 42
43. I despise myself. ............................................................... 43
44. I am satisfied with my family relationships. ................................... 44
45. I understand my family as well as I should. ................................ 45
46. I should trust my family more. ............................................. 46
47. I am as sociable as I want to be. ........................................... 47
48. I try to please others, but I don’t overdo it. ................................ 48
49. I am no good at all from a social standpoint. ................................ 49
50. I do not like everyone I know. ............................................. 50

RESPONSES—c Completely Mostly Partly Mostly Completely
false false partly false true true
1 2 3 4 5
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>Once in a while, I laugh at a dirty joke</td>
</tr>
<tr>
<td>52</td>
<td>I am neither too tall nor too short</td>
</tr>
<tr>
<td>53</td>
<td>I don't feel as well as I should</td>
</tr>
<tr>
<td>54</td>
<td>I should have more sex appeal</td>
</tr>
<tr>
<td>55</td>
<td>I am as religious as I want to be</td>
</tr>
<tr>
<td>56</td>
<td>I wish I could be more trustworthy</td>
</tr>
<tr>
<td>57</td>
<td>I shouldn't tell so many lies</td>
</tr>
<tr>
<td>58</td>
<td>I am as smart as I want to be</td>
</tr>
<tr>
<td>59</td>
<td>I am not the person I would like to be</td>
</tr>
<tr>
<td>60</td>
<td>I wish I didn't give up as easily as I do</td>
</tr>
<tr>
<td>61</td>
<td>I treat my parents as well as I should (Use past tense if parents are not living)</td>
</tr>
<tr>
<td>62</td>
<td>I am too sensitive to things my family say</td>
</tr>
<tr>
<td>63</td>
<td>I should love my family more</td>
</tr>
<tr>
<td>64</td>
<td>I am satisfied with the way I treat other people</td>
</tr>
<tr>
<td>65</td>
<td>I should be more polite to others</td>
</tr>
<tr>
<td>66</td>
<td>I ought to get along better with other people</td>
</tr>
<tr>
<td>67</td>
<td>I gossip a little at times</td>
</tr>
<tr>
<td>68</td>
<td>At times I feel like swearing</td>
</tr>
<tr>
<td>69</td>
<td>I take good care of myself physically</td>
</tr>
<tr>
<td>70</td>
<td>I try to be careful about my appearance</td>
</tr>
<tr>
<td>71</td>
<td>I often act like I am &quot;all thumbs&quot;</td>
</tr>
<tr>
<td>72</td>
<td>I am true to my religion in my everyday life</td>
</tr>
<tr>
<td>73</td>
<td>I try to change when I know I'm doing things that are wrong</td>
</tr>
<tr>
<td>74</td>
<td>I sometimes do very bad things</td>
</tr>
<tr>
<td>75</td>
<td>I can always take care of myself in any situation</td>
</tr>
</tbody>
</table>

**RESPONSES**

- Completely false
- Mostly false
- Partly false and partly true
- Mostly true
- Completely true
76. I take the blame for things without getting mad.................... 76
77. I do things without thinking about them first .................... 77
78. I try to play fair with my friends and family.......................... 78
79. I take a real interest in my family.................................. 79
80. I give in to my parents. (Use past tense if parents are not living).... 80
81. I try to understand the other fellow's point of view.................. 81
82. I get along well with other people..................................... 82
83. I do not forgive others easily........................................... 83
84. I would rather win than lose in a game.................................. 84
85. I feel good most of the time.............................................. 85
86. I do poorly in sports and games......................................... 86
87. I am a poor sleeper.......................................................... 87
88. I do what is right most of the time...................................... 88
89. I sometimes use unfair means to get ahead.............................. 89
90. I have trouble doing the things that are right........................ 90
91. I solve my problems quite easily......................................... 91
92. I change my mind a lot...................................................... 92
93. I try to run away from my problems..................................... 93
94. I do my share of work at home............................................ 94
95. I quarrel with my family................................................... 95
96. I do not act like my family thinks I should............................ 96
97. I see good points in all the people I meet............................... 97
98. I do not feel at ease with other people................................ 98
99. I find it hard to talk with strangers.................................... 99
100. Once in a while I put off until tomorrow what I ought to do today... 100

RESPONSES-- Completedly false Mostly false Partly false Mostly true Completely true
1 2 3 4 5
COLLEGE STUDENT QUESTIONNAIRE

DIRECTIONS TO THE STUDENT:

This is a research questionnaire. In it you will be asked for a variety of information about your activities and attitudes. This is not a test. The only "right" answers are those which reflect your own aspirations, experiences, and attitudes. In no case will the answers of individual students be singled out. The results, which will be in the form of statistical summaries, will be used for research purposes only.

1. PENCILS. Use any type of soft lead pencil. Do not use an ink or ballpoint pen.

2. YOUR NAME. In the upper right-hand corner of the answer sheet, print your name in the appropriate boxes. Under each letter box is a column of grids for the letters a, b, c, etc. Go down the column under the first letter of your last name, locate the letter grid that corresponds to that letter, and blacken that grid space. Do the same for the remaining letters of your last and first names, and your middle initial.

3. MARKING YOUR ANSWERS. Each question in the booklet is accompanied by four (4) alternative answers. You are to indicate your answer to each question by blackening the grid space on the answer sheet which corresponds to the alternative you have chosen. Be sure that all your answers are firm and black and that they completely fill the grids. Do not make any stray marks on the answer sheet. If you erase, do so completely. Incomplete erasures and stray marks might be read as intended answers.

4. ONE ANSWER PER QUESTION. Regardless of the number of alternatives provided, please mark only one answer for each question. In other words, for each question only one box should be blackened on the answer sheet.

