

CERTAIN VARIABLES RELATED TO THE CHANGE
IN CULTURAL INTERESTS OF
LEWIS AND CLARK COLLEGE FRESHMEN

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CHAPTER I

INTRODUCTION

The privately controlled college of liberal arts and sciences has played an important role in higher education in America. From a very humble beginning, these institutions now number 723. (55, p. 10) As compared to the tax-supported institutions of higher education, they serve approximately 45 per cent of the total college population. (55, p. 4)

Many colleges of liberal arts and sciences include in their purpose statements concerning the development of traits of personal character toward which their activities are directed. (37, pp. 3-6) It is assumed and widely accepted that the colleges of liberal arts and sciences are unique in developing academic situations which lead to positive changes in interests and attitudes in their undergraduate students. This is especially true of the church-related colleges in which Christian ideals are stressed. (46, p. 72) The fact that a large number of colleges have small enrollments also leads to the assumption that students have more personal relationships with the college staff and other members of the student body. (14, p. 336)

These assumptions are difficult to substantiate due to the broad generalizations on which they are based. There have been few studies made which can support these assumptions, and there appears to be a need to determine the degree of change which takes place in students who attend small colleges of liberal arts and sciences.

Dr. Henry Chauncey, president of the Educational Testing Service, in an unpublished letter addressed to the Committee on the Improvement of Instruction, Lewis and Clark College, stated that this is a field where outcomes were assumed rather than tested, and that measurements are needed desperately.¹

An interesting study made in this area is reported by Havemann and West (33, p. 5) based on a survey made of United States college graduates by Time Magazine and analyzed by the Columbia University Bureau of Applied Social Research. Through the cooperation of 1,037 of the American colleges, a group of 9,064 graduates took part in this survey which attempted to answer these questions:

"What does college do to its students? What kind of breadwinners does it turn out, and what kind of citizens with what kind of political and social attitudes?"

The magnitude of the problem is expressed by the authors in these words:

¹Chauncey, Henry, President Educational Testing Service. Princeton, N. J. Jan. 17, 1955.

"The folklore is endless. The facts have been pretty scarce.... These are not easy questions, and probably no one will ever know the full, complete, and final answers. But one way of getting at the facts is to select as large a group of college graduates as possible, picking them carefully to represent a cross section of all the graduates now alive, and then to ask them as many questions as time permits about their college careers and their lives since they left the campus." (33, pp. 4-5)

In reviewing the above study, it was found that college graduates are somewhat ambiguous in their statements concerning the development of personal characteristics as a result of their college experience. However, from the statements quoted in the study, the majority feel that intangible values are derived. As one graduate states:

"Because of unavoidable circumstances, I was unable to follow the career for which I trained. However, my college training has helped me to enjoy life and be a good citizen by giving me a philosophical outlook on life, an appreciation of spiritual values, and a guiding line to keep me from going out of bounds in this game of life." (33, p. 133)

Such a statement is difficult to evaluate, inasmuch as the reader cannot determine that which the writer means by a "good citizen" or a "philosophical outlook on life."

Purpose of the Study

The purpose of this study is to determine whether certain variables in academic life produce any measured changes in cultural interests among students enrolled in

Lewis and Clark College, a church-related college of liberal arts and sciences. If changes occur in cultural interests, this study will attempt to identify these changes with certain variables in academic life. For measurement purposes, an interest profile will be used.

Problems to Be Considered

There are two basic problems to be considered in this study.

1. Are there significant changes in cultural interests among students during their first year of academic life in a college of liberal arts and sciences, as measured by the Adult Interest Profile?
2. Are there certain variables related to these changes in cultural interests?
 - a. Is there a relationship between the degree of change in cultural interests and:

(1) sex, (2) age, (3) intellectual ability, (4) academic knowledge, (5) percent of self-support, (6) religious activities, (7) education of parents, (8) high school grade point average, (9) on campus - off campus residence, (10) choice of academic major, (11) choice of college courses.

In order to consider these problems, the following assumptions are made:

1. That there are individual differences in the cultural interests of college students.
 - a. That students enter college with cultural interests which are based on past learning experiences.
2. That students change in cultural interests while attending a college of liberal arts and sciences.
 - a. It is not assumed that students enrolled in other types of institutions of higher learning do not change in cultural interests.
3. That certain changes in cultural interests will be reflected by the Adult Interest Profile.

Scope of the Study

This study is based on 216 freshmen students selected from the class that entered Lewis and Clark College in the Fall of 1954-55. There were 328 members of the class from which the sample was taken. The 216 selected completed the freshman year and carried a minimum of twelve semester hours each semester. The Adult Interest Profile was administered to them at the beginning and also at the completion of the freshman year.

The records of the 216 students were reviewed for information concerning their age, high school grade point

average, formal education of parents, religious activities, per cent of self-support, scores on the American Council on Education Psychological Examination, choice of academic major, courses completed during their first year, and their first year college grade point average. These factors were used as some of the variables in attempting to relate their changes of interest to other variables as measured by the Adult Interest Profile.

Development of the Adult Interest Profile

The measuring instrument used in this study was first conceived by members of the Committee on the Improvement of Instruction at Lewis and Clark College. This committee felt there was a need to evaluate the interests of students in those values which colleges designate as goals of higher education. The sub-committee appointed to study the problem was under the direction of Dr. Harold S. Tuttle, Professor of Education.

For purposes of definition, the term "interest" as accepted by the committee is as follows:

An interest is an object, act, idea, or range of experiences with which a favorable state of feeling is steadily associated. The term is not applied to passing pleasures but rather deep-rooted, stable capacities for appreciation. Interests are strong, deep-seated tendencies to secure the object in question. (52, p. 121)

In attempting to evaluate the interests of college students relating to certain goals of higher education, the

assumption was made by the committee that such interests may not be the functions of knowledge. The problem was to construct an instrument which would evaluate these interests with minimum reference to or dependency on the subject's information in any of the fields included in the college academic curriculum. If it should be found that interest scores were based on knowledge of content in related fields, then the need for a separate instrument for the evaluation of interests would appear to be of relatively little urgency. But, if the scores based on interests show no significant correlation with scores based on scholastic achievement in related fields, then the problem of evaluating interests assumes superlative importance.

Strong (48, p. 3), in his study of occupational interests, states:

"As occupational interest scores correlate in the neighborhood of zero with intelligence, it is evident that the occupational interest scores measure other factors than those involved in general intelligence and probably also those involved in scholarship. It is consequently not to be expected that interest scores will correlate particularly with school grades."

The first step required was to discover what goals or outcomes the colleges really seek to achieve. It was agreed that members of college faculties could be one source from which a definition of these goals might be obtained. The goals announced by college catalogues do not necessarily reflect the true goals of a college. It was felt that

faculty members rather than the administration had the greatest influence in establishing and perpetuating the true goals.

A set of items was prepared which attempted to spell out the stated goals of Lewis and Clark College. The items were tentatively classified in eleven categories, all worded as "appreciation of" in order to keep dependence on scholastic achievement and judgment at a minimum. These categories were then condensed to form the following five groups:

- I. Democratic Interests - including the appreciation of health, freedom, democratic values, social fellowship, good workmanship, and social uses of wealth.
- II. Philosophy of Life - including altruism and philosophy of life.
- III. Scientific Spirit - including interests in scientific advancement.
- IV. Play - including appreciation of recreation.
- V. Esthetic Interests - including appreciation of beauty.

Ninety-nine items were developed in the attempt to more specifically define the five areas of appreciation. These items were distributed to the faculty of Lewis and Clark College with a frank explanation of the purpose prompting the study. Instructions were given to eliminate those items which did not define the five areas of appreciation. Any item which was rejected by more than five percent

of the faculty was eliminated.

The next step was to canvass representative faculties so that a common denominator might be found among colleges. The committee decided to include only those colleges in the canvass which could be classified as church-related colleges of liberal arts and sciences. It was felt that it would be much easier to find a common denominator among colleges with similar philosophies than to try to include tax-supported institutions. It was realized that the use of such a measuring instrument would be limited to those colleges which agreed with the general criteria on which the instrument was based.

The committee invited some fifty church-related colleges of liberal arts and sciences to participate in the selection of items for the inventory. A careful statement of the problem and of the steps underway was sent to each college that indicated willingness to participate. The question form included 280 items. Clear indication was given as to which of the five areas of appreciation each item was intended to test. Participants were asked to mark the items, not blindly in terms of their individual preference, but in terms of the answer which would most surely indicate appreciation of the value designated. In short, they were asked to give their definitions in specific form of the cultural and personality goals of church-related colleges.

Returns were received from 150 faculty members

representing twenty colleges. An item analysis was made of their answers. No item was retained on which there was a ten percent disagreement. The approved items constituted, tentatively, a basic library of items for use in the final instrument.

A further step was deemed necessary in the selection of acceptable items. A church-related college depends for its support on the ministers of the contributing churches. The definition of goals by the ministers of Presbyterian churches in Oregon supporting this college was deemed important. The same procedure was followed in their case as with faculty members. Some 70 returns were received. Any item on which there was a ten percent disagreement was discarded. By an analysis of items submitted by faculty members and ministers, a library of items was compiled which contained only those items as were approved by 90 percent of both groups. Hence, validity of the instrument is based on the jury method.

The number of items that could be included in the form for the jury without unreasonable imposition was not sufficient for the two forms of the inventory needed in the evaluation program. It was necessary to make provisions for more items. These were validated by preparing from the list established by the jury an inventory form containing a large number of items. To these were added some 100 new items. This form was administered to 75 upper division students

enrolled at Lewis and Clark College. These inventories were first scored on the basis of the jury-approved items only. A second scoring was made on the new items which had not been submitted to the jury. By comparison of the scores on both sets of items, it was possible to recognize the new items which correlated highly with the jury-approved items. By the addition of these new items, a total of 292 items was secured for the inventory. These were paired off to constitute two forms of the inventory, each having 146 items.

These two forms, labeled A and B, were administered to the entire freshman class in September, 1954. Omitting cases in which one or the other form was incomplete, 180 cases were used in correlating the two forms. The coefficient of correlation was found to be .73. While this is not high enough to justify using these forms unrevised, it is high enough to indicate that the two forms measure something involving a considerable common element.

In order to determine if the Adult Interest Profile was a measurement of scholastic aptitude, the raw scores obtained from the instrument administered in the Fall were correlated with raw scores made by the same students on the American Council on Education Psychological Examination. The coefficient of correlation was found to be .16, which is statistically significant at the one per cent level. This indicates that scholastic aptitude is a factor to be considered in interpreting the scores on the Profile, but

its influence is rather slight. The percentage of the interest variable accounted for by the ACE examination is approximately $2\frac{1}{2}$ per cent. Therefore, the Profile must be weighted with other factors which account for $97\frac{1}{2}$ per cent, thus making the remaining scholastic aptitude factor negligible.

For this study, the Adult Interest Profile in its present form was used to consider the problems as stated. Additional comments and suggestions for its revision will be made in a later chapter.

Methods of Study

In order to determine if there is any significant difference in the influence of certain variables on cultural interests, scholastic aptitude, and scholastic achievement, certain correlations were made. The Adult Interest Profile was used to measure cultural interests, The American Council on Education Psychological Examination for the measurement of scholastic aptitude, and the college yearly grade point average to measure scholastic achievement. Using the Pearson Product Moment method of correlation and the first order partial coefficient of correlation, coefficients were obtained and comparisons made. Degree of change in cultural interests was shown for the entire population of the study as well as the several sub-groups by testing the significance of the difference of the means between the Fall profile and the Spring profile scores.

A factorial design, using an analysis of variance, was used to examine relationships of the independent variables. This permitted the examination of the unique relationship of certain variables, holding other variables constant.

Securing of Information

The cumulative record of each student in the study was made available, and the greater portion of information used was obtained from this source. Self-support was determined by the percent the student was financing his college expenses. Religious activities were determined by church membership and participation in church activities as listed. Parent education was determined by the amount of formal education listed for each parent.

Age, sex, high school grade point average, raw scores on the ACE examination, college yearly grade point average, year courses completed during the freshman year, choice of academic major, and college residence information were obtained from the college transcript.

In addition, the Adult Interest Profile scores for each student in the study were computed for the Fall and Spring administration of the profile.

Significance of the Study

The definition of cultural interests, as accepted by the Committee on the Improvement of Instruction, is as

follows:

Cultural interests include all interests which tend to enrich the life of the individual and, directly or indirectly, to enrich the life of the community.

The cultural interests of college students are determined by many variables. The student's pre-collegiate background and training undoubtedly play an important role in determining his interests as he enters college. From the standpoint of the college educator, it is important to know whether these interests change as a result of college participation. If a change does take place, he should be interested in the variables which might be related to these changes. Thus, the problem might be stated under two headings:

1. Are there changes in cultural interests among college students?
2. What variables are associated with any changes which might occur?

If it can be shown that changes in cultural interests, as measured by this instrument, are negligible, colleges should re-evaluate the claims that they are influential in the development of cultural interests and traits of personal character. On the other hand, the claims of the colleges may be valid and the instrument should be re-examined or validated on a broader scale.

If a positive or negative change in cultural interests

can be shown, the colleges should be interested in attempting to determine those variables in collegiate life which are associated with these changes. For example, if a greater positive change takes place among residents of college dormitories as compared to students living in private homes or other housing facilities, this variable could be studied more intensively and recommendations be considered for more dormitories. If certain selection of courses by students results in a greater positive change in cultural interests, these courses could be amplified; and those which apparently show little influence could be strengthened or modified.

Although this sampling does not include cases from tax supported institutions or non-church-related colleges, similar methods could be employed by such institutions to determine whether or not they are attaining the goals they consider to be important. Similar studies might aid in answering the question concerning the claimed advantages of attending a church-related college as compared to other types of institutions of higher learning. Non-church-related schools are faced with the problem of attempting to show that they have as much to offer in the area of character development as do the church-related schools.

Limitations of the Study

This study was limited to 216 students who entered

Lewis and Clark College as freshmen in September, 1954. There were 328 students in the class, and the selection of the 216 for the study was based on several factors. Only freshmen students who met the following qualifications were used in the study: (1) entered in September, 1954; (2) completed a full academic year; (3) had completed the Adult Interest Profile at the beginning and end of the academic year; and (4) had completed at least twelve semester hours of work each semester.

The size of the sample was considered adequate by the graduate committee who supervised the study. The limitations listed above were considered necessary for this type of study due to the information which was sought.

The information obtained may be classified as a pilot study, as we cannot be certain, without similar studies, that the same results would be obtained for college freshmen attending other church-related colleges of liberal arts and sciences or institutions of higher education of a different classification.

Another limitation was due to the time factor involved. A question can be raised as to the amount of influence any college can have on an individual after having attended but one year. If there are changes in cultural interests as a result of attending any institution, there is a possibility that the change would be greater in relation to the time spent at the institution. However, there are few colleges

that state one must attend for four years before changes and development of cultural interests take place. The general public assumes that students entering a small church-related college of liberal arts and sciences will experience a unique situation which cannot be duplicated in other institutions of society.

If a third form of the Adult Interest Profile had been available, it would have been interesting to determine if changes of interests were greater at the completion of the first semester of academic work as compared to the second semester. With but two forms, this procedure was not deemed feasible.

A fourth limitation presents itself in the method of selection of students for the study. As a result of this study, we may be able to draw certain conclusions concerning the students involved; but as we did not include all the freshman students in the study, we cannot predict what changes, if any, took place in those students who did not meet the requirements of the study. Therefore, we cannot say that this study included a random sampling of the freshman class but only those students who met certain requirements. It may be true that those students who did not complete one year of academic study dropped out because of changes in cultural interests caused by the academic life in which they found themselves.

A study which attempts to measure interests, attitudes,

or ideals has, by its very nature, certain limitations. It is difficult to develop an instrument which measures the source of interests and the relative importance of factors which might change these interests. As in most psychological testing, a well constructed instrument will generally have greater predictive value than mere subjective judgment. This limitation can be overcome by persistent revision and use of the instrument in many varying situations under adequate controls. This study is but the beginning, and a great deal of work will have to be done in this area if an adequate form of measurement is to be developed.

Organization of This Report

There are four chapters in this study with the following contents:

- Chapter I - Introduction, Statement of Problem, Methods Used, and Limitations of the Study.
- Chapter II - A review of the literature relating to the study.
- Chapter III - Statement of Hypothesis, Description of Methods Used, Treatment of Data, and Tables of findings.
- Chapter IV - Summary of Findings, Interpretations of Results, and Conclusions.

Summary

Small colleges of liberal arts and sciences make certain assumptions as to the values to be derived from attendance at such institutions. This study proposes to determine whether cultural interests change as a result of attendance at Lewis and Clark College. If it is found that there are changes in cultural interests, an attempt will be made to relate these changes to certain variables which are found in the academic and cultural life of this institution.

CHAPTER II

RELATED STUDIES

Introduction

The church-related college of liberal arts and sciences, as an institution of higher education, is criticized by many for its emphasis upon providing educational training in the general broad areas of the humanities, arts, and sciences. This criticism stems from the belief that their graduates are not equipped to compete on an equal basis with graduates from technical schools in our present world of business and technology. There is no proof that the church-related college develops high moral standards and Christian character and the secular institutions do not.

The purpose of this study was to determine if the objectives and statement of purpose of Lewis and Clark College could be measured adequately by attempting to relate certain variables found in the academic life of the college to changes in cultural interests. A survey of the literature was made in the following areas: the purposes of the liberal arts college; the definitions of culture, interests, and values; instruments for measuring different types of interests; and related studies.

The Liberal Arts College

As this study was conducted at Lewis and Clark College, Portland, Oregon, and the major measuring instrument used in the study was developed by members of its faculty, a statement of the purpose and objectives of the college would be of value in describing this institution. As stated in the catalog of Lewis and Clark College: (37, p. 3)

"The work and the activities of the College are directed toward the development of the following traits of personal character: disciplined intelligence; Christian integrity and purpose; devotion to freedom and justice; humane and responsible citizenship; competence in expression and work; physical and social fitness; understanding enjoyment of art, music, and science."

Lewis and Clark College is a modern Christian co-educational college, maintained by the Oregon Synod of the Presbyterian Church and is nationally accredited. It has an enrollment of approximately 1,000 students. The degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Music are offered. Master's work is offered in education, music, and music education. The institution is qualified to prepare candidates for both the Oregon elementary and secondary teaching credentials.

The stated purposes and objectives of Lewis and Clark College do not differ to a great extent from those of other church-related colleges. From a year study by Distler (18, p. 329) made to define the nature of a Christian

college, the following conclusions were made:

A Christian college that is true to its name is sincerely dedicated to the interpretation and practice of the Christian religion; but its function is specifically educational. It is primarily an institution of learning, and as such it provides its students with knowledge of the world in which they live and fits them for their responsibility in society.... The college should distinguish between an impartial, objective presentation of facts in the classroom and the cultivation of Christian services.

Sibley (46, p. 72) agrees with this statement but believes the liberal arts college should also help the students weigh the aesthetic and ethical values of life in order to make every changing circumstance a goal which will be meaningful and satisfying.

Those who criticize the liberal arts college are rather outspoken. There is little agreement that the institution should be abolished, but the need for improvement is often voiced. Eldridge (22, p. 345) states:

"Allowing for exceptions and qualifications, the typical liberal arts college is gravely defective on three principal counts. First, it does not definitely orient its students toward problems, responsibilities, opportunities, life situations which will confront them after graduation. The work is not goal centered, is wanting in purpose and direction, so far at least as these vital needs are concerned."

He continues in his criticism to state that many liberal arts colleges center their program around books, lectures, and examinations or tests which put a premium on rote learning or at best some comprehension of reading

and lecture. They do not make symbols meaningful, nor do they deal with their students to any extent as individuals.

Dickey (17, pp. 31-32) is not so strong in his condemnation but agrees in principle.

"Without attempting here the impossibility of conclusive proof, I suggest that the American liberal arts college (including the church colleges) can find a significant, even unique, mission in the duality of its historic purpose: to see men made whole in both competence and conscience....

"To create the power of competence without creating a corresponding sense of moral direction to guide the use of that power is bad education.

"This is the point in the story where most college catalogue statements of high purpose end, leaving the blissful impression that the undergraduate and the moral purpose of his college once met will live happily together ever afterward."

In constructing the instrument for this study, the Committee on the Improvement of Instruction, Lewis and Clark College, carefully considered the sources from which they obtained statements of the purpose of a church-related college. Klapper (34, p. 113) does not agree with the procedure of using faculty members to define the goals of a college.

"Many have essayed the necessary task of crystallizing the idea of the liberal arts college by defining its objectives. So far no such formulation of objectives has been accepted by even a respectable minority of college teachers. Only when these objectives are drawn in terms too broad to carry definite meaning do they gain acceptance."

In all fairness to the committee members who constructed the instrument, it should be pointed out that they attempted to obtain free expression from a large jury of faculty members who were employed by a number of similar institutions. The purpose of this expression was to determine whether the proposed items on the instrument measured the goals and objectives of a liberal arts college. Only items on which there was a 90 per cent or more agreement were retained.

That there is a need for such a study is clearly stated by Murphy. (40, pp. 578-583)

"Most of the current discussion and plans for change in college education that are being formulated and widely heralded are devoid of any basis in research to determine what students are actually like in college, how they use different curricula or what their college education does to them as reflected in later development and behavior... Undoubtedly if scientific evaluation of the effects of education on individual personality, human relations and trends of world cooperation were made, some revolutionary changes would be involved which would be disturbing to the guardians of tradition."

It was suggested that personality development at the college level means the development of abilities, interests, values, and self-awareness which would, in turn, aid in the development of wholesome attitudes and a greater freedom from the tensions which now characterize adults in our culture.

Due to the contemplated increase in college enrollment in this country, the liberal arts college is looking

forward to larger enrollments and greater financial aid from sources which have not as yet been tapped. However, these types of institutions will still find strong competition with state supported schools and will have to offer a program which will be attractive to students who might otherwise attend larger institutions. Charters (14, p. 336) is in agreement with this policy.

"There are scores of small colleges where everyone is known by everyone else but which give students less personal guidance than some huge universities provide.

"The college, however, that can assure parents that it will use all known techniques of understanding a youth, study him as an individual, help him build a career program, modify what he studies to meet his needs, treat his extracurricular life as part of his experience, is assured of permanency. The excellent small college is superior in this respect to the huge institutions and for this service parents will gladly pay."

Definition of Terms

Inasmuch as this study proposed to measure cultural interests, it was necessary to limit the area which would be covered. It was felt that if terms could be defined, unrelated studies could be eliminated.

Tuttle (51, p. 98) defines culture as follows:

"Culture refers to the degree of satisfaction yielded by the characteristic adjustment of any particular group. Emphasis is on the attitudes produced, not upon the forms in which they are expressed.... A group has attained culture to the degree that it has established fairly uniform modes of conduct which produce

"rich and enduring satisfactions. The culture of an individual in the group is measured by the degree to which his behavior tends to enrich the lives of his fellows."

Smith (47, p. 202) believes that the only common element in the many interpretations of the cultural concept appears to be the element of refinement. This concept would include whatever adds to the highly complex art of living. The manner in which culture is taught or acquired is through the study of the whole pattern of a given society (1, p. 271).

Certain subjects in a college curriculum are often classified as cultural subjects. Bode (6, p. 264) believes that this is not always the criterion for determining such a classification.

"Whether a subject is cultural or not is determined, not by any trait inherent in the subject itself, but by the contribution it makes to the development of the individual. We are learning to think of culture not as a possession but as a way of life, an expression of the whole personality."

Thus, we can assume that culture does not mean having more knowledge or wealth, but the influencing of human behavior in a manner acceptable to the society of which he is a member. (15, p. 629)

In reviewing the literature, it was found that the three terms -- interest, attitude, and value -- were used synonymously by certain authors. Buck (7, pp. 12-19), in a study of the Pressy Interest-Attitude Test, does not

distinguish the relationship between moral attitudes, anxieties, and interests. Many writers agree that interests and attitudes are elements in the value concept.

In defining interests, we find that there is a general agreement among those who make such an attempt.

Dewey (16, p. 21) states:

"An interest is primarily a form of self-expressive activity -- that is, of growth that comes through acting on nascent tendencies. If we examine this activity on the side of what is done, we get its objective features, the ideas, objects, etc., to which the interest is attached, about which it clusters. If we take into account that it is self-development, that self finds itself in this content, we get its emotional or appreciative side. Any account of genuine interest must, therefore, grasp it as an outgoing activity holding within its grasp an object of direct value."

He believes that items are extremely varied. A person who is moved to strive for the realization of an impulse generates a purpose which becomes an interest (16, p. 90).

One must be actively concerned with any matter in order to be interested in it. Having a feeling for a subject does not imply that there is an interest created, for there must be a recognition of something whose outcome is important for the individual. (16, p. 16)

The word "interest" is associated with various phenomena. It includes some aspects of all forms of motivation. It may be described as a state of the organism; a quality of the stimulus; a relationship between organism and stimulus; or a striving for novelty based upon curiosity.

These ideas were presented by Berlyne (4, p. 188), whom we quote:

"An 'interest' has (a) its evoking stimulus or stimuli, (b) a capacity for releasing psychological energy, (c) a goal (which is defined as 'a condition of the organism upon the occurrence of which the supply of energy furnished by interest is cut off'), (d) a feeling of satisfaction or dissatisfaction."

He goes on to state that the word "interest" is used in much the same way as other writers use the word "drive." Interests are named after the classes of objects to which a person has attitudes of any sort, as attitudes are generally classified according to types of response they elicit. (4, p. 188)

In summing up the interest concept, we find there are common elements. First, there is persistent attention which appears to be held without seeming effort for a considerable length of time. Secondly, there is a liking or disliking for the object or idea which results in the acceptance or rejection of the same. There appears to be a pleasantness or unpleasantness when there is a reaction to simple sensory experiences. Thirdly, there must be an object, activity, or idea on which the interest can be focused. The object forces attention upon the stimulus while the activity forces attention upon the response.

The establishing of interests is most significant for the field of education. Strong (49, p. 521) states:

"There is a great need for research here for there are too many students who seem to lack the interests which characterize their fellows who are well-adjusted. If social forces are responsible, it would appear that they are forces of the home and elementary school, else we would not have such distinct differences in interests as early as the high school level."

That the measurement of interest plays an important part in determining educational goals will be discussed later.

The area of attitude testing has been developed to a great extent during the past forty years. There appears to be more disagreement as to the nature of attitudes than there is of interests. This may be due to the fact that a fine line cannot be drawn between the two concepts. Tuttle (54, p. 706), in his disagreement with Thurstone's measurement of attitudes, states:

"An attitude is the strength of one's tendencies to utilize a particular pattern of behavior for the sake of attaining some desired end.

"An attitude involves two distinct, or at least distinguishable, elements: (a) a desire for attainment of the specific end; (b) the belief that the means in question will achieve the end."

An attitude is a belief which expresses the evaluation of ideas. It does not have the dynamic qualities expressed by interests.

Woodruff (59, p. 33) includes interest and attitudes as a part of values. He defines a "value" as:

"...any object, condition, activity, or idea which the individual believes will contribute to his well-being."

We can see that this definition embodies the principles found in the definitions of both interests and attitudes. However, a value is a more intangible thing, and an individual may not be aware of all the values which influence his behavior; whereas there is a conscious aspect to interests and attitudes.

Development of Interest Instruments

One of the first reported systematic attempts to measure interests was made by Kelley in 1914. Flanagan (24, p. 529) states that this attempt was met with but mild enthusiasm, for the measurement of interests up to this time had not produced any significant results.