5. PLEASE ANSWER ALL QUESTIONS.
1. What proportion of the faculty members who have taught you during the past year would you say are superior teachers?
   1. Very few
   2. Less than half
   3. More than half
   4. Almost all

2. In general, are you enjoying your studies in college this term as much as you had expected to?
   1. No, I am definitely enjoying them less than I had expected
   2. No, but I am only mildly disappointed
   3. My expectations for this term are reasonably well satisfied
   4. I am enjoying my studies this term much more than I had expected

3. So far this year how successful would you say your instructors at this college have been in challenging you to produce to the limit of your intellectual and creative capacities?
   1. They have been wholly unsuccessful
   2. Several have been somewhat successful
   3. Several have been quite successful
   4. Almost all have succeeded in continuously challenging my intellectual capacities

4. How many faculty members at this college have provided personal evaluations of your work which made you think that you might become a creative or productive worker in their fields?
   1. None
   2. One
   3. Two or three
   4. More than three

5. Of the instructors you have had this past year, about what proportion would you say came to know you by name?
   1. Almost none
   2. Less than half
   3. More than half
   4. Almost all

6. What proportion of the faculty members you have observed at this college would you say are genuinely interested in students and their problems?
   1. Very few
   2. Less than half
   3. Over half
   4. Almost all
7. Have you had the feeling in the past year or so that some of your instructors have judged (e.g., graded) you more on the basis of extraneous or irrelevant factors than on the basis of the quality of your work?

1. Quite often
2. Once in a while
3. Very rarely
4. Never

8. What has been your general impression of the tolerance for student argument and disagreement on the part of the instructors you have come in contact with this year?

1. Some of them have definitely penalized student disagreement
2. Some of them have not particularly welcomed disagreement
3. Most of them have accepted student disagreement
4. Most of them have definitely valued and encouraged reasonable student disagreement

9. During the past academic year, how competent, in your opinion, have you found your instructors to be in their own special fields?

1. I felt that several were not sufficiently competent
2. I felt that two or three were not sufficiently competent
3. One was not sufficiently competent
4. All were competent in my judgment

10. On the whole, how satisfied are you with the opportunity you have had in the past year to meet with your instructors privately about course work and your own progress?

1. Mostly dissatisfied
2. Fairly satisfied
3. Quite satisfied
4. Extremely satisfied

11. Would you agree that most of the existing rules and regulations on this campus are logical and necessary?

1. Strongly disagree
2. Disagree, but not strongly
3. Agree, but not strongly
4. Strongly agree

12. Do you agree or disagree that this college or university exercises too much authority over student life outside the classroom?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree
13. On the basis of either direct experience or conversations with student friends, what is your impression of the quality of help on problems of a personal nature presently available from personnel deans (dean of students, deans of men, deans of women) at this college?

1. They are no help
2. Not usually very helpful
3. More often helpful than not
4. Consistently very helpful

14. Again from either direct experience or hearsay, what is your general impression of the courtesy and efficiency with which student problems are taken care of by various administrative or personnel divisions on this campus (e.g., admissions registrar, loans, housing, etc.)?

1. Impression mostly negative; many improvements definitely needed
2. Impression somewhat negative; a number of improvements could be made
3. Impression reasonably positive
4. Impression very positive; student problems handled very courteously and efficiently

15. How do you feel about the assistance (or lack of assistance) in thinking through your educational and vocational plans which you have received at this college (from teachers, counselors, deans, etc.)?

1. Very dissatisfied
2. Somewhat dissatisfied
3. Fairly satisfied
4. Very satisfied

16. Would you say that individual students on this campus have a voice in formulating the regulations which affect them?

1. No, they have no voice
2. They have a rather weak voice
3. A moderately strong voice
4. Yes, a very strong voice

17. In your experience (direct or hearsay) so far at this college, how satisfied have you been with the fairness and impartiality by which rules regulating student personal conduct have been enforced?

1. Greatly dissatisfied
2. Somewhat dissatisfied
3. Reasonably satisfied
4. Very satisfied

18. Would you agree that the college administration here generally treats students more like children than like adults?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree
19. To what extent would you say this institution is under pressure from outside sources to offer a kind of educational experience which is contrary to the kind of educational experience you are seeking?

1. There are very strong pressures of which I disapprove
2. There are moderate pressures of which I disapprove
3. There are pressures, but they are weak
4. I am aware of no such outside influence

20. How do you feel about the policies on this campus concerning such things as class attendance, number of "cuts," arriving in class on time, etc.?

1. Entirely inappropriate
2. Somewhat inappropriate
3. Appropriate for the most part
4. Entirely appropriate

21. Would you say there is anything approaching a "group spirit" or a feeling of common identity among the students in your department?

1. No, practically none
2. Yes, but it is rather weak
3. Yes, to a moderate degree
4. Yes, it is quite strong

22. Would you agree that the department or division in which you are doing your major work tends to reward conformity and punish individualism?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

23. What is your general impression of the intellectual ability of most of the students in your major department or division?

1. Most of them are below the average at this college
2. Most of them are near the average at this college
3. Most of them are above the average at this college
4. The students in my field are among the brightest on this campus

24. Would you agree that the division in which you are doing your major work has too many purely formal requirements which are more in the nature of initiation rituals than of genuine learning incentives?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

25. How certain are you that your present major field is the one you really want?

1. Very uncertain
2. Somewhat uncertain
3. Fairly certain
4. Very certain
26. In your major department, how satisfied are you with your present academic standing insofar as you can estimate it?

1. Very dissatisfied
2. Somewhat dissatisfied
3. Fairly satisfied
4. Very satisfied

27. So far this term how interesting have you found the course work in your major field?

1. Rather dull for the most part
2. So-so
3. Fairly interesting
4. Very interesting

28. In relation to the kind of education you are seeking, how satisfied are you so far with the various competencies and specialties of the faculty in your present major field?

1. Very dissatisfied
2. Somewhat dissatisfied
3. Fairly satisfied
4. Very satisfied

29. In relation to the kind of education you are seeking, how adequate would you say is the choice of courses and the availability of suitable facilities (e.g., laboratory) in your present major department?