It was soon realized that more indirect and subtle approaches to the determination of interest would have to be explored. One of the most fruitful of these approaches originated in a graduate seminar on interests conducted at the Carnegie Institute of Technology during the academic year 1919-1920. Several standardized interest inventories were subsequently prepared as the result of the work begun by their authors while attending this seminar. But the one whose development has been carried farthest is the Vocational Interest Blank (VIB) constructed by E. K. Strong, Jr. Unlike other early tests, the Vocational Interest Blank has undergone continuing research, revision, and extension.

Interest inventories have had their greatest development in the field of measuring vocational interests. The need for the measurement of academic interests has created many forms of inventories. Many personality tests depend

for their results upon the measuring of varied interests. The field in which there has been very limited success is that of the evaluation of personal or cultural interest. In the four Mental Measurements Yearbooks, edited by Buros, beginning in 1938, we find listed over 32 published interest inventories. (8, pp. 43, 57, 58, 162-165), (9, pp. 73, 79, 428, 452), (10, pp. 52, 71, 92-94, 647, 650, 653, 654, 665, 666, 668, 680), and (11, pp. 726, 728, 730, 732, 734) This does not include all the separate tests listed under one inventory such as the academic tests of Thurstone. Neither does this include many instruments that are unpublished and, therefore, not listed by Buros.

Criticisms of Interest Inventories

Inasmuch as there is a distinction made between interests and abilities, there are many who claim that interests cannot be accurately measured. There are so many variables which influence an individual's interest that to attempt to define which variable influences an interest appears to be a rather impossible task.

Raths (43, p. 559) criticizes the instruments because he claims that they are based upon certain fixed categories of values which have been "set" by the test maker. The responses that students make are mechanically related to a value-category. The either-or type of relationship, or

the assigning of weights to a statement, results in drawing inferences which may or may not reflect the true nature of the interest. In every case, values are attributed to a student in terms of the selections made from a very limited number of alternatives set by the test maker. It is suggested that an appraisal of values should be a procedure rather than an instrument, such as one finds in the projective techniques used in other areas of testing.

Many of the existing instruments are based upon the assumption that the personalities of individuals are not infinitely varied. The makers of these instruments begin with a series of value categories in mind, and then proceed to formulate statements which are related to these categories. If a student selects the answer, the test maker has in mind, then it is concluded that he has an interest in or an attitude toward the statement similar to that of the test maker. The problem appears to be one in which sets of values are established and the individual being tested has to decide whether he agrees or disagrees with these values without having an opportunity to express his own values. (43, p. 557)

Cattell (13, p. 224) expresses his concern over the fact that psychologists have not as yet developed an objective measurement of attitudes and interests other than the method now used of asking persons how strong their

interests are or if they have the interests listed. The greater part of research done in this field has continued to concentrate on the refinement of the existing verbal, self-declaratory scales. Those working in the field of applied psychology, using socio-economic attitudes resulting from polls, have found that what a man says may be unpredictably different from what he often does or that which he said a short time before.

Green (30, p. 503) points out that in a great many cases, tests of this type can be biased by the average testee. As most of the studies have involved college students, only generalizations can be made on this point concerning the general population. This bias will approximate the results he was instructed to achieve or that which he feels is the "right" answer. It has not been shown in real life situations that such biasing actually takes place, and this fact holds true for many tests. When biasing does occur, it does not necessarily invalidate the test scores, but neither is an accurate picture presented. Rather, the test becomes one in which an individual's social intelligence is measured to some extent. He answers according to his knowledge of the prevailing social values, and his ability to gain insight into the purpose of the test will bias his answers.

Rothney (44, pp. 199-204) lists several limitations of interest inventories. Faking of responses, items or

sections named according to that which the author thinks they measure, the problem of vocabulary, forcing a person to make a choice whether he has any interest or feeling toward the statement, lack of means for expressing enthusiasm or degrees of concern over the item, and the danger of misinterpretation of the results by the testee are explained.

Derived Values of Interest Testing

In defense of interest testing, we find as many favorable comments as unfavorable. The favorable comments come from those who have worked in the area and, as a result, their opinions may be biased. Strong (49, p. 518) believes that when an interest inventory is used as a measuring device, the person is forced to notice items on the blank. As he responds to them, this response is based upon his past experiences in terms of the habits he has formed respecting them. There is also an element of response associated with the liking-disliking aspect of the situation as he perceived it.

The measurement of interests can be made in areas established by the instrument or evaluated by the total responses made. If the evaluation is made by considering small areas or individual items, the validity may be questioned; although, it has been found that it is appreciably superior to that of chance. The evidence is

also clear that considerable validation may be attached to the total summarization of the instrument when the summarization is properly done.

Another likelihood is that interest scores should correlate highly with test scores expressing evaluation, and correlate zero with test scores not involving any evaluation of the person by himself.

It is safe to say that interests are expressions of personality rather than ability.
(49, p. 520)

The predictive value of such instruments is often questioned. Gustau (32, p. 57) believes that for group purposes, the predictive value is sufficiently high but doubts the value of individual scores for counseling purposes. It was not determined on which classification of tests this opinion was based, for the work by Strong in the vocational interest area does not support this conclusion. This is also true in the area of academic interest testing; many studies have shown that interests do not change a great deal in academic subjects.
(23, p. 626)

Most activities are evaluated by an individual according to the activity itself and as a means by which a goal can be attained. Because of this, expressed interests afford a basis for predicting future conduct. Interests may be evaluated in two different ways: they are liked or disliked for their own sake; they are liked or disliked according to the aid they give in reaching a

definite purpose. This does not imply that these two procedures for evaluating activities are clear-cut or distinct procedures formulated in the mind of the individual. (49, p. 520)

Weedon (57, pp. 66-71) reported on a study in which an attempt was made to define problems involved in interest measurement in order that further research might be planned at the points in which there were the greatest needs. He raised the question as to significant behavior from the point of view of interests. Who determines what significant behavior should be? Can a homogeneous classification be made of activities or objects of interests? These are typical of the problems which test makers have seldom faced.

Related Instruments Used in Measuring Interests

As this study is limited to instruments similar to the Adult Interest Profile, the large areas of vocational and academic interest testing will not be considered. Undoubtedly, the one instrument which has been used to the greatest extent in evaluating personal interests is the Allport-Vernon-Lindzey Study of Values (2, pp. 1-16). This was first developed in 1931 and revised in 1951. The authors list it as a personality test aimed at measuring the relative strengths of five areas through the interest expressed in each of the situations listed in the areas.

The scale is based on Eduard Spranger's Types of Men, a study which attempted to classify personality according to the dominant interests of the individual. Spranger gives a flattering view of human nature but does not allow for the "baser" values which are a part of the personality of many. (2, p. 14)

Personalities are classified according to theoretical, economic, aesthetic, social, political, and religious. The instrument was primarily designed for use by college students or adults with college experience. Opinions are sought on a variety of familiar situations with either two or four answers provided. There is a total of 120 answers, 20 to each value, with no time limit set for completing the inventory.

Pintner (41, pp. 351-357) used the instrument to determine the relationship between the various areas of the scale with intelligence test scores, marks in class, and four of the Thurstone attitude scales. As no statistics were given for total scores, a comparison between Pintner's findings and this study cannot be made.

Fischer (23, pp. 619-627) used the Allport-Vernon-Lindzey inventory in his study of 96 freshmen women at the University of Illinois enrolled in the Division of General Studies. He determined that students who seek a liberal education have a pattern of interests common among themselves, and that this pattern is relatively stable

over a period of years.

Glaser and Maller (29, pp. 67-81), using the Allport-Vernon-Lindzey Scale as a guide, developed an instrument called the Interest-Values Inventory. Their instrument combined the areas of social-religious and economic-political, as they found these areas were measuring the same interests on the Allport-Vernon scale. The reasons given for the superiority of their instrument were as follows:

- (1) Their area of social values was less heterogeneous and more reliably measured than the social-religious areas of the Allport-Vernon scale.
- (2) A provision for an indirect measure of interests through word association.
- (3) The reliability was greater.
- (4) An absolute measure of interests is provided.
- (5) Each problem includes four alternatives.

The inventory retained the other four areas of value as found on the Allport-Vernon scale.

Woodruff (59, pp. 32-42) developed an instrument called A Study of Choices. He felt there was a need for measuring personal values in such a way that each person's own unique patterning of values could express itself freely. It is stated that a person develops a pattern of personal values as a continuously growing residue of his total experience which can be measured. This instrument

appears to be a measurement of attitudes rather than interests, in that the situations in which a testee can express himself do not require anything other than opinions.

The Edmiston Inventory of Interests was developed in 1946 at Miami University and a report of its use made. (20, pp. 153-154) Its purpose was to aid in the appraisal of academic interests of college students. It included statements which would indicate interests in the areas of business, education, aesthetics, government, science, social, journalism, and mechanics. In the study cited, 146 freshman students in the School of Education were administered the test. They were grouped according to their interests in these fields as to high, medium, or low interests. Their selection of courses for the first year showed that few chose courses from the interest fields in which they rated low. The author concludes that the information furnished by the results of this inventory would aid in the selection of a college curriculum and should result in the reduction of college-student mortality. It is this writer's opinion that the students enrolled in the School of Education would naturally show low interests in academic areas associated with other schools at the University. If the study had been made of students in other schools, the results might have been similar because of their original choice of schools.

The Guilford-Schneidman-Zimmerman Interest Survey, as reported by the authors (31, pp. 302-306), is actually a vocational interest test but is reported here because the areas of interests include statements, the response to which may be termed as "appreciation of." This is similar to the instrument used in this study. There are nine general interest and 18 special interest categories listed which give both vocational and hobby scores. One feature which is rather unique is the "D" response which the testee may use. "D" is interpreted as dislike, disinterested, or don't know. Many of the instruments reviewed make no provision for such a response, and as a result the testee is forced to make a response about which he has no knowledge. This idea might prove to be of value if incorporated into the Adult Interest Profile used in this study, providing provision was made for interpretation of such a response.

The Pressey Interest-Attitude Tests were developed in order to investigate the maturity of interests and attitudes (42, pp. 1-4). The tests are incorporated into one instrument which lists 90 words or phrases in the following areas: (1) things which some people think are wrong or people think a person ought not to do; (2) things which people worry about or feel fearful or anxious about; (3) things people often like or are interested in; (4) a list of words that describe people. In the space provided

before each statement the testee is instructed to place a single "X" indicating a mild response or two "X's" indicating a strong response. Those words or phrases for which they have no reaction are left blank. The total score indicates the level of maturity.

Kuhlen (36, p. 583) reported a study using the Pressey instrument as a measure of personality at the college level. An analysis was made of the test scores given to 97 women as freshmen and again as seniors. These scores were correlated with test scores of 173 women who had been rated by their sorority sisters as having average emotional maturity. His findings indicated that the test was useful as a descriptive measure of personality at the college level, but he questioned its validity as a measure of emotional maturity at this level.

The Pressey test was administered to a group of college students in 1923 and again in 1933 to a comparable group. Buck (7, pp. 12-19) reported that there was little change indicated between the two groups in the total number of indicated anxieties and interests. There was a decrease in the number of things disliked. He attributes the latter findings to the possibility that the second group had experienced the effects of an economic depression and had probably adjusted themselves to a more stringent manner of living in which things were accepted to a greater degree than in the 1923 period.

The Kuder Preference Record - Personal (35, pp. 1-16) is classified as an interest test. There are five scales describing different types of personal and social activities. It is intended to help determine the kind of situation in which a person prefers to work. The five areas include: (1) participation in group activities; (2) role preference in a group; (3) interest in exploring new situations; (4) the desire to be self-assertive; and (5) preference for working with ideas or things. The authors claim a close correlation between the interests expressed on this form and the vocational form they devised.

Birge (5, pp. 392-394) used the Kuder Preference Record - Personal in an attempt to determine if there were a relationship between conduct and that which the testees reported. There were 92 college students selected from groups who had taken the test and were classified as "high dominant" or "low dominant" according to their past activities in fraternity and dormitory life. Those classified as "high" had shown the greatest aggressiveness and ability to influence others in group situations. It was determined from this study that the difference of the mean scores between the high and low groups was significant at the five per cent level of confidence in two areas of the Preference Record, namely, preference for taking the lead and being in the center of activities involving

people and preference for activities involving the use of power and authority.

More specifically, in terms of expressed preferences, these results indicate that the highly dominant person tends to differ from persons with low dominance rating as follows:

- (1) He prefers to take the lead and be in the center of activities involving people.
- (2) He prefers activities involving the use of authority and power.
- (3) He prefers activities ordinarily chosen by people trying to make a good impression.

It can be seen from the report of this study that the Kuder Preference Record - Personal may be used as a personality test or test of values.

Comparable Studies

In a review of the studies which may be considered as comparable to this study, only two could be found which attempted to achieve the same purpose. Both differed with regard to the instruments which were used for measurement, but both obtained similar results.

Woodman (58, pp. 275-284) made a study to determine if college life situations had a relationship to intelligence scores and academic achievement on the college level. An instrument called "An Evaluation of Student Opinion" was administered to 1,500 freshmen women in a number of small New England colleges. The assumption was made that

an instrument which measures the affective aspects of an individual's college-related activities may partially measure certain energies which determine scholastic achievement at the college level.

The instrument was organized in such a manner that the testees were asked to make responses to certain situations found in college life. It differed in approach from the Adult Interest Profile in that the testee responded according to his "attitude toward" the situations. Although the author did not define an attitude in the report, we assume from the types of questions asked that he believed an attitude is the sum total of an individual's feelings, beliefs, notions, prejudices, fears, and ideas about the topics listed (8, p. 43).

The American Council of Education Psychological Examination (ACE) was used to measure scholastic aptitude, the yearly college grade point average (GPA) to measure academic achievement and an Evaluation of Student Opinion (EST) to measure college life situations. Following are the statistical results obtained:

ACE - GPA $r = .30$
EST - GPA $r = .30$

It was reported that this correlation was equally effective or ineffective for the prediction of academic achievement.

ACE - EST/GPA $R = .43$

In correlating scholastic aptitude with academic achievement and student opinion on college life situations, the R indicated a 9.7 above chance correlation. This was significant at the five per cent level of confidence.

$$\text{ACE - EST } r = -.017$$

This correlation, according to the author, provides an inference that the two instruments are measuring quite different factors. This makes plausible their increased predictive effectiveness when used in combination. It seems apparent that each instrument measures, to some degree, different personal qualities which relate to academic success.

The low correlation between the ACE and GPA is attributed to the belief that a lack of precision or uniformity in grading may have greater influence on the correlation than the measured intelligence of individuals. An "A" may not measure the top level of intelligence as shown on the ACE, and students with low scores on the ACE may receive high grades due to superior application. This low correlation may not be due entirely to the inadequacy of the predictive instrument for the reasons stated.

The low correlation between EST and GPA ($r = .30$) was explained by the belief that many students with low academic standing evidenced a generally satisfactory attitude pattern. The low scores obtained in specific areas on the EST may be concealed in the total score.

In conclusion, the author states:

"The many attempts to measure physical, sociological and psychological variables are encouraged in that such measurements, when combined with scholastic aptitude tests, usually increase the aggregate forecasting efficiency to a higher level than any single measure can produce." (58, p. 275)

The result of Woodman's study compares favorably with the result obtained in the present study. Similar correlations were obtained for academic aptitude and interests, academic achievement and interests. The conclusions, as reported in Chapters III and IV, correspond to the reported study.

The second reported study which attempted to measure interests used an entirely different technique. Believing that the measurement of interests and attitudes should be more objective than methods previously used, Cattell (13, pp. 244-248) and a group of assistants devised the "Ergic Theory of Attitude Measurement."

According to the ergic theory of attitude measurement, an attitude may be expressed, for the purpose of analysis and calculation, as a vector quantity, in which the length of the vector represents the strength of desire for (interest in) the desired course of action, and its direction represents its dynamic composition. (13, p. 225)

The measurement of the strength of an attitude is thus a measurement of interest. An attitude is measured when both interest and ergic composition are measured.

An attitude is defined according to five aspects:

(1) the stimulus situation with reference to the attitude evoked; (2) the organism bearing the attitude; (3) the strength of the interest in the course of action indicated; (5) the object with which the attitude is identified or associated.

The experiment listed 25 distinct methods of objective attitude measurement. Of these methods, 16 were tried and 12 were described in this report. Unique among those reported was an attempt to determine what action an individual actually took in certain situations. If the individual reported that he liked to hear good music, he was asked to keep a record of the amount of time or money he spent in listening to good music. The experiment is not complete, and those involved in the study are attempting to test other methods of approach. It was felt that a satisfactory objective measure of an attitude would be obtained through the use of a battery using four to six different methods. If the psychologist can supply objective and accurate means of measuring strength of motive, interests, or attitudes (that is, of dynamic traits in general), he will contribute to much needed measurements of integrated studies in the social sciences, with economics, anthropology and sociology.

Summary

In reviewing the literature in the area of interest

measurement, it was found that the place of the church-related liberal arts college in developing socially acceptable character and personality traits was questioned by many. Those who support its program made constructive criticisms which, if followed, would re-establish the liberal arts college in its rightful place in higher education.

It was also found that there was confusion in the reports of many writers regarding the relationship between interests, attitudes, and values.

The measurement of vocational and academic interests has produced the greatest number of instruments with few studies reported in the area of personal or cultural interests.

The relationship between measurements of interests and scholastic aptitude is negligible, with evidence to support a positive relationship between interests and academic success at the college level. The use of interest inventories, scholastic aptitude tests, and previous academic achievement as well as other variables would aid in predicting academic success at the college level.

There is little change in interests over a period of time especially in the area of academic and vocational interests. (28, pp. 243-246)

There is a need for more objective types of measurement of dynamic traits such as attitudes, interests, ideals and values.

CHAPTER III

DESIGN AND FINDINGS OF THE STUDY

Hypotheses to Be Tested

The two problems of this study as stated in Chapter I are the basis for the following hypotheses:

1. There are no significant changes in cultural interests among students during their first year of academic life at Lewis and Clark College, as measured by the Adult Interest Profile.
2. There is no significant relationship between the degree of change in cultural interests and certain variables found in the sample used in the study.

Methods of Approach

1. An interest inventory, prepared by the Committee on the Improvement of Instruction, Lewis and Clark College, was used as a measure of cultural interests. The inventory, the Adult Interest Profile, with two forms A and B, was administered to members of the freshman class in September 1954 during a scheduled testing session. The results of the two forms were correlated, and a

coefficient of .73 was obtained. In May 1955 the forms were administered to the sample used in the study in sections of the General Psychology classes.

2. The sample used in the study included 216 freshmen students enrolled at Lewis and Clark College who entered in September 1954, completed a full academic year, completed the Adult Interest Profile at the beginning and end of the academic year, and completed at least 12 semester hours of work each semester. Of the sample, 67 per cent were females, and 33 per cent were males.
3. The cumulative records and transcripts were used to obtain the following information: age, sex, church participation, formal education of parents, per cent of self support, high school grade point average, yearly college grade point average, raw scores on the American Council on Education Psychological Examination, choice of academic major, courses completed during the academic year 1954-1955, and place of residence.
4. An analysis was made of the scores of those students in the study who completed a one-year course in General Psychology and those students not taking the course. Comparisons were made as to the methods of presentation used.

5. Statistical treatment of the data was made by computing the significance of the difference of the means, the Pearson product moment coefficient of correlation, the first order partial coefficient of correlation, the analysis of variance, and the multiple coefficients of correlation.

The Adult Interest Profile - Composition and Scoring

The development of the Adult Interest Profile was described in Chapter I. The instrument is divided into seven parts with several techniques used in obtaining the responses.

ANNOYING WORDS - The student is instructed to cross out those words which are objectionable from a list of 39 words.

ATTRACTIVE WORDS - The student is instructed to circle any of the 39 words or phrases which are strongly attractive, suggest a highly pleasant idea, or arouse a favorable attitude.

DEGREE OF VALUE - On a bar labeled Low and High, the student is instructed to estimate the degree of value he attaches to the outcome or experience described. There are 12 of these descriptions given.

AGREEMENT - The bar is divided into three sections -- Disagree, Neutral, and Agree. The student is instructed to indicate his agreement, disagreement, or neutrality on ten statements.

REPUTATION - A forced choice is requested to indicate how he would prefer his friends or acquaintances to perceive him.

PREFERENCES - This part is composed of 23 items which are mutually conflicting situations involving competing values. The student is forced to make a choice between three situations in each item.

NEWS - There are 15 items stated, and the student is requested to rate each item as "good" or "bad" news.

There is a total of 146 responses on the inventory with no set time limit. Usually, 25 or 30 minutes are required for completion. Scoring is done by hand with a scoring key. The scoring time is approximately three to four minutes. Raw scores are obtained, and no provision has yet been made to develop standard scores.

Cultural Interest Scores

In order to test the hypothesis that there were no significant changes in cultural interests among students during their first academic year at Lewis and Clark College

as measured by the Adult Interest Profile, means of the raw scores were obtained for the Fall and Spring administered inventory. Table I presents a summary of these statistics.

TABLE I

MEAN SCORES ON THE ADULT INTEREST PROFILE (A.I.P.)
FOR 216 LEWIS AND CLARK COLLEGE FRESHMEN

Scores	Number	Mean
Fall A.I.P. Raw Scores	216	75.9
Spring A.I.P. Raw Scores	216	78.4
Mean Raw Score Gain - 2.5 points		

Table I indicates there was a change in raw scores between the Fall and Spring administration of the instrument. This change was found to be significant beyond the one per cent level of confidence, which indicates that the change in cultural interest scores, as measured by the Adult Interest Profile, cannot be fully explained as temporary and occasional. Thus, we must reject the null hypothesis in this situation.

To further determine if this change in cultural interest scores were different between the females and males of the population tested, means were obtained for each sex. Table II presents these differences.

TABLE II
MEAN CHANGE ON A.I.P. FOR MALES AND FEMALES

Sex	Number	t	1% Level of Significance
Male	71		
Female	145	3.32	2.60

Table II indicates that the difference of the means between males and females is significant beyond the one per cent level of confidence. There was a greater change in cultural interest scores among the females of the population than among the males.

A further study was made to determine if there was a greater mean change among those students who returned for the sophomore year and those who did not return. Table III gives these findings.

TABLE III
MEAN CHANGE ON A.I.P. OF STUDENTS
WHO DID AND DID NOT RETURN FOR SCHOOL YEAR 1955-56

Population	Number	Mean Change	t	5% Level of Significance
Students returning	158	3.15		
Students not returning	58	1.60	1.36	1.97

The difference in the means, as reported in Table III, is not significant. It is interesting to note that there was a greater mean change in cultural interest scores

among students who returned compared to those who did not return.

Scholastic Aptitude

In order to test the second hypothesis that certain variables found in the sample had no significant relationship to change in cultural interests as measured by the Adult Interest Profile, several different variables were tested. Inasmuch as the first hypothesis was rejected and a change did take place in cultural interests, the next step was to determine if there were any relationship between this change and certain variables found existing in the population of the study.

A study was made of the relationship between cultural interest scores and scholastic aptitude. Table IV indicates the results obtained on the American Council on Education Psychological Examination administered as a part of the entrance requirements for all students applying for admission to Lewis and Clark College.

TABLE IV

AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION
(A.C.E.) MEAN RAW SCORES ACCORDING TO SEX AND RESIDENCE

Population	Number	Mean Raw Scores
TOTAL	216	113.73
Female	145	115.54
Male	71	110.57

Dormitory residence	91	115.37
Off-campus residence	125	112.64

Table IV indicates that the mean score for females was higher than males and that dormitory students made higher mean scores than those living off-campus.

As reported in Chapter I, the coefficient of correlation between the Fall administered inventory and A.C.E. raw scores was .16, which was significant at the one per cent level of confidence. A similar computation for the Spring administered inventory produced a coefficient of .20, which was also significant at the one per cent level of confidence. In a later part of the study (Table VIII) intercorrelations between cultural interest scores and scholastic aptitude, with college grades held constant, result in a coefficient of .003. Thus, it can be assumed that there is not a significant relationship between cultural interest scores, as measured by the A.I.P., and scholastic aptitude.

Academic Achievement

Table V summarizes the yearly college grade point average for students included in the study. Indications from Table V reveal that the female students obtained higher grade point averages than male students, and that students living in dormitories maintain higher grade point averages than those living off-campus. The latter may be attributed to several factors. Lewis and Clark College is located in the suburban area some distance from the city

TABLE V
COLLEGE GRADE POINT AVERAGE - FIRST YEAR
ACCORDING TO SEX AND RESIDENCE

Population	Number	Mean
TOTAL	216	2.59
Female	145	2.74
Male	71	2.27

Dormitory residence	91	2.61
Off-campus residence	125	2.56

of Portland, and inadequate transportation facilities make it difficult for students living off-campus to use the library facilities. There is a greater percentage of off-campus students working and the time element for preparation may be less. The restrictions in force in dormitories are usually more strict than those held in most homes with regard to study hours.

In comparing the raw scores of the Spring administered interest inventory with the college grade point average, a correlation of .46 was obtained. A similar comparison with the Fall administered inventory produced a coefficient of .35. Both of these coefficients are beyond the one per cent level of confidence which indicates that the obtained relationship between cultural interest scores and college grades is not due to chance. Neither of the correlations are sufficiently high to use the inventory as a predictive instrument by itself but may be valuable as a part of a battery.

Table VI is a summary of the high school grades of all students connected with the study. The grades were converted to a single numerical average corresponding to the four-point system used in computing the college grade point average.

TABLE VI
HIGH SCHOOL GRADE POINT AVERAGE - FOUR YEARS
ACCORDING TO SEX AND RESIDENCE

Population	Number	Mean
TOTAL	210	3.01
Female	142	3.43
Male	68	2.36

Dormitory residence	92	2.96
Off-campus residence	118	3.02

Table VI indicates that freshman women enter this college with higher grade point averages than do freshman men. There appears to be little difference in the grade point average of those who select dormitory living compared to living off-campus.

In comparing the raw scores of the Spring administered interest inventory with the high school grades, a coefficient of correlation of .43 was obtained, which is significant beyond the one per cent level of confidence. This indicates there is a significant relationship between cultural interest scores and high school grades.

Cultural Interests, Scholastic Aptitude,
and Scholastic Achievement

In order to determine the relationship between cultural interest scores, scholastic aptitude scores, high school grade point average, and college grade point average, a first order partial coefficient was obtained. Table VIII gives these results.

TABLE VIII

INTERCORRELATIONS BETWEEN CULTURAL INTEREST SCORES,
SCHOLASTIC APTITUDE, AND SCHOLASTIC ACHIEVEMENT

Variables	Constant	r	1% Level of Confidence
G.P.A. ¹ - A.I.P. ²	A.C.E.	.53	.228 - Significant
G.P.A. - A.C.E. ³	A.I.P.	.45	.228 - Significant
G.P.A. - H.S.G. ⁴	A.I.P.	.62	.228 - Significant
G.P.A. - H.S.G.	A.C.E.	.63	.228 - Significant
A.I.P. - A.C.E.	G.P.A.	.003	.228 - Not Significant
A.I.P. - A.C.E.	H.S.G.	.23	.228 - Significant
A.I.P. - H.S.G.	A.C.E.	.49	.228 - Significant
A.C.E. - H.S.G.	A.I.P.	.47	.228 - Significant

1. Yearly college grade point average.
2. Adult Interest Profile administered in May 1955.
3. American Council on Education Psychological Examination.
4. High school grade point average.

There is a significant correlation between all variables listed in Table VIII with the exception of cultural interest scores and scholastic aptitude scores, with the college grade point average held constant.