1. Very inadequate
2. Somewhat inadequate
3. Fairly adequate
4. Very adequate

30. Would you say that the major department or specialty you are in has prestige among this student body as a whole?

1. It does not have the prestige that most other majors or specialties have
2. Its prestige is neither particularly high nor particularly low
3. Its prestige is fairly high
4. It has a great deal of prestige on this campus

31. Would you agree that there are too many students on this campus who are so wrapped up in their intellectual development that they are close to failures as social persons?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

32. Would you agree that there are too many students on this campus who go too far with their extremist politics?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree
33. Speaking generally, how satisfied are you with the degree of academic honesty and integrity characteristic of most students at this college, e.g., as evidenced by the amount of cheating on examinations, taking credit for material written by someone else, etc.?
1. Very dissatisfied
2. Somewhat dissatisfied
3. Fairly satisfied
4. Very satisfied

34. How satisfied are you with the amount of competitiveness for grades you have found among your classmates since you have been at this college?
1. Very dissatisfied (i.e., they are either much too competitive or much too noncompetitive)
2. Somewhat dissatisfied
3. Fairly satisfied
4. Very satisfied (i.e., they are as competitive as I would like them to be)

35. Speaking generally, how satisfied are you with the degree of concern about political, economic, and social issues shown by most students at this college?
1. Very dissatisfied
2. Somewhat dissatisfied
3. Fairly satisfied
4. Very satisfied

36. Would you agree that most of the undergraduates on this campus would just avoid anything controversial?
1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

37. Would you agree that there are too many students on this campus who carry their nonconformity too far, e.g., the clothes, beard, speech patterns, etc.?
1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

38. Speaking generally, would you agree that too many students on this campus are overly susceptible to popular fads and fashions, such as in dress, hair styles, tastes in music, etc.?
1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

39. Would you agree that too many students on this campus use personality, "pull," "apple polishing," or bluff to get through courses?
1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree
40. Would you agree that too many of the students at this college are more concerned about their social lives—dating, parties, etc.—than they are about their academic responsibilities?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

41. Speaking generally, how efficiently have you performed during exams in the past year?

1. Quite uneasy, considerable loss of efficiency
2. Somewhat uneasy, some loss of efficiency
3. Generally have worked fairly efficiently
4. Generally have worked very efficiently

42. Compared with most of your classmates at this college, how much would you say you have studied during the present term?

1. I have studied much less than most of my classmates this term
2. I have studied slightly less than most of them
3. I have studied slightly more than most of them
4. I have studied much more than most of my classmates this term

43. Do you make notes while reading textbooks?

1. No, almost never
2. Once in a while (e.g., depending on the subject)
3. I generally do, but I have no particular notemaking system
4. I almost always make note while reading, and I have a systematic method for doing so

44. Regardless of whether you live on or off campus, how successful have you been this term in finding a place to study which is comfortable, well lit, heated and ventilated, free from distractions, and which you can think of as "your own?"

1. Completely unsuccessful
2. Unsuccessful for the most part
3. Successful in several of the above mentioned respects
4. Completely successful
45. How well would you say that you understand the various reference facilities of the main library on this campus and how these library services may be potentially useful to you as a student?

1. My general understanding of these matters is rather poor
2. My understanding of these matters is incomplete in a number of respects
3. For my purposes, I know about what I need to know about the library here
4. I would say that my knowledge of the library here and its potential use to me is quite complete

46. In recent weeks have you found yourself unintentionally napping or daydreaming when you intended to be studying?

1. Frequently
2. Occasionally
3. Infrequently
4. Never

47. When going into examinations this past year, how often have you felt adequately prepared?

1. I have almost always felt inadequately prepared
2. More often than not I have not felt prepared
3. More often than not I have felt prepared
4. I have almost always felt adequately prepared

48. Have you generally kept up to date on your course assignments this past year?

1. I have usually been behind on my assignments
2. I have frequently found myself behind on assignments
3. I have usually kept my assignments up to date
4. I have almost always kept my assignments up to date

49. Do you use bibliographical note cards (or some similar technique) while preparing papers which require library research?

1. I'm not certain that I know what bibliographical note cards are
2. I know what they are, but I don't use them
3. I use them once in a while
4. I consistently use them

50. Have you kept some sort of study schedule or time budget this year?

1. No, have tended to work when the pressure was on
2. No, but have tried to follow some kind of study routine
3. Have kept a schedule, but have not been very good about following it
4. Have kept a schedule and have stuck to it fairly well

51. How extensively in the past year have you been involved in the activities of student government organizations (student legislative body, election commission, etc.)?

1. Not at all
2. One such organization
3. Two such organizations
4. Three or more (or have held one or two highly responsible and time-consuming offices)
52. How closely do you generally follow the news about varsity and/or intramural athletics?
   1. Not at all
   2. Not very closely
   3. Fairly closely
   4. Very closely

53. To what extent have you participated in varsity or intramural sports during the past year?
   1. Not at all
   2. One sport
   3. Two sports
   4. Three or more sports

54. To what extent in the past year or so have you participated in organized activities sponsored by churches, synagogues, religious foundations, etc. (regular services excluded)?
   1. Not at all
   2. To a small extent
   3. Fairly extensively
   4. Very extensively

55. To what extent in the past year have you participated in the activities of on-campus professional organizations or organizations primarily for students in your field of major academic or career interest (e.g., American Society for Public Administration, teacher organizations, various engineer-major societies, etc.)?
   1. Not at all
   2. To a small extent
   3. Fairly extensively
   4. Very extensively

56. How extensively in the past year have you been involved in school spirit organizations and activities (e.g., rally committee, welcoming committees, student guides, etc.)?
   1. Not at all
   2. To a small extent
   3. Fairly extensively
   4. Very extensively

57. What is your estimate of the total number of hours you have devoted to organized extracurricular activities in an "average" week during the past year?
   1. None
   2. Less than five
   3. Between five and ten
   4. More than ten

58. To what extent in the past year have you participated in the organized activities of your living group (e.g., dormitory, fraternity, sorority)?
   1. Do not live in an organized living unit (i.e., I live at home, or in a private apartment, etc.)
   2. To a small extent
   3. Fairly extensively
   4. Very extensively
59. What is your opinion about the necessity for organized extracurricular activities on any college campus

1. For the most part they are irrelevant and distracting
2. No opinion
3. They are reasonably necessary
4. They are very necessary

60. How interested are you in what the student government does on this campus?

1. Not particularly interested
2. Somewhat interested
3. Quite interested
4. Very much interested

The following group of questions refers to your parental family, not, if you are married, to your own family. "Parents" may mean either natural parents or stepparents.

61. During the past year, how often have you seen your parents?

1. Every day or almost every day
2. About once a week
3. During holidays and/or occasional weekends
4. Only during summer vacation or not at all

62. Could you become so absorbed in some kind of activity that you would lose interest in your family?

1. Definitely not; impossible
2. Extremely unlikely
3. Some probability
4. Quite or very possible

63. Would you agree that a person should generally consider the needs of his parental family as a whole more important than his own needs?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

64. Would you agree that members of your family should hold fairly similar religious beliefs?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

65. Would you describe your family as:

1. Very closely united
2. Fairly closely united
3. Not particularly united
4. Very disunited
66. Many parents take a great deal of interest in what their sons and daughters do. How important is it to you that you satisfy your parents' wishes?