In comparing college grades and high school grades, holding cultural interest scores and scholastic aptitude constant, a partial r of .51 was obtained. The one per cent level of confidence for 200 degrees of freedom is .234. This indicates that there is a significant relationship between college grades and high school grades.

Comparing college grades with the combined variables of cultural interest scores, scholastic aptitude, and high school grades, a multiple R of .74 was obtained. The one per cent level of confidence for 200 degrees of freedom is .234. This indicates that college grades are related to cultural interest scores, scholastic aptitude scores, and high school grade point average.

Garrett (26, pp. 91-138) compiled the results of studies attempting to determine the manner in which academic achievement in college could be predicted. Correlations were given for the combination of various factors used. A multiple R of .59, with a range of .47 to .79 and a median of .58, was obtained for two variables used in predicting academic achievement in 59 studies. These variables included such factors as high school grades, scores on achievement tests, intelligence and psychological tests, and aptitude test scores. Of the two studies cited which used the A.C.E. scores and high school grades, a multiple R of .63 was obtained. Using the same variables in this study, a multiple R of .51 was obtained.

In the use of three or more variables in combination, it was reported that a third variable adds very little to the predictive value of two variables. (26, pp. 120-121) However, certain studies reported a multiple coefficient of correlation of .75 between scholastic aptitude, high school record, and content examination with the college record. (26, p. 125) The median for three-variable coefficient was .61 on 22 studies reported. A study made by Douglass and Lovegren as reported by Garrett (26, p. 126) using variables similar to those used in this study, obtained a multiple R of .71. The A.C.E. scores, high school percentile, and the Wesley Test of Social Terms were used as variables.

In his conclusions, Garrett (26, pp. 128-130) states that the high school average bears the closest relation to college grades. Interest tests and personality tests add very little, if anything, to scholastic aptitude as a predictor of college success. Coefficients of correlation in the 70's and 80's were reported from three- and four-variable combinations of factors, with the coefficients rarely being higher than .80.

Pre-collegiate Factors

Up to this point, the study was concerned with the relationship of cultural interests to academic achievement and scholastic aptitude. It has been established

that there is a change in cultural interest scores during the first year of academic life for freshmen students enrolled at Lewis and Clark College, as measured by the Adult Interest Profile.

In Chapter I, an assumption was made that students enter college with certain cultural interests. In order to determine if certain variables in pre-collegiate life could be associated with cultural interests as measured by the Adult Interest Profile, an analysis of variance was made. Fisher's F-ratio was used to determine the level of significance between cultural interest scores and these variables.

The sample was first grouped according to age as of September, 1954, to the nearest half-year. Table IX is a summary of the relationship between age groups and cultural interest scores.

TABLE IX
CULTURAL INTEREST SCORES AND AGE GROUPS

Age Group	Number	A.I.P. Fall Means	A.I.P. Spring Means	Mean Change
16 yrs-11 mo to 17 yrs- 5 mo	9	76.00	79.37	3.37
17 yrs- 6 mo to 17 yrs-11 mo	58	76.21	79.14	2.93
18 yrs to 18 yrs- 5 mo	94	77.00	79.76	2.76
18 yrs- 6 mo to 18 yrs-11 mo	38	73.18	78.26	5.08
19 yrs to 19 yrs- 5 mo	6	73.67	77.38	3.71
19 yrs- 6 mo & over	5	77.66	66.66	-10.00

The F-ratio for the Fall A.I.P. Raw Scores was 661, which is not significant. The F-ratio for the Change in A.I.P. Scores was 1.76, which is not significant. However, there is a significant difference in the means of all age groups compared to the 19 yrs- 6 mo and over group.

The minus sign before the last figure in the Mean Change column in Table IX indicates that on certain scores on the A.I.P., there were negative rather than positive mean changes. Out of the total population, 58 per cent had an increase in raw scores between the Fall and Spring administered inventory, 39 per cent had a decrease, and 7 per cent made the same score.

Because Lewis and Clark College is a church-related school, it was felt that there might be a relationship between cultural interest scores and religious activities of the students who attend. The population was grouped according to its church affiliation and participation in church activities. Table X summarizes the results of this grouping.

TABLE X
CULTURAL INTEREST SCORES AND CHURCH PARTICIPATION

Activity Group	Number	A.I.P. Fall Means	A.I.P. Spring Means	Mean Change
Member and Active	102	76.83	79.91	3.08
Member - Not Active	55	73.40	77.09	3.69
Non-Member - Active	9	78.44	82.55	4.11
Non-Member - Not Active	40	77.58	78.81	1.23
No Church Affiliation	5	64.80	66.80	2.00

Table X indicates there is little relationship between cultural interest scores and church participation. The F-ratio for the Fall A.I.P. Raw Scores and the Change in A.I.P. Scores was not significant.

The amount and type of formal education of parents was the next variable to be analyzed. Table XI gives a summary of findings based upon this factor.

TABLE XI
CULTURAL INTEREST SCORES AND EDUCATION OF PARENTS

Amount of Education	Number	A.I.P. Fall Means	A.I.P. Spring Means	Mean Change
Both parents college grads.	26	73.35	79.35	3.00
One parent college grad.	40	78.53	81.66	3.13
Both parents college exper.	7	78.86	81.15	2.29
One parent college exper.	39	76.18	77.80	1.64
Both parents high school grads.	48	76.44	81.04	4.60
One parent high school grad.	38	73.82	75.77	1.95
Both parents less than grad. from high school	9	77.44	81.04	3.60

The F-ratio for the Fall A.I.P. Raw Scores and the Change in A.I.P. Raw Scores was not significant. This indicates that there is little statistical relationship between cultural interest scores and the formal education of the parents of students in the study. It is interesting to note that more than 54 per cent of the students came

from homes in which at least one of the parents had had some college experience.

There was no information available on the economic status of the homes from which the students came. The per cent of self-support of students in the study may be considered as an index of economic status of the home. However, this is not an absolute index, as many students come from homes with low incomes and the parents make financial sacrifices to aid in the support of their son or daughter attending college. Conversely, many parents who could afford to finance a college education believe there are values in having their children support themselves while in college.

Table XII indicates the amount of self-support of students in the study compared to cultural interest scores.

TABLE XII

CULTURAL INTEREST SCORES AND PER CENT OF SELF SUPPORT

% of Self Support	Number	A.I.P. Fall Means	A.I.P. Spring Means	Mean Change
76 - 100	14	73.17	71.74	-1.43
51 - 75	14	76.21	76.00	-0.21
26 - 50	20	75.90	80.35	4.45
11 - 25	31	72.39	77.62	5.23
1 - 10	65	77.82	80.30	2.48
No self support	67	75.92	79.17	3.25

The F-ratio for the Fall A.I.P. Raw Scores was 1.08 and for the Change in A.I.P. Scores was .06, neither of

which is significant. Table XII indicates that there is little statistical relationship between cultural interest scores and the amount of self-support furnished by students in the study. A difference of the means between the groups furnishing 50 per cent or more of their support and the group furnishing no self-support was found to be insignificant.

Table XIII summarizes the findings between cultural interest scores and high school grades.

TABLE XIII
CULTURAL INTEREST SCORES AND HIGH SCHOOL
GRADE POINT AVERAGE

High School G.P.A.	Number	A.I.P. Fall Means	A.I.P. Spring Means	Mean Change
3.50 - 4.00	66	80.14	83.28	3.14
3.00 - 3.49	47	77.51	81.51	4.00
2.50 - 2.99	48	73.98	76.37	2.39
2.00 - 2.49	39	70.67	73.16	2.49
1.50 - 1.99	10	68.00	58.50	0.50

The F-ratio for the Fall A.I.P. Raw Scores was 6.52 with a one per cent level of confidence being 3.41. This indicates that there is a significant relationship between cultural interest scores, as measured by the Fall administration of the Adult Interest Profile, and high school grades. The F-ratio for the change in A.I.P. Scores was 1.56 which is not significant. By an inspection of the means in Table XIII, it is noted that there is a decrease in means comparable to a decrease in high school grade

point average with but one exception.

In addition to the analysis of variance of the entire sample, a study was made of the significance of the difference of the mean change between those students receiving a grade point average of 3.50 or above and those at the lower end of the scale receiving a grade point average between 1.50 and 2.50. A "t" score of 1.82 was obtained, which is significant between the five per cent and ten per cent level of confidence. This finding is not significant.

Students entering Lewis and Clark College have an opportunity to indicate their preference of a major field of study at the beginning of the freshman year. This choice of major emphasis permits the college administration to assign Freshmen Advisers who are instructors in that particular academic field. Students are informed that their particular choice of academic specialization does not prohibit them from changing their major field of concentration at any time they so desire. They are encouraged to make this choice so that prerequisite training will commence as early as possible. However, they are not accepted as "majors" in a department until they have completed their sophomore year of academic work.

In order to determine if there were any relation between cultural interest scores and preliminary choice of academic concentration, the sample was divided into

such groups. Table XIV gives the mean change in cultural interest scores for these groups, the means being shown in rank order.

TABLE XIV
RANK ORDER OF MEAN CHANGE IN CULTURAL INTEREST
SCORES BY ACADEMIC MAJOR

Major Choice	Number	Mean Change Fall-Spring Testing
Physical Education	7	5.86
Social Service	10	5.70
Education	32	5.66
Pre-Nursing	18	4.77
Pre-Medical-Dental	6	4.50
Art	7	4.43
Social Science	11	4.18
English-Journalism	11	4.09
Speech Arts	6	3.50
Music	22	2.36
Undecided	44	.68
Science-Mathematics	12	.08
Business Administration	26	-.58

The significance of the difference of the mean change of the lower three groups and the upper five groups was computed. The mean change was found to be significant between the one per cent and two per cent level of confidence. There may be some significance in the fact that Table XIV indicates lower mean changes for the technical-vocational groups than for the social service type of groups. There was no significant difference of the mean change in the first five groups.

Factors in Academic Life

Up to this point in the study, we have considered those variables which may have a relationship to cultural interest scores of students prior to the first year of academic life on a college campus. The balance of the study was devoted to those variables which result from students completing one year of academic study. An attempt was made to indicate the relationship between cultural interest scores and courses completed, methods of teaching, yearly grade point average, and the influence of dormitory life compared to living off campus.

With the exception of a few special cases, all freshmen entering Lewis and Clark College are required to enroll in a seven semester-hour course in General Education. This is an integrated course in the humanities, the social sciences, history, and fine arts. Using this course as a constant, an attempt was made to determine if there was a statistical relationship in change in cultural interest scores and other year courses in which the students were enrolled. Tables XV and XVI summarize this data. In Table XV, scores of students were grouped according to their completing one one-year course, the balance of the courses being one-semester courses. In Table XVI, scores of students were grouped according to their completing two one-year courses, the balance of the courses being one

semester in length. The assumption was made that a year course might have more influence on cultural interest scores than a semester course. This assumption is hypothetical, in that certain semester courses which interested students might have a great deal more influence on their cultural interest scores than a year course that was uninteresting. From a statistical standpoint, the numbers of students enrolled in semester courses were so small that it was impossible to obtain any degree of accurate measurement.

TABLE XV
CULTURAL INTEREST SCORES AND
ONE-YEAR COURSES COMPLETED

Course	Number	Mean Change Fall-Spring Testing
Psychology	18	1.94
Fine Arts	17	1.18
Natural Science - Math.	10	-.10
Humanities	8	3.25
Applied and Vocational	7	5.29

The F-ratio for the change in A.I.P. scores was .28 which is not significant. Thus, the statistical relationship between cultural interest scores and one one-year course is not significant. It is interesting to note that the mean change for the Vocational and Applied was the highest on Table XV, and on Table XIV it was the lowest. This is probably due to the small number of cases but may be significant.

TABLE XVI
 CULTURAL INTEREST SCORES AND
 TWO ONE-YEAR COURSES COMPLETED

Courses	Number	Mean Change Fall-Spring Testing
Physical Science and:		
Humanities	9	6.1
Mathematics & Science	10	.3
Applied and Vocational	7	2.2
Fine Arts	4	2.6
Psychology and:		
Humanities	15	4.9
Mathematics & Science	13	1.4
Applied and Vocational	12	9.5
Fine Arts	4	-1.7

The F-ratio for the change in A.I.P. scores was 1.12 which is not significant. This indicates that the statistical relationship between cultural interest scores and two one-year courses completed is not significant.

In connection with another study being conducted by the Psychology Department of Lewis and Clark College, information was made available which was used to determine if there was a statistical relationship between methods of presentation in the General Psychology classes and change in cultural interest scores. Table XVII is a summary of this information. The three groups were composed of students who were in General Psychology sections in which one class session per week was devoted to an unstructured discussion; the second group was composed of students in General Psychology classes in which the lecture method

was used; the third group included students who were not enrolled in any General Psychology section, the teaching method varying according to the instructor.

TABLE XVII
CULTURAL INTEREST SCORES AND METHODS OF
TEACHING IN GENERAL PSYCHOLOGY

Method	Number	Mean Change Fall-Spring Testing
Discussion	67	4.67
Lecture	24	2.31
Students not enrolled in psychology	125	2.73

The F-ratio for the change in A.I.P. scores was .47 which is not significant. This indicates that, statistically, the relationship between cultural interest scores and methods of teaching in psychology and other subjects is not significant.

In order to determine if there were any significant statistical relationship between cultural interest scores and the yearly grade point average of students in the study, means were computed for each of the groups shown in Table XVIII and an analysis of variance was used to determine the relationship.

The F-ratio for the Fall A.I.P. Raw Scores was 7.36 which is significant beyond the one per cent level of confidence. This indicates a significant relationship between college grades and raw scores on the Adult

TABLE XVIII

CULTURAL INTEREST SCORES AND
COLLEGE GRADE POINT AVERAGE

Yearly G.P.A.	Number	A.I.P. Fall Means	A.I.P. Spring Means	Mean Change
3.50 - 4.00	21	79.73	84.97	5.24
3.00 - 3.49	39	80.23	82.77	2.54
2.50 - 2.99	51	79.74	83.49	4.02
2.00 - 2.49	68	74.48	76.76	2.28
1.50 - 1.99	26	68.00	70.38	2.38
Below 1.50	11	66.55	62.82	-3.73

Interest Profile. The F-ratio for the change in A.I.P. scores was 1.31 which is not significant. Thus, the Adult Interest Profile would have some use in predicting college grades.

As was previously indicated, more than half the population of the study had an increase in raw scores on the A.I.P. between the Fall and Spring administration of the inventory. The balance showed a decrease in scores with seven per cent having no change. A sample was taken for those having the greatest increase in raw scores and compared to those with the greatest decrease. The significance of the difference of the means on the A.C.E. test and the college grade point average was computed for both groups. The difference was found not to be significant. Insofar as the sample used in this study is concerned, it appears that there is little difference between students having an increase and decrease in scores on the A.I.P. with respect to scholastic achievement.

In attempting to determine if any relationship existed between the change in cultural interest scores and on-campus off-campus living, an analysis of variance with a factorial design was used. Table XIX summarizes these statistics.

TABLE XIX

ANALYSIS OF VARIANCE OF THE CHANGE IN CULTURAL INTEREST SCORES OF MALES AND FEMALES LIVING IN THE DORMITORIES AND OFF-CAMPUS

Source of Variation	Sum of Squares	df	Mean Square	F
Male - Female	1109.14	1	1109.14	10.90
Dormitory - Off-campus	179.30	1	179.30	1.76
Interaction:				
Sex x Residence	1.33	1	1.33	.013
Within groups	21553.44	212	101.67	

All the values of F in Table XIX are based upon 1 and 212 degrees of freedom; and from the F table (21, p. 410) we find that a value of 3.89 will be significant at the five per cent level and a value of 6.76 at the one per cent level. The F for male-female has a probability of less than one per cent, while that of dormitory-off campus and interaction is greater than five per cent. Thus, the first value of F may be regarded as significant, while the other two are insignificant.

Summary

The findings of this chapter refute the first main

hypothesis that there is no change in cultural interest scores among students during their first year of academic life at Lewis and Clark College as measured by the Adult Interest Profile.

The second main hypothesis contains a series of sub-hypotheses to be tested. In comparing the data of each variable with scores on the Adult Interest Profile, it was determined that there was no significant relationship between change in cultural interest scores and the variables used with the exception of academic achievement. There is a significant relationship between academic achievement scores and cultural interest scores. Chapter IV contains a summary of these findings and an analysis of the information obtained.

CHAPTER IV

SUMMARY AND CONCLUSIONS

SummaryIntroduction

This study was designed to determine what relationships existed between certain variables found in pre-collegiate and collegiate life of freshman students enrolled at Lewis and Clark College and change in cultural interest scores. The instrument used to measure cultural interests, the Adult Interest Profile, was an experimental inventory developed by the Committee on the Improvement of Instruction at Lewis and Clark College.

For purposes of this study, the Adult Interest Profile was used in its original form. As an experimental instrument, it is to be revised as a result of this study. Proposed revisions include: an item analysis in order to improve the wording and content of certain statements; a division of the areas of appreciation in order that area scores, as well as total score, may be compared; and a more simplified method of scoring. It should be recognized that this study accepted the Adult Interest Profile as an experimental inventory, and the statistical computations were based upon the total

raw scores of the instrument.

Findings - Hypotheses

Two hypotheses were proposed in order to determine the relationship between cultural interest scores and the variables selected.

1. There are no significant changes in cultural interests among students during their first year of academic life at Lewis and Clark College, as measured by the Adult Interest Profile.
2. There is no significant relationship between the degree of change in cultural interest scores and certain variables found in the sample used in the study.

First Hypothesis

The first hypothesis was tested by a comparison of the mean raw scores on the Adult Interest Profile administered to 216 members of the freshman class in September 1954 and again in May 1955. A mean change of 2.5 was found, which is significant beyond the one per cent level of confidence. This indicates that there was a change in cultural interests, as measured by the Adult Interest Profile, which cannot be fully explained as temporary and occasional. Thus, the first hypothesis is rejected.

By a comparison of the mean change in scores on the Adult Interest Profile, it was found that females in the study had a significantly higher mean change in scores than did the males.

The mean change in scores on the inventory was not found to be significant for those students in the study who returned for the academic year 1955-1956 as compared to those students in the study who did not return.

Second Hypothesis

In order to determine if there were relationships between the change in cultural interests and certain variables found in the pre-collegiate and collegiate life of students in the study, certain comparisons were made. The raw scores on the American Council on Education Psychological Examination, the yearly college grade point average, and the high school grade point average were computed.

The correlation between the Fall and Spring administered Adult Interest Profile and intelligence test scores indicated coefficients beyond the one per cent level of confidence. However, as these correlations were not high, the instrument could not be used alone to predict academic achievement but might be valuable as a part of a battery.

A first order partial coefficient of correlation

was used to compare cultural interest scores, scholastic aptitude scores, college grades and high school grades. Positive correlations were obtained for all variables compared. These correlations were significant beyond the one per cent level of confidence with the exception of cultural interest scores and scholastic aptitude scores, with college grades held constant. Using a multiple correlation, an R of .74 was obtained between college grades and the three variables -- cultural interest scores, scholastic aptitude scores, and high school grades. This coefficient was well beyond the one per cent level of confidence. This is one of the most significant findings in the study. It indicates that a prediction of academic success during the first year of college work could be more accurately made by a consideration of scholastic aptitude test scores, high school grades, and scores made on the Adult Interest Profile than by the use of one or two of these variables. It appears that the Adult Interest Profile measures certain traits or capacities not necessarily measured by scholastic aptitude test scores or high school grades.

In order to determine whether certain variables in pre-collegiate life could be associated with cultural interests as measured by the Adult Interest Profile, an analysis of variance was made with Fisher's F-ratio being used to determine the level of significance. There were

no significant differences found between age groups and cultural interest scores. However, there was a significant difference found in a comparison of all age groups between 16 years-11 months and 19 years-5 months with the highest age group of 19 years-6 months and above.

In comparing cultural interest scores with church participation, education of parents, and per cent of self-support, no significant differences were obtained.

There was a difference, significant at the one per cent level of confidence, between the Fall administered inventory scores and high school grades. The change in cultural interest scores compared to high school grades was not significant. With a positive correlation between scholastic aptitude test scores and high school grades, as well as cultural interest scores and high school grades, this would tend to substantiate the findings that the Adult Interest Profile could be used as a part of a battery to predict academic success during the first year of collegiate work.

The mean change in cultural interest scores of students who made a preliminary choice to major in areas connected with social service type of work compared to students choosing the technical-vocational areas was significant between the one per cent and two per cent level of confidence.

In considering the variables which resulted from students completing one year of academic study, the following factors were compared with change in cultural interest scores. There was no significant difference in the scores of those students completing one one-year course and two one-year courses, the balance of their program being one-semester courses. Methods of instruction used in sections of General Psychology and other courses made no significant difference in the mean change of scores on the Adult Interest Profile by students enrolled.

There was no significant difference between change in cultural interest scores and the college yearly grade point average. A significant difference was found between scores on the Adult Interest Profile administered in the Fall and the college grade point average which was well beyond the one per cent level of confidence. This again indicates that this instrument would have value as a predictive measure for academic success if used with scholastic aptitude test scores and high school grades.

A factorial design was used to determine the relationship between change in cultural interest scores and the residence of students included in the study. The male and female population living in college dormitories and those living off campus were compared. The value of F for the male-female variation had a

probability of less than one per cent, while that of dormitory-off campus living and interaction of sex and residence was greater than five per cent. Thus, we may regard the variation between male and female as being significant and the other two variations as insignificant.

As a result of these findings, it was determined that the second hypothesis could be rejected in part only. A significant relationship was found in the change in cultural interests between males and females in the study. The balance of the variables compared to cultural interest scores substantiate the hypothesis that any relationships existing were due to chance.

Conclusions

A review of this study seems to justify the following conclusions:

1. The Adult Interest Profile, as an experimental instrument, has value in predicting academic success for freshmen entering Lewis and Clark College.
2. When used with the American Council on Education Psychological Examination and the high school grade point average, the Adult Interest Profile appears to measure an area which is not being measured by the other two factors.

3. The Adult Interest Profile was not able to measure, to any significant degree, those variables which might contribute to a change in cultural interest scores. If students attending Lewis and Clark College develop traits of character and personality as a result of their academic experiences, the Adult Interest Profile was not able to determine the factors which would influence these traits.
4. A selective factor in the admissions program may account for higher scores made by the female students in the study for scholastic aptitude, high school grade point average, and yearly college grade point average. There are more female students who apply for admission than male students, and, hence, there is a greater selectivity operating in the case of female students than for males.
5. The low correlation between Adult Interest Profile scores and the American Council on Education Psychological Examination scores provides inference that the two instruments are measuring quite different factors, a condition which apparently increases their predictive effectiveness when used in combination. It seems to indicate that each

instrument measures, to some degree, different sets of those many personal qualities which may be related to academic achievement.

6. The correlation between scores on the Adult Interest Profile, high school grade point average, and college grade point average is sufficiently high enough to indicate that the A.I.P. is measuring academic achievement to some degree. It was not possible to determine those areas in the curriculum which were related to the change in cultural interest scores.

Recommendations for Further Research

1. It would be desirable to validate the findings of this study by replication of the study on a comparable population, either at Lewis and Clark College or at other church-related colleges of liberal arts and sciences.
2. In order to determine if the Adult Interest Profile had value as a predictive instrument for academic achievement in institutions other than church-related colleges, it could be administered to populations in secular schools -- both large and small.
3. Some consideration could be given to the use of

the Adult Interest Profile as a measuring instrument to determine changes in interests resulting from the completion of certain academic disciplines. Those institutions offering one- and two-year courses in General Education (designed primarily to acquaint students with the interaction of the humanities, the social sciences, history, and fine arts) could use this instrument at the beginning of the course and at the termination to determine if it measured anticipated changes in interests.

4. Students used in this study could be administered the Adult Interest Profile at the end of their senior year and a study made of the results. Of special interest would be the results obtained from the students who had negative scores on the change in cultural interests after one year of academic work.

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A P P E N D I X A

A D U L T I N T E R E S T P R O F I L E

Scores of test instruments are in use as measures of mastery of knowledge in various fields, of native abilities, and of aptitudes. One of the truest measures of an adult's education must be found in the realm of his appreciation of the values that contribute most to cultural ideals. A profile of an adult's interests often reflects the most significant aspects of his education.

This instrument seeks to evaluate such interests.

The following items have been scientifically selected from a large number on the basis of consistency of responses by selected adult populations.

Read directions; follow them carefully; answer sincerely.

W O R K F A S T !

Form A

Prepared by the Faculty Committee on the Improvement of
Instruction of Lewis and Clark College.

FORM A

PART I ANNOYING WORDS

READ DIRECTIONS CAREFULLY! Read the following words rapidly. If any word irritates you, or suggests a strongly unpleasant idea, or arouses a feeling of dislike for any reason, CROSS IT OUT with a quick stroke of your pencil. DON'T STOP TO ANALYZE WHY. Just cross out the offensive word and go right on to the next word. WORK FAST!

- | | | |
|-----------------------|----------------------------|---------------------|
| 1. accident | 14. discovery | 27. poise |
| 2. art gallery | 15. drudgery | 28. progress |
| 3. autocracy | 16. favoritism | 29. rationalization |
| 4. awkward | 17. freedom of speech | 30. recluse |
| 5. bribe | 18. freedom of worship | 31. regimentation |
| 6. civic-minded | 19. fun | 32. relaxation |
| 7. class barriers | 20. human rights | 33. roses |
| 8. concert | 21. mental acuteness | 34. self-centered |
| 9. conscientious work | 22. misleading advertising | 35. self-control |
| 10. considerate | 23. open-handed | 36. social drinking |
| 11. conversation | 24. optimism | 37. temperance |
| 12. co-operation | 25. penny-pincher | 38. tenement house |
| 13. cynicism | 26. pioneer thinker | 39. unreliable |

FORM A

PART II ATTRACTIVE WORDS

READ DIRECTIONS CAREFULLY! Read the following words rapidly.
 If any word attracts you strongly or suggests a highly pleasant idea, or arouses a favorable attitude, MARK A CIRCLE AROUND IT with a quick movement of your pencil. DON'T STOP TO ANALYZE WHY. Just circle the favorable word and go on to the next word. WORK RAPIDLY!

- | | | |
|--------------|------------------|----------------------------|
| 1. weeds | 14. progress | 27. human rights |
| 2. clique | 15. cathedral | 28. clock-watcher |
| 3. poetry | 16. credulity | 29. dependability |
| 4. health | 17. conformity | 30. golden sunset |
| 5. awkward | 18. relaxation | 31. penny pincher |
| 6. poverty | 19. temperance | 32. self-important |
| 7. recluse | 20. big-hearted | 33. democratic spirit |
| 8. science | 21. caste system | 34. freedom of thought |
| 9. whiskey | 22. complacency | 35. freedom of worship |
| 10. epidemic | 23. hospitality | 36. special privileges |
| 11. laughter | 24. magnanimous | 37. pride in workmanship |
| 12. oblivion | 25. originality | 38. suppression of speech |
| 13. patience | 26. faith in man | 39. misleading advertising |

FORM A

PART III DEGREE OF VALUE

DIRECTIONS: Check the horizontal line at the point which indicates, in a quick estimate, the degree of value which you attach to the outcome or experience described in the line. Think of this in relation to other values which you would be willing to sacrifice, in some degree, for this one. WORK FAST!