1. Very important
2. Fairly important
3. Moderately important
4. Not very important

67. Do you feel that in the last year or so you have been growing closer to your family or further away from it?

1. Much closer
2. Slightly closer
3. Slightly away
4. Much further away

68. Do you consult with your parents when you are faced with important personal decisions?

1. I almost always do
2. I usually do
3. I occasionally do
4. I rarely do

69. Do you feel that you should consult with your parents on important personal matters?

1. I feel that I definitely should
2. I feel that I probably should
3. I have no particular feelings one way or the other
4. Generally speaking, no

70. How dependent on or independent of your parents do you consider yourself to be at the present time?

1. Quite dependent
2. Somewhat dependent
3. Fairly independent
4. Very independent

71. As you think back over this past academic year, how much of your non-class time per week (including the weekend) would you say you spent in casual conversations with friends or acquaintances?

1. Sixteen or more hours
2. Eleven to fifteen hours
3. Six to ten hours
4. One to five hours

72. Other than on dates or with your spouse, do you generally pursue leisure time and recreational activities (movies, exhibits, hobbies, etc.) with a group of friends or by yourself or with one friend?

1. Almost always with a group of friends
2. Usually with a group of friends
3. Usually by myself or with one friend
4. Almost-always by myself or with one friend
73. With regard to the arts, would you say that the preferences and tastes of most of your acquaintances are similar to your own tastes:

1. Yes, their tastes in the arts are very similar to my own
2. Their tastes are fairly similar to mine
3. Mine are different in a number of respects
4. No, their preferences tend to be quite different from mine

74. As a description of yourself, how accurate is the following statement, "I am one in a group of close friends, and we do most things together"?

1. Very accurate
2. Fairly accurate
3. Not particularly accurate
4. Definitely inaccurate

75. How often do you maintain a point of view despite other students losing patience with you?

1. Rarely
2. Occasionally
3. Quite often
4. Very often

76. Would you say that you often seem to ignore the opinions of other students when trying to accomplish something that is important to you?

1. No, never
2. Rarely
3. Occasionally
4. Yes, quite frequently

77. Do you generally like to do things in your own way and without regard for what other students around you may think?

1. Definitely no
2. No, not usually
3. Yes, most of the time
4. Definitely yes

78. Do you generally consult with close friends while you are in the process of making some fairly important decision?

1. Almost always
2. Usually I do
3. Seldom
4. Almost never

79. Could you become so absorbed in some kind of activity that you would lose interest in what your good friends were doing?

1. Definitely not; impossible
2. Extremely unlikely
3. Some probability
4. Quite or very possible
80. Before you do something, do you try to consider how your friends will react to it?
   1. Yes, I always do
   2. Yes, I usually do
   3. Sometimes I do
   4. No, usually not

81. Do you consider your political point of view to be generally:
   1. Quite conservative
   2. Fairly conservative
   3. Fairly liberal
   4. Very liberal

82. Would you agree that the government should have the right to prohibit certain groups of persons who disagree with our form of government from holding peaceable public meetings?
   1. Strongly agree
   2. Agree, but not strongly
   3. Disagree, but not strongly
   4. Strongly disagree

83. Do you agree that police are unduly hampered in their efforts to apprehend criminals when they have to have a warrant to search a house?
   1. Strongly agree
   2. Agree, but not strongly
   3. Disagree, but not strongly
   4. Strongly disagree

84. Do you agree or disagree with the belief that capital punishment (the death penalty) should be abolished?
   1. Strongly disagree
   2. Disagree, but not strongly
   3. Agree, but not strongly
   4. Strongly agree

85. Would you agree or disagree that the government should do more than it is presently doing to see that everyone gets adequate medical care?
   1. Strongly disagree
   2. Disagree, but not strongly
   3. Agree, but not strongly
   4. Strongly agree

86. Would you agree or disagree that legislative committees should not investigate the political beliefs of college or university faculty members?
   1. Strongly disagree
   2. Disagree, but not strongly
   3. Agree, but not strongly
   4. Strongly agree
87. Do you agree or disagree that labor unions these days are doing the country more harm than good?

1. Strongly agree (they are doing the country more harm than good)
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

88. Would you agree or disagree that conscientious objectors should be excused from military service in wartime?

1. Strongly disagree
2. Disagree, but not strongly
3. Agree, but not strongly
4. Strongly agree

89. Do you agree or disagree with the contention that the welfare state tends to destroy individual initiative?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

90. Do you agree or disagree with the belief that individual liberties and justice under law are not possible in socialist countries?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

91. Do you become indignant when you read that a high government official has taken money or gifts in return for favors?

1. No
2. Cannot say
3. Mildly indignant
4. Very indignant

92. How strongly do you feel that something must be done soon about the rising tide of juvenile crime in this country?

1. I do not feel that the "problem" is as serious as the question makes it out to be
2. I have not given this matter sufficient thought to say
3. Fairly strongly
4. Very strongly

93. Are you concerned about the extent to which economic poverty still exists in the United States (e.g., the fact that in 1964 about one-fifth of American families earned under $3000 a year)?

1. In my opinion this is not a matter for concern
2. I have not given this matter sufficient thought to say
3. Mildly concerned
4. Highly concerned
94. Are you concerned that persons who are not white-Anglo-Saxon-Protestant seem to have somewhat less opportunity in America?

1. In my opinion this is a phony complaint or for other reason not a matter for concern
2. I have not given this matter sufficient thought to say
3. Mildly concerned
4. Highly concerned

95. Are you disturbed about what appears to be a growing preoccupation with money and material possessions throughout this country accompanied by a declining concern for national aims, spiritual values, and other moral considerations?

1. No, or the assumption made in this question is mistaken
2. Cannot say
3. Mildly disturbed
4. Very much disturbed

96. Are you concerned about the many elderly people in the U.S. who are left alone to live "on crumbs of welfare measures"?