- | | | |
|--|-------|-------|
| 1. Enjoyment of music. | _____ | _____ |
| | Low | High |
| 2. Zest in life; vivacity; enthusiasm. | _____ | _____ |
| 3. Concern for the health of the community. | _____ | _____ |
| 4. Devotion to the ideal of justice for all. | _____ | _____ |
| 5. Indignation at the use of deceitful propaganda. | _____ | _____ |
| | Low | High |
| 6. Ability to co-operate with others at a common task. | _____ | _____ |
| 7. Distress over barriers that hinder free social interaction. | _____ | _____ |
| 8. Trying to see all sides of a question before forming a judgment. | _____ | _____ |
| 9. Steadfast refusal to accept unearned, undemocratic privileges. | _____ | _____ |
| | Low | High |
| 10. Respect for the personality of others, regardless of race or creed. | _____ | _____ |
| 11. Interest in continued intellectual pursuits; desire to learn more. | _____ | _____ |
| 12. Sensitiveness to the influence of all aspects of community life on the ideals of growing children. | _____ | _____ |

FORM A

PART IV AGREEMENT

DIRECTIONS: WORK FAST! On the horizontal line, in the appropriate box, make a check to indicate whether you agree or disagree with the statement at the left. Do not try to distinguish degrees of agreement or disagreement. If you have no preference whatever, check at "neutral." But if you have any slight preference one way or the other, check in the appropriate box. **WORK FAST!**

13. The emphasis on wealth in the western world is so exaggerated as to tend to impoverish rather than enrich human society. () () ()
Disagree Neutral Agree
14. The recluse finds in his tranquility greater rewards and satisfactions than social fellowship could yield. () () ()
D N A
15. My confidence in the ultimate triumph of good in human society is greater than when I finished high school. () () ()
D N A
16. The conscientious citizen will school himself to enjoy the sense of achievement in his work even more than he cares for praise. () () ()
D N A
17. Human nature is so constituted that, with wholesome social training, co-operation and concern for others yield more satisfaction than self-centered individualism. () () ()
D N A
18. When one finds that his work brings diminished financial returns as the quality of his workmanship improves, only a fool will still try to produce the best quality he can. () () ()
D N A

19. Cross-word puzzles provide a mild form of scientific research; the more competent one's mind the more difficult intellectual problems he will attack when opportunity offers.

() () ()
 —————
 D N A

20. One should conscientiously budget a certain amount of time for play and health-sustaining activities at considerable sacrifice of income, if necessary.

() () ()
 —————
 D N A

21. The value of freedom is played up, doubtless because it receives sentimental approval. Yet this sentiment springs from deep roots: freedom is worth whatever price must be paid for it.

() () ()
 —————
 D N A

22. "All work and no play makes Jack a dull boy." More sense than sentiment! Time taken out of work for play more than justifies, in buoyant personality, all it costs in time and dollars.

() () ()
 —————
 D N A

FORM A

PART V REPUTATION

DIRECTIONS: Mark a circle around the letter at the left of the description or designation of the reputation which you would prefer to have on the part of your friends and acquaintances. Your score will have meaning only to the degree that you answer sincerely.

- a. 23. A lover of art, music, and poetry, a patron of museum and symphony, finding in the fine arts a vital part of his recreation.
- b. A practical person with important work to do, spending any time available for recreation in physical games or restful diversions, with little time for the fine arts.
- a. 24. Serious-minded, courteous, acknowledging friendly advances, but letting others make them, preferring magazines and books to conversation with friends.
- b. A good mixer, enjoying visits with friends, making new friends easily, good natured and well-liked.
- a. 25. A reader of the most approved newspaper, of popular magazines, taking advantage of recreational radio and television to offset the serious responsibilities of the work day.
- b. An active-minded citizen, alert in many areas of thought and activity, a reader of serious books, conversant with the intellectual progress of the world.
- a. 26. An inventor of many labor-saving devices that have made life more tolerable for thousands, too concerned to enrich civilization to capitalize on his inventions and make a fortune.
- b. An efficient and successful business manager, who, through sheer genius, has built up a great enterprise and an ample fortune with a deserved reputation for ability among other captains of industry.
- a. 27. A superman with high capabilities, recognizing self-realization as one's destiny, looking on the weak as factors to be used in the struggle for success rather than permitting them to be objects of sentimentalism to stand in the way of success.
- b. A sensitive humanitarian, looking upon human nature as essentially social, finding fulfillment of life in serving one's fellows, and greatest happiness in the happiness of others.

- a. 28. A person with a sensitive palate, thoroughly enjoying food and drink, unimpressed by the example of the ascetic, not harshly critical of the motto, "eat, drink, and be merry."
- b. More concerned to maintain health, for the sake of top efficiency, than with the momentary enjoyment of tasty food.

- a. 29. A supporter of Americanism, recognizing the danger of free discussion of unsound ideologies, preferring safety to sentimentalism about democratic rights.
- b. A staunch defender of freedom of thought and expression -- even the expression of unsound views; maintaining that free discussion is the safest road to truth, and basic to democracy.

FORM A

PART VI PREFERENCES

DIRECTIONS: Mark a circle around letter at left of preferred item. WORK FAST!

30. The most reliable evidence of social progress is to be found in the
- annual production of wealth.
 - use of wealth as means of enriching culture.
 - regulation of currency to encourage spending instead of hoarding.
31. Faith in the ultimate triumph of good in human society
- generally decreases as education increases.
 - is generally stronger and more stable among the educated.
 - is unaffected by and unrelated to higher education.
32. As I grow more mature I realize that I am
- less health-conscious than formerly.
 - more inclined to accept the motto, "Eat, drink, and be merry."
 - more attentive to the effects of diet and activities on my health.
33. Indicate the most significant insight among the following quotations:
- "The essence of friendship is magnanimity and trust." (Emerson)
 - "Friendship is but a name; I love no one." (Napoleon)
 - "There is flattery in friendship." (Shakespeare)
34. Indicate the most significant insight among the following quotations:
- "Spend all you have for loveliness; Buy it, and never count the cost."
 - "Only the educated can appreciate high art."
 - "Art is nothing but the highest sagacity of human nature."
35. The principles of freedom of speech, of the press, and of worship
- have been given undue importance by sentimental people.
 - are so indispensable to democracy that we must not deny them even to enemies of democracy.
 - should be abrogated for radicals who seek to make revolutionary changes in our political and economic system.

36. I most admire and respect
- Henley (author of "Invictus.")
 - Kant (philosopher of the moral imperative).
 - Poe (author of "The Raven").
37. If costs and accessibility were uniform, I would choose most often to attend
- art museum exhibits of famous collections of paintings.
 - boxing contests.
 - horse races.
38. With all the lectures and forums in local halls and on the radio
- citizens have a chance to be better informed today than ever before.
 - even if one tries to keep informed he gets bored most of the time.
 - it's no wonder that so many people turn their radios to jazz music.
39. The meaning of life is most significantly reflected in the quotation,
- "And because right is right, to follow right
Were wisdom is the scorn of consequence."
 - "Back of the hammer the plan;
Back of the brawn, the brain."
 - "Beware the pine tree's withered branch!
Beware the awful avalanche!"
40. Definitions of democracy, if they are to stress its social significance,
- will emphasize the right of all to vote for representatives who will conduct the government for them.
 - will emphasize freedom from oppressive acts of government as detailed in the Bill of Rights.
 - will stress the removal of all barriers to free social interaction, such as social or economic caste or race prejudice.
41. Public officials have been criticized for profiting from inside tips: which indicates
- public recognition of the principle that, in an ideal democracy, one may not accept special privileges.
 - a perfectionism that cannot be expected in political life.
 - jealousy and lack of realism; the critics would do the same if they had a chance.

42. Psychology has introduced the word, "rationalization," which suggests that
- intellectually honest persons find sophistry and rationalization intolerable.
 - we are helpless victims of prejudice in much of our conduct.
 - the invention of long words doesn't prove that previous generations were dumb.
43. The student planning his vocation will be happiest eventually if he chooses a field in which he
- can rapidly rise to wealth and influence.
 - has promise of generous public recognition and adulation.
 - can render helpful service to many and receive their warm gratitude.
44. Indicate the most significant insight among the following quotations:
- "Men must work, and women must weep; And the sooner it's over the sooner to sleep."
 - "Get work. It is better than what you work to get."
 - "It is natural for work to be satisfying; under normal conditions it yields a highly rewarding sense of accomplishment."
45. Indicate the most significant insight among the following quotations:
- "Social change is capricious, meaningless, and without direction."
 - "Social change follows cycles. We chance to be living when civilization is on the decline. Nothing can be done about it."
 - "Progress takes place in the degree that human intelligence and effort are directed toward social ideals."
46. Such personal traits as poise, equanimity, and patience
- are attractive in people in certain vocational areas, such as receptionists.
 - in normal people are marks of weakness and warnings of failure.
 - are traits essential to the highest contribution of the individual to human happiness.
47. Libraries today provide abundant literature on science, philosophy and biography:
- This is a good thing for old men without energy or responsibility.
 - Good! Women's clubs are better off listening to book reviews than playing bridge all the time.
 - Americans could very profitably make fuller use of these cultural advantages.

48. One of Keats' most beautiful odes, and Edwin Markham's most famous poem, were written after visits to museums:
- a. School children in cities can learn a good deal of geography by seeing things collected from various parts of the world in a museum.
 - b. It is more interesting and valuable to see things in their natural setting than in the artificial collections in museums.
 - c. Few experiences are so effective in giving one a sense of kinship with people in all ages in all climes as a study of museum exhibits.
49. The good citizen examines the principles of government and concludes that
- a. in the long run, the people will govern themselves better than any self-perpetuating group can govern them.
 - b. the delegation of governing powers to representatives elected by the people, as in U. S., provides essentially a perfect government for large populations.
 - c. the assumption that people have an inherent right to govern themselves is unrealistic, wishful thinking that has robbed the human race of a large measure of its deserved tranquility and security.
50. The good citizen examines the idea of "general welfare" and concludes that
- a. the phrase is ambiguous, interpreted by no two people alike, impossible of evaluation, and therefore not an outcome that can have claims on anyone.
 - b. devotion to such an ideal cultivates a spirit of mutual co-operation, leading to a community spirit which increases the happiness of all.
 - c. however desirable in theory, no one is under any more obligation than any other to sacrifice for the rest.
51. The good citizen examines the problem of health and concludes that
- a. if one lives normally health will take care of itself.
 - b. every individual owes a basic obligation to all others to become intelligent regarding personal and public health, in order to safeguard both.
 - c. good health is desirable; but asceticism involves the sacrifice of an unreasonable amount of pleasure in life.
52. The good citizen examines education and concludes that
- a. since a good civilization depends on production, society cannot afford to hamper profits by sentimental teachings about co-operation in the name of civic education.
 - b. society owes its children the opportunity to secure all the education they have capacity to profit by.

- c. education is a matter of individual privilege; parents should bear the cost of educating their children.
53. Sam Lancaster was an efficient and successful engineer; he was sensitive to beauty; he planned and built the scenic Columbia River Highway; after World War I he devoted all his time and energy, without reserve, to raising funds for destitute children in the Near East; eventually he accumulated a comfortable competence, indulging an expensive hobby when he retired. He probably (judging by my own values) found greatest satisfaction in
- a. raising funds for Near East relief.
 - b. his career in engineering and road building.
 - c. his comfortable financial success.
 - d. his hobby after retirement.

FORM A

PART VII NEWS

DIRECTIONS: WORK FAST! If you consider the item reported good news, mark a circle around G; if you consider it bad news, mark a circle around B.

- G 54. The past decade has produced a notable increase of
B books predicting a bright future for civilization.
- G 55. A well known educator is reported to have asserted
B that it does not matter so much what you learn as
that you develop a love of learning.
- G 56. A large engineering school has modified its freshman
B course to include an introduction to the fine arts,
emphasizing appreciation of poetry, music, and art.
- G 57. A community health crusade has been launched in
B Altamont, in which every school child as well as
every adult is being asked to participate.
- G 58. The legislature of the State has removed all
B restrictions on the hours at which advertisements
of liquor may be shown on television on the ground
that such restrictions discriminate against
individual rights.
- G 59. The principal of Park School has announced that
B play periods will be shortened for seventh and
eighth grade pupils: "Upper grade children are old
enough to form serious work habits; play habits
will tend to prevent the forming of good work
habits," explained the principal.
- G 60. A reliable journal recently carried an article
B describing the process of "brain washing" applied
by the Communists to prisoners. It explained that
the intensive indoctrination and group pressure,
with implied consequences of failure to "see the
truth," is a form of hypnotism virtually removing
the power of freedom of thought.
- G 61. The school board sustained the superintendent's
B ruling that discussion of the "influence of
religion on personality," and of "spiritual values
and mental health," does not constitute sectarian
teaching and is permissible in any high school
course. Actual sectarian teaching is still
forbidden.

- G 62. A popular lecturer dramatically asserted that the
B better civilized we become the worse off we are;
the ideal of equal rights is fundamentally unsound
since individuals are unequal in ability; democracy
only tends to atrophy creative ability and subordi-
nate individuality.
- G 63. A five year study has been made by an American
B Commission on education gathering and organizing
the most effective methods of educating youth in
the principles of religious freedom. The report
has had wide circulation and has attracted
significant attention from school authorities.
- G 64. In an East Side High School assembly program
B John West, a sophomore, was cited for superior
citizenship by the student-faculty public affairs
committee as having exhibited superior devotion
to the welfare and idealism of the school with
conspicuous disregard for his own personal
advantage.
- G 65. Central Teachers College announces a summer session
B course on "Efficiency and Success"; "The course
will be an adaptation of Nietzsche's philosophy to
present day conditions, aiming to free teachers from
the enervating effect of the self-sacrifice which
teachers are generally exhorted to exemplify."
- G 66. One period a week in the social studies curriculum
B in Lincoln High School is given over to a home
economics-sponsored tea for the informal training
of boys and girls in social amenities and construct-
ive conversation. Selected teachers mingle with
students, stimulating their conversation and putting
them at their ease. Discussions follow regarding
traits of good hosts and hostesses.
- G 67. Reports of a reputable research institute based on
B known stock ownership and published dividend rates
indicate that a score of families have accumulated
fabulous wealth, far exceeding the fortunes which,
a generation ago, aroused lively discussion of the
ethics of individual wealth.
- G 68. A coroner's jury found that an accident that had
B cost the lives of the four occupants had been caused
by defective assembling. One of the mechanics,
commenting on the report, said, "I can't feel too
bad about it; the fault is wholly with the manufac-
turer trying to make too much profit off his labor.
We work hard enough for the pay we get; we can't
worry over consequences."