1. In my opinion this is a phony problem or for other reason not a matter for concern
2. I have not given this matter sufficient thought to say
3. Mildly concerned
4. Highly concerned

97. Would you be upset at the sight of children looking at obscene printed material at a magazine stand (or elsewhere)?

1. No
2. Cannot say
3. Mildly upset
4. Very much upset

98. Do you feel that the decision to drop an atomic bomb on the city of Hiroshima was right or wrong?

1. Strongly feel that the decision was right
2. I think that the decision was right, but my feelings on this matter are not strong
3. I think that the decision was wrong, but my feelings are not strong
4. Strongly feel that the decision was wrong

99. Are you disturbed when you hear of confessions of extensive rigging of bids or rigging or "administering" of prices in some essential industry in the U.S.

1. I am not disturbed by these activities
2. Don't really understand what is involved
3. Mildly disturbed
4. Greatly disturbed
100. How would you feel (or have you felt) when first hearing about a lynching somewhere in the United States (which happened as recently as 1559—to a man named Parker)?

1. Indifferent, or my reaction would depend on who was lynched
2. I'm not certain
3. Mildly shocked
4. Highly outraged

101. Would you (or do you) enjoy participating in, or listening to, a discussion of philosophies of history?

1. I definitely would not
2. I probably would not
3. I probably would
4. I definitely would

102. How frequently do you discuss foreign films with your acquaintances?

1. Never
2. Rarely
3. Occasionally
4. Quite frequently

103. How interested are you in modern art?

1. No interest whatsoever
2. Slightly interested
3. Quite interested
4. Very much interested

104. How many of the following have you read: James Joyce, Leo Tolstoy, Thomas Mann?

1. None
2. One
3. Two
4. Three

105. How much pleasure do you usually experience when listening to good live performances of classical music?

1. None or very little
2. A moderate amount
3. Quite a bit
4. A great deal

106. Do you enjoy reading poetry?

1. No, I dislike poetry
2. Not very much
3. Yes, to some extent
4. Yes, very much
107. How much would you say you know about the history of painting?

1. Almost nothing
2. A small amount
3. A moderate amount
4. A good deal

108. How many times during the past year or so have you gone to an evening lecture on some serious topic (other than required lectures)?

1. Not at all
2. Once or twice
3. Three or four times
4. Five or more times

109. How many books do you yourself own (not including textbooks for your present courses, but counting serious paperbacks)?

1. Less than ten
2. Ten to 30
3. 31 to 75
4. More than 75

110. Can you say that in the past year or so you have reacted to some work of art (e.g., a painting, sculpture, musical performance) with deep and intense personal feeling?

1. No
2. I don't think so
3. Yes, several times
4. Yes, quite a number of times

111. Would you agree that you knew your way around the campus and felt "at home" at Ohio State University this year?

1. Strongly disagree
2. Disagree, but not strongly
3. Agree, but not strongly
4. Strongly agree

112. Would you agree or disagree with the following statement: "I feel like a person here at Ohio State and not like a number."

1. Strongly disagree
2. Disagree, but not strongly
3. Agree, but not strongly
4. Strongly agree

113. On the whole, how do you feel about having been treated fairly and with understanding during this year at OSU?

1. Disagree: I was not treated fairly and with understanding
2. Mildly disagree
3. Somewhat agree
4. Agree: I was definitely treated fairly and with understanding
114. Have you found that among the people you know at Ohio State, there is a peer or a friend you could turn to if you had a problem?

1. There is no one at Ohio State among my classmates or friends that I could turn to if I had a problem.
2. There are very few people at Ohio State that I could turn to with a problem.
3. There are quite a few people I could turn to.
4. There are many people I could turn to.

115. Was the whole program of learning and activities inside and outside of the classroom a valuable addition to your knowledge?

1. No, it was not.
2. Generally it was not.
3. It was somewhat of a valuable addition.
4. It was a very valuable addition.

116. If you had to decide again, would you go to college?

1. I would definitely not go to college.
2. I would strongly consider not going to college.
3. I would probably go to college.
4. I would definitely go to college.

117. If you had to make the choice of college again, would you still choose Ohio State?

1. I would choose another institution.
2. I would strongly consider attending another institution.
3. I would probably choose to attend Ohio State.
4. I would definitely choose to attend Ohio State.

118. In general, do you feel that this year at Ohio State has been a profitable experience for you?

1. No.
2. No, for the most part it was not profitable.
3. It was somewhat profitable.
4. Yes, it was very profitable.

119. To what extent have you really enjoyed being at OSU?

1. I did not enjoy being at OSU at all.
2. I rarely enjoyed being at OSU.
3. It was somewhat enjoyable.
4. It was very enjoyable.

120. How positive an attitude do you have toward college and higher education?

1. Not positive at all.
2. For the most part, not positive.
3. Fairly positive.
4. Very positive.
BIOGRAPHICAL QUESTIONNAIRE

Before you answer the two questionnaires, we are interested in finding out what you have been doing since the 1968-69 academic year. Please respond to the following questions as best you can.

1. Did you enter OSU during Autumn Quarter 1968? yes no

2. If you were not here in Autumn 1968, where were you? (check one)
   _____ Another Institution. Please name it. ____________________________
   _____ Working. What were you doing? ________________________________
   _____ Other. Please explain. _______________________________________

3. During which of the following quarters were you enrolled at OSU? Check all which apply.

   _____ A quarter before Autumn 1968 (please name.)
   _____ Autumn 1968
   _____ Winter 1968
   _____ Spring 1968
   _____ Summer 1968
   _____ Autumn 1969
   _____ Winter 1969
   _____ Spring 1969
   _____ Summer 1969
   _____ Autumn 1970
   _____ Winter 1970
   _____ Spring 1970
   _____ Summer 1970
   _____ Autumn 1971
   _____ Winter 1971
   _____ Spring 1971
   _____ Summer 1971

4. What were you doing during those quarters when you were not at OSU? Check as many that apply.

   _____ Working. Please describe. ______________________________________
   _____ Attending another institution. Please name. ______________________
   _____ Other. Please explain. _________________________________________

5. If you were not at OSU for several quarters not including summer quarters, why did you return to OSU?
6. What kinds of activities are you involved in now as a student? Check as many that apply.

_____ Extracurricular activities. Please name. ________________________________

_____ A job. Where and doing what? ________________________________________

_____ Going to school and not involved in any of the above.

_____ Other. Please describe. ____________________________________________

7. What are your plans for the future? Check as many as apply.

_____ Plan to continue attending OSU, but no decision yet as to whether I will graduate.

_____ Plan to graduate from OSU. Please name major and degree sought. ________________________________

_____ Do not plan to continue at OSU. If so, what are your plans? 

______________________________

_____ Plan to work after graduation. What kind of work? ______

________________________________________

_____ Plan to do nothing.

_____ Plan to go on for more education after the bachelor's degree. Please explain what kind of additional education and where if you know it.

________________________________________

_____ Have no plans in mind at this time.

_____ Other. Please explain. ____________________________________________

8. We hope this questionnaire will tell us something about what you have been doing during these past four years and something about your future plans. If there is anything about yourself which you feel would help us know a little more about you, please feel free to respond below either now or after you have answered the two questionnaires. Thank you very much for your cooperation.

4/14/72
APPENDIX B

TABLE A: Wilcoxon T Values, Direction of Change and Number of Persons Signed Using the Wilcoxon Matched-Pairs Signed Ranks Test Within HEOP and COM Groups Between 1968 1969 and 1972 on the TSCS

TABLE B: Mann-Whitney U Values and Group with Higher Scores on TSCS Variables Between HEOP and COM and Within HEOP using the Mann-Whitney U Test

TABLE C: Mann-Whitney U Values and Sex with Higher Scores on TSCS Variables for Males and Females in HEOP and COM Groups using the Mann-Whitney U Test

TABLE D: Wilcoxon T Values, Direction of Change and Number of Persons Signed using the Wilcoxon Matched-Pairs Signed-Ranks Test Within HEOP and COM Groups between 1969 and 1972 on the CSQ

TABLE E: Mann-Whitney U Values, Group with Higher Scores on the Mann-Whitney U Test Between HEOP and COM Groups and Within HEOP on the CSQ

TABLE F: Mann-Whitney U Values and Sex with Higher Scores on the CSQ in HEOP and COM Groups using the Mann-Whitney U Test
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_**p < .05, ***p < .01, ****p < .001, two-tailed probabilities_
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*p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001, two-tailed probabilities
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Two-tailed probabilities: p<.10, *p<.05, **p<.01, ***p<.001
### TABLE B (2)

Mann-Whitney U Values and Group with Higher Scores on TSCS Variables Between HEOP and CON and Within HEOP using the Mann-Whitney U Test

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<th>HatwnWhltnay</th>
<th>Valua and Croup with Htcuar Scores on T S C S  Variables</th>
<th>Httn in  H E O P  and C O H  and Within H E O P  using tha M ann-W hitney U  Tast</th>
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<td>H</td>
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<td>C</td>
<td>H</td>
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<td>C</td>
<td>H</td>
</tr>
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<td>5. TP</td>
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<td>C</td>
<td>H</td>
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<td>C</td>
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<td>C</td>
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<td>C</td>
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**Two-tailed probabilities ____p<.10, *p<.05, **p<.01, ***p<.001**
### TABLE 5 (5)

Mann-Whitney U Values and Group with Higher Scores on TSCS Variables Between HEOP and COM and Within HEOP using the Mann-Whitney U Test

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<th>U</th>
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Two-tailed probabilities: \( p < .10 \), \( *p < .05 \), \( **p < .01 \), \( ***p < .001 \)
# TABLE C (1)

Mean-Whitney U values and sex with higher scores on TSCS variables for males and females in HEOP and COM groups using the Mann-Whitney U test.

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<th>1968 HEOP (He+b68)</th>
<th>1968 HEOP (Hc68)</th>
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<td>23M, 32F</td>
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Two-tailed probabilities **P < .01, *P < .05, **P < .01, ***P < .001
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Two-tailed probabilities __P<.10, *p<.05, **p<.01, ***p<.001
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Two-tailed probabilities: **P < .10, *P < .05, **P < .01, ***P < .001
TABLE D

Wilcoxon T Values, Direction of Change and Number of Persons Signed Using the Wilcoxon Matched-Pairs Signed-Ranks Test Within HEOP & COM Groups Between 1969 & 1972 on the CSQ

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*p < .10, *p < .05, **p < .01, ***p < .001, two-tailed probabilities
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<td>H</td>
<td>1212.50**</td>
<td>C</td>
<td>H</td>
</tr>
</tbody>
</table>

Two-tailed probabilities

- *p < .10
- **p < .01
- ***p < .001
<table>
<thead>
<tr>
<th>CSQ</th>
<th>Ha+b69</th>
<th>Ce69</th>
<th>Ce+c*72</th>
<th>Ha+c*72</th>
<th>Ha72</th>
<th>Ha+c*72</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>Hi</td>
<td>Lo</td>
<td>U</td>
<td>Hi</td>
<td>Lo</td>
<td>U</td>
</tr>
<tr>
<td>1. SF</td>
<td>M F</td>
<td>355.50</td>
<td>M F 335.50*</td>
<td>M F 116.00</td>
<td>M F 8.00</td>
<td>M F 16.00</td>
</tr>
<tr>
<td>2. SA</td>
<td>M F</td>
<td>320.00</td>
<td>M F 468.00</td>
<td>M F 108.50</td>
<td>F M 11.00</td>
<td>M F 16.00</td>
</tr>
<tr>
<td>3. SS</td>
<td>M F</td>
<td>335.50</td>
<td>M F 360.50</td>
<td>M F 110.50</td>
<td>M F 9.50</td>
<td>M F 11.00</td>
</tr>
<tr>
<td>4. SH</td>
<td>F M</td>
<td>243.00*</td>
<td>M F 481.00</td>
<td>M F 124.00</td>
<td>M F 4.00</td>
<td>M F 17.00</td>
</tr>
<tr>
<td>5. EI</td>
<td>F M</td>
<td>369.00</td>
<td>M F 319.00*</td>
<td>M F 99.50</td>
<td>M F 1.00*</td>
<td>M F 14.50</td>
</tr>
<tr>
<td>6. FI</td>
<td>M F</td>
<td>271.00</td>
<td>M F 401.50</td>
<td>M F 127.50</td>
<td>M F 11.00</td>
<td>M F 16.50</td>
</tr>
<tr>
<td>7. PI</td>
<td>M F</td>
<td>370.00</td>
<td>M F 389.00</td>
<td>M F 107.50</td>
<td>F M 12.00</td>
<td>F M 15.50</td>
</tr>
<tr>
<td>8. L</td>
<td>M F</td>
<td>350.00</td>
<td>M F 465.50</td>
<td>M F 119.00</td>
<td>M F 11.00</td>
<td>M F 8.00</td>
</tr>
<tr>
<td>9. SC</td>
<td>F M</td>
<td>280.00</td>
<td>M F 395.00</td>
<td>M F 135.50</td>
<td>F M 8.50</td>
<td>M F 15.00</td>
</tr>
<tr>
<td>10. CS</td>
<td>M F</td>
<td>373.00</td>
<td>M F 444.50</td>
<td>M F 89.00</td>
<td>M F 0.00**</td>
<td>M F 15.00</td>
</tr>
<tr>
<td>11. OSU</td>
<td>M F</td>
<td>339.50</td>
<td>M F 418.50</td>
<td>M F 128.50</td>
<td>M F 12.00</td>
<td>M F 13.00</td>
</tr>
</tbody>
</table>

*p < .10, **p < .05, ***p < .01, two-tailed probabilities
APPENDIX C

LETTERS SENT TO HEOPS AND COMS IN 1969 AND 1972
April 17, 1969

Dear

We hope everything is going well for you this spring quarter. We would like to thank you for the good cooperation you gave us last summer when you answered a questionnaire for us while in the HEOP program. We now urgently need your help again.

This week, on Friday, April 25th, we would like your help in answering some questionnaires for us. You are an important person to those of us concerned with higher education and programs similar to HEOP. For your convenience, we have reserved Room 356 in Arps Hall at 11 a.m., 1 p.m., and 3 p.m. We are requesting that you come to Arps 356 at one of those times to fill out the questionnaires. It should take you an hour and a half so please plan on spending that time. The information you can give us is vital—I hope you will make every effort to spend the hour and a half with us.

If, for some reason, you will not be free during those times, please contact us by calling Mrs. Vaughn at 293-8494 (days) or me at 299-6924 (evenings) by Wednesday, April 23rd. We will make special arrangements for you. If we do not hear from you by Wednesday, we will assume you will be in Arps 356 at 11, 1, or 3 o’clock on Friday, April 25, 1969.

Thanks in advance.

Warmly,

Elaine Haramoto
Research Assistant
As a participant in the Higher Education Opportunity Program (HEOP) during the summer of 1968 at Ohio State University you were involved in the first stage of a dissertation study of self-concepts. If you were here during Spring Quarter 1969 you may have again participated in a second phase of the study which in addition to self-concept, asked you about your attitudes towards the university.

We are now in the third and final stage of the study -- that is, seeing you again now that four years have elapsed to see what you've been doing and to see what changes have occurred with you. Some of you have been out of school or at other schools and we are interested in knowing these things too.

We hope you will be willing to cooperate by coming to a session to answer 2 questionnaires on Monday, April 24, at 10:00 a.m. or 2:00 p.m. or Tuesday, April 25, at 2:00 p.m. in Room 457 of the Ohio Union (1739 North High Street). You should probably plan on spending an hour. There is a special reason for needing you in particular for this session. You were chosen as a unique individual to be a part of this study -- looking at your growth and development. Therefore there is no substitute or replacement we may use if you do not participate.

We hope you understand the importance of your cooperation and that you will find the time to attend the scheduled session or call to arrange another appointment. If you have any questions, please do not hesitate to call me (Elaine Tanabe) or my research assistant, Maryann Marsh, at 422-8245 or 888-4761.

We are looking forward to seeing you again.

Cordially,

Elaine Naramoto Tanabe
Student in Counseling Psychology

Maude A. Stewart
Professor, Department of Psychology
Adviser
As a freshman four years ago you participated in a dissertation study which was looking at your self-concept and attitudes towards various aspects of the university. At the time you were tested you were in Mr. Richard Brown's English 103 class, Spring Quarter 1969.

We are now attempting to finish the final aspect of the study—that is, seeing you again now that four years have elapsed to see what changes have occurred with you.

We hope you will be willing to cooperate by coming to a session to answer 2 questionnaires on Monday, April 24 at 10 a.m. or 2 p.m. or Tuesday, April 25 at 2 p.m. in Room 457 of the Ohio Union (1739 North High Street). You should probably plan on spending an hour. There is a special reason for needing you in particular for this session. You were chosen as a unique individual to be a part of this study—looking at your growth and development. Therefore there is no substitute or replacement we may use if you do not participate.

We hope you understand the importance of your cooperation and that you will find the time to attend the scheduled session or call to arrange another appointment. If you have any questions, please do not hesitate to call me (Elaine Tanabe) or my research assistant, Maryann Harsh, at 422-8245 or 888-4761.

We are looking forward to seeing you again.

Cordially,

Elaine Naramoto Tanabe
Student in Counseling Psychology

Maude A. Stewart
Professor, Department of Psychology
Adviser
APPENDIX D

DESCRIPTION OF HEOP STUDENTS
(from Halverson, 1970)

Geographical Origin

Fourteen Ohio counties and two other states accounted for HEOPs

<table>
<thead>
<tr>
<th>County</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franklin County</td>
<td>117</td>
</tr>
<tr>
<td>Hamilton County</td>
<td>29</td>
</tr>
<tr>
<td>Cuyahoga County</td>
<td>9</td>
</tr>
<tr>
<td>Other Ohio Counties</td>
<td>11</td>
</tr>
<tr>
<td>Kentucky &amp; North Carolina</td>
<td>2</td>
</tr>
</tbody>
</table>

168 HEOPs

Franklin County high school breakdown:

<table>
<thead>
<tr>
<th>School</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>16</td>
</tr>
<tr>
<td>East</td>
<td>30</td>
</tr>
<tr>
<td>Eastmoor</td>
<td>7</td>
</tr>
<tr>
<td>Linden-McKinley</td>
<td>12</td>
</tr>
<tr>
<td>Marion-Franklin</td>
<td>12</td>
</tr>
<tr>
<td>North</td>
<td>3</td>
</tr>
<tr>
<td>South</td>
<td>22</td>
</tr>
<tr>
<td>West</td>
<td>8</td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
</tr>
</tbody>
</table>

117 students
High School Academic Performance

**High School Rank (n=115):** the range was from the 1st to 98th percentile. Distribution by decile was:

<table>
<thead>
<tr>
<th>Decile</th>
<th>Number of Students</th>
<th>% of N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st (highest)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>2nd</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>3rd</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>4th</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>5th</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>6th</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>7th</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>8th</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>9th</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>10th (lowest)</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

While 60% of the students ranked in the upper half of their high school classes the quality of their schooling may not have produced equal achievement outcomes due to their predominantly black racial mix.

**Point-hour ratios (n=153):** On a four-point scale the grades of HEOPs ranged from a 3.187 to 0.78 with a mean of 2.103. A breakdown follows:

<table>
<thead>
<tr>
<th>PHR</th>
<th>Number of Students</th>
<th>% of N</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5-4.0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3.0-3.499</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2.5-2.999</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>2.0-2.499</td>
<td>54</td>
<td>36</td>
</tr>
<tr>
<td>1.5-1.999</td>
<td>34</td>
<td>22</td>
</tr>
<tr>
<td>1.0-1.499</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>Below 1.0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

153 100%

**High School Performance in English (n=152):** Converting English grades into a four-point scale, HEOPs earned an average grade of 2.075 in English with a range of 0.667 to 3.667.
GPA in English  Number of Students  % of N
3.5-4.0  5  3
3.0-3.499  23  15
2.5-2.999  27  18
2.0-2.499  45  30
1.5-1.999  22  14
1.0-1.499  27  18
Below 1.0  3  2
152 100%

High School Performance in Math (n=149): Converting math grades into four-point equivalents, the 149 students had a mean math grade of 1.85 with a range of 0.5 to 4.0.

GPA in Math  Number of Students  % of N
3.5-4.0  5  3
3.0-3.499  10  7
2.5-2.999  12  8
2.0-2.499  45  30
1.5-1.999  29  20
1.0-1.499  41  28
Below 1.0  7  4
149 100%

Other Test Scores: No test was administered to all HEOPs but there is limited data on some instruments. Sixty-one persons took the American College Test (ACT) with the following results:

<table>
<thead>
<tr>
<th>Portion of ACT</th>
<th>Range</th>
<th>HEOP means</th>
<th>Freshmen Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>01-23</td>
<td>13.18</td>
<td>19.9</td>
</tr>
<tr>
<td>Math</td>
<td>02-30</td>
<td>13.96</td>
<td>21.03</td>
</tr>
<tr>
<td>Social Science</td>
<td>01-27</td>
<td>14.69</td>
<td>21.92</td>
</tr>
<tr>
<td>Natural Science</td>
<td>02-27</td>
<td>13.84</td>
<td>22.51</td>
</tr>
<tr>
<td>Composite</td>
<td>04-25</td>
<td>14.21</td>
<td>21.67</td>
</tr>
</tbody>
</table>

On the basis of the predictability of the ACT Composite Score, 8% of the 61 students would achieve a 2.0 or higher point-hour ratio during his/her freshman year at OSU.
Appendix E

The table is a summary of HEOP and COM students persistence at OSU. COMs cannot be equally compared with HEOPs because they were not identified until two quarters after the HEOPs entered. By Spring Quarter 1969 many other persons who might have been in the COM group may have left the university. Second, COMs who were followed were only those who consented to participate by answering the CSQ and TSCS in their English 103 class during Spring 1969. Other students may have been in the class but not chosen to participate, or they may have been absent from class. Thus, their names were not available.

The chart only reflects most recent enrollment status with OSU. Some students were dismissed several times, withdrew once or twice and still graduated with a degree. Thus, the chart should be viewed with these limitations.

**COM and HEOPs’ Most Recent Enrollment Status with OSU by Quarter & Type**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Out Under Rules</th>
<th>Withdraw</th>
<th>Last Quarter Attended</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HEOP</td>
<td>COM</td>
<td>HEOP</td>
<td>COM</td>
</tr>
<tr>
<td>Aut. 1968</td>
<td>7</td>
<td>*</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>Win. 1969</td>
<td>7</td>
<td>*</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>Spr. 1969</td>
<td>10</td>
<td>*</td>
<td>4</td>
<td>*</td>
</tr>
<tr>
<td>Sum. 1969</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Aut. 1969</td>
<td>5</td>
<td></td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Win. 1970</td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>Spr. 1970</td>
<td></td>
<td></td>
<td>1</td>
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</tr>
<tr>
<td>Sum. 1970</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Aut. 1971</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Win. 1971</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Spr. 1971</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sum. 1971</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
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<tr>
<td>Aut. 1972</td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>Win. 1972</td>
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<td>Spr. 1972</td>
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<tr>
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<tr>
<td>Aut. 1972</td>
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<td></td>
<td>36</td>
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<tr>
<td></td>
<td>(33%)</td>
<td>(8%)</td>
<td>(13%)</td>
<td>(3%)</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>15</td>
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</tr>
<tr>
<td></td>
<td>(22%)</td>
<td>(15%)</td>
<td>(23%)</td>
<td></td>
</tr>
</tbody>
</table>

* No comparative data available

HEOPs: 109 attended sometime between Autumn 1968 and Spring 1973: 53 never attended OSU
REFERENCES


Bayer, A. E., Royer, J. T., & Webb, R. M. Four years after college entry. ACE Research Reports, 1973, 8 (1).


Dispenzieri, A., Kweller, I., & Giniger, S. An overview of longitudinal findings on a special college program for disadvantaged students, 1971, ERIC No. ED 047 078.


Fitts, W. H. The self concept and performance. Dede Wallace Center Monograph, 1972, No. 5.


Lounsbury, J. E. An analysis of the satisfactions with college experiences by special project students, primarily inner-city and negro, at a non-metropolitan university as measured by the College student questionnaire. Dissertation Abstracts International, 1972, 32 (9), 4989-A.


Nelsen, E. A. & Johnson, N. C. Attitude changes on the College student questionnaires: A study of students enrolled in predominantly black colleges and universities, February 1971, ERIC No. ED 049 296.


Thompson, R. B. & Mahr, E. T. A profile of Ohio State University students, Columbus, Ohio. The Ohio State University, Office of Student Statistical Services, July 1969.

Thompson, R. B. & Mahr, E. T. A study of persistence and attrition among 7411 Ohio State University students. Columbus, Ohio (no date).