A P P E N D I X B

A D U L T I N T E R E S T P R O F I L E

Scores of test instruments are in use as measures of mastery of knowledge in various fields, of native abilities, and of aptitudes. One of the truest measures of an adult's education must be found in the realm of his appreciation of the values that contribute most to cultural ideals. A profile of an adult's interests often reflects the most significant aspects of his education.

This instrument seeks to evaluate such interests.

The following items have been scientifically selected from a large number on the basis of consistency of responses by selected adult populations.

Read directions; follow them carefully; answer sincerely.

W O R K F A S T !

Form B

Prepared by the Faculty Committee on the Improvement of
Instruction of Lewis and Clark College.

FORM B

PART I ANNOYING WORDS

READ DIRECTIONS CAREFULLY! Read the following words rapidly.

If any word irritates you, or suggests a strongly unpleasant idea, or arouses a feeling of dislike, for any reason, **CROSS IT OUT** with a quick stroke of your pencil. **DON'T STOP TO ANALYZE WHY**. Just cross out the offensive word and go right on to the next word. **WORK FAST!**

- | | | |
|-----------------------|----------------------------|---------------------------|
| 1. awkward | 14. freedom of thought | 27. penny-pincher |
| 2. big-hearted | 15. freedom of worship | 28. poetry |
| 3. caste system | 16. golden sunset | 29. poverty |
| 4. cathedral | 17. health | 30. pride in workmanship |
| 5. clique | 18. hospitality | 31. progress |
| 6. clock-watcher | 19. human rights | 32. recluse |
| 7. complacency | 20. laughter | 33. relaxation |
| 8. conformity | 21. magnanimous | 34. science |
| 9. credulity | 22. misleading advertising | 35. self-important |
| 10. democratic spirit | 23. oblivion | 36. suppression of speech |
| 11. dependability | 24. originality | 37. temperance |
| 12. epidemic | 25. patience | 38. weeds |
| 13. faith in man | 26. privileged character | 39. whiskey |

FORM B

PART II ATTRACTIVE WORDS

READ DIRECTIONS CAREFULLY! Read the following words rapidly.
 If any word attracts you strongly or suggests a highly pleasant idea or arouses a favorable attitude, mark a circle around it with a quick movement of your pencil. DON'T STOP TO ANALYZE WHY. Just circle the favorable word and go on to the next word. **WORK FAST!**

- | | | |
|---------------|-------------------|----------------------------|
| 1. fun | 14. discovery | 27. regimentation |
| 2. bribe | 15. favoritism | 28. self centered |
| 3. poise | 16. relaxation | 29. class barriers |
| 4. roses | 17. temperance | 30. tenement house |
| 5. awkward | 18. unreliable | 31. considerateness |
| 6. concert | 19. art gallery | 32. mental acuteness |
| 7. recluse | 20. open handed | 33. rationalization |
| 8. accident | 21. civic minded | 34. social drinking |
| 9. cynicism | 22. conversation | 35. pioneer thinking |
| 10. drudgery | 23. co-operation | 36. freedom of speech |
| 11. optimism | 24. human rights | 37. conscientious work |
| 12. progress | 25. self control | 38. freedom of worship |
| 13. autocracy | 26. penny pincher | 39. misleading advertising |

FORM B

PART III DEGREE OF VALUE

DIRECTIONS: Check the horizontal line at the point which indicates, in a quick estimate, the degree of value which you attach to the outcome or experience described in the line. Think of this in relation to other values which you would be willing to sacrifice in some degree for this one. **WORK FAST!**

- | | | |
|--|-------|-------|
| 1. Enjoyment of music. | _____ | _____ |
| | Low | High |
| 2. Concern for the health of the community. | _____ | _____ |
| 3. Devotion to the right of freedom of thought. | _____ | _____ |
| 4. Open-mindedness; refusal to hold prejudiced opinions. | _____ | _____ |
| 5. A wide variety of commanding and satisfying interests. | _____ | _____ |
| | Low | High |
| 6. Enjoyment of social fellowship; liking to be with people. | _____ | _____ |
| 7. Satisfaction in productive work; pride in good workmanship. | _____ | _____ |
| 8. Devotion to the democratic ideal in all social relationships. | _____ | _____ |
| 9. A sense of kinship with other minds, regardless of time or race. | _____ | _____ |
| | Low | High |
| 10. Interest in continued intellectual pursuits; desire to learn more. | _____ | _____ |
| 11. Appreciation of and commitment to human values above property values. | _____ | _____ |
| 12. Feeling an obligation to use my abilities as means of bettering society. | _____ | _____ |

FORM B

PART IV AGREEMENT

DIRECTIONS: WORK FAST! On the horizontal line, in the appropriate box, make a check to indicate whether you agree or disagree with the statement at the left. Do not try to distinguish degrees of agreement or disagreement. If you have no preference whatever, check at "neutral." But if you have any slight preference one way or other, check in the appropriate box. WORK FAST!

13. A long range philosophy of optimism for human society is justified. () () ()
Disagree Neutral Agree
14. One is really a member of a community only as he enjoys associating with other people. () () ()
D N A
15. In order to have an ideal civilization, wealth must be thought of in terms of the enrichment it makes possible, not as a goal in itself. () () ()
D N A
16. Social fellowship is so indispensable to civilization as to impose a moral obligation on every individual to help foster it. () () ()
D N A
17. The United Nations should be given increasing authority over policies that affect war and peace, even at the cost of some phases of our national authority. () () ()
D N A
18. Play is so essential to the physical and spiritual well-being of man that one is under moral obligation to participate regularly in some sort of play all his life. () () ()
D N A

19. When one finds that his work brings diminished financial returns as the quality of his workmanship improves, only a fool will still try to produce the best quality he can.
20. Cross-word puzzles provide a mild form of scientific research; the more competent one's mind, the more difficult intellectual problems he will attack when opportunity offers.
21. The known effects of overweight in inducing heart trouble and other impairments of health and efficiency constitute nothing short of a moral obligation to practice a diet and regimen calculated to keep one at normal weight.
22. Mass production competes with fine workmanship. For the sake of the morale of workers and the effect on the esthetic taste of consumers, mass production should be slowed down if necessary to permit more highly finished workmanship.

() () ()
 —————
 D N A

() () ()
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 D N A

() () ()
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 D N A

() () ()
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 D N A

FORM B

PART V REPUTATION

DIRECTIONS: Mark a circle around the letter at the left of the description or designation of the reputation which you would prefer to have on the part of your friends and acquaintances. Your score will have meaning only to the degree that you answer sincerely.

- a. A second George Washington Carver.
23.
- b. A second John D. Rockefeller.
- a. The speediest piece worker in the factory, earning
24. the highest bonuses for extra production.
- b. The "artist" of the factory, turning out the finest workmanship of any employee.
- a. Just a "grown-up boy" outside of working hours,
25. enjoying the same sports as when a boy, forgetting business when outside the office.
- b. A hard worker, "grown up," having too much important work to do to permit frittering away any time in play.
- a. Conscientious in supporting the rights of everyone
26. to full opportunity for development and self-expression, holding human rights above property rights.
- b. Practical and realistic; willing, for example, to sign petitions when favored by the majority of neighbors against sales to "undesirable" classes and races.
- a. The political boss of the State; the power behind
27. the throne.
- b. Intellectually honest; scientific minded; logical, accurate; the best scientific mind in the State.
- a. A hard-headed realist, working on the assumption that
28. man's destiny depends on man's wit and effort, looking on the universe as the product of complicated forces following inexorable laws; little concerned with the fate of individuals.
- b. A reverent person, seeing purpose in the universe; feeling himself a related part of it, finding meaning for life in that relationship, and finding serenity and emotional security in that interpretation of life.

- a. 29. A supporter of Americanism, recognizing the danger of free discussion of unsound ideologies, preferring security to sentimentalism about democratic rights.
- b. A staunch defender of freedom of thought and expression -- even the expression of unsound views; maintaining that free discussion is the safest road to truth and basic to democracy.

FORM B

PART VI PREFERENCES

DIRECTIONS: Mark a circle around letter at left of preferred item. WORK FAST!

30. I most admire and enjoy the poetry of
- Ben King; comic poet; columnist.
 - Edna St. Vincent Millay, nature poet.
 - Edgar A. Guest, popular jingle writer, columnist.
31. Indicate the most significant insight among the following quotations:
- "It is good to have friends in court." (Chas. Lamb)
 - "A friend is worth all hazards we can run." (Young)
 - "Virtuous men alone possess friends." (Voltaire)
32. I most fully approve the outlook on life of
- Henry Ward Beecher.
 - Bertrand Russell.
 - Voltaire.
33. The Constitution was adopted "in order to...establish justice."
- Even reformers can't agree on the definition of justice.
 - Human nature being what it is, justice is but a futile dream.
 - Democracy is based on the principle of even-handed justice; every effort will be made by good citizens to prevent any from practicing injustice.
34. The highest contribution to culture and well-being has come from
- philosophers, including leaders of religious thought.
 - inventors of machines and devices for producing more goods.
 - industrial leaders, railway builders, manufacturers, distributors.
35. I most admire and respect
- Thomas Edison (inventor).
 - Henry Ford (pioneer auto manufacturer).
 - Louis Pasteur (pioneer in research in humane medicine).
36. The happiest person is the one who
- has learned to enjoy fellowship with many sorts of people.
 - has a strong ambition that holds him in pursuit of his chosen project.
 - has money enough to buy whatever he needs to make him happy.

37. The quotation, "eat, drink, and be merry, for tomorrow we die,"
- is realistic; one has a right to get what pleasure he can out of life.
 - underestimates one's obligation to maintain health in order to be of maximum service to society.
 - while extreme in form, correctly implies that one must look out for himself.
38. Indicate the most significant insight among the following quotations:
- "Thank God for a world where none may shirk!
Thank God for the splendor of work!"
 - "Work is healthy; you could hardly put more upon a man than he can bear."
 - "Better to wear out than rust out."
39. Definitions of democracy, if they are to stress its social significance,
- will emphasize the right of all to vote for representatives who will conduct the government for them.
 - will emphasize freedom from oppressive acts of government as detailed in the Bill of Rights.
 - will stress the removal of all barriers to free social interaction, such as social or economic caste, or race prejudice.
40. The most reliable among the following criteria of social progress is
- the amount of bank clearings.
 - the number of books drawn annually from libraries.
 - the degree to which human rights are placed above property.
41. The honest citizen must acknowledge that social welfare required
- that one be willing to sacrifice self for the sake of duty.
 - that one exert leadership; take command of the situation.
 - one to use his head; direct many; make a little profit from each.
42. In this scientific age the public has become more familiar with the method of scientific thinking:
- just the same, common sense is still our best guide.
 - more people are looking behind propaganda, demanding the evidence.
 - science has made a lot of our reading stilted and dry.

43. The good citizen examines play and concludes that
- play is undignified for an efficient adult.
 - the serious business of life properly crowds play to a minimum.
 - all should keep up the spirit of play and readiness to enter into play throughout life.
44. Kinship with persons of other ages and places
- is an illusion; an unrealistic figment of the imagination.
 - is an illusion; but it probably lifts one's morale.
 - can be as real and stimulating to the growth of personality as fellowship with persons living and present.
45. Hundreds of thousands of volumes of poetry are published annually:
- comics are more fun and will soon replace poetry for most people.
 - poetry is a luxury enjoyed chiefly by daughters of rich parents.
 - when the schools teach appreciation of poetry effectively, America will be a more cultured and a happier nation.
46. The word "freedom" in our patriotic songs
- is misleading; for we have about the same degree of freedom as most of the other people in the world.
 - may well stimulate our imagination to dramatize the contrast between our lot and that of millions less favored than we.
 - is a sentimental word to whip us into obedience to the forces that control our government.
47. The next generation will be better off than the present if
- education becomes more realistic, providing earlier and more thorough training in vocations and business efficiency.
 - children are trained to be more ambitious, thrifty, and industrious.
 - children are trained to think of wealth only in terms of its uses, not as a goal.
48. I can most honestly accept the statement:
- "I believe in self-denial and its secret throb of joy."
 - "We are living in an age of competition; each individual must outdo his rival if he is to survive."
 - "Life has no meaning; we are robots going through motions not of our own choosing; justice and success are hollow sounds."

49. Indicate the most significant insight among the following quotations:
- "Wealth may be an excellent thing, for it means power, leisure, liberty."
 - "Wealth is security for gentleness; since it removes disturbing anxieties."
 - "Get place and wealth if possible with grace; If not, by any means get wealth and place."
50. The good citizen examines the place of the family in democratic culture and concludes that
- affection, devotion, and the democratic spirit on the part of each member toward all other members is essential to an ideal democratic culture.
 - the assumption of obligation to the monogamous family is a traditional sentiment unsupported by sociological evidences.
 - in a culture in which women as well as men are vocationally trained, and knowledge of the principles of child training is available to all, the necessity of family life has been largely removed.
51. "Some books are to be tasted."--Bacon.
- I wish I had sold more of my college books while prices were good.
 - I hope to read quite a good deal among lines in which I have become interested whenever I can find time.
 - In the time I have to use as I please, I read relatively little; there are more interesting things to do.
52. "I hear America Sing," is the title of a collection of popular songs.
- Such books increase popular taste for music and swell the number who find life richer and more satisfying as a result.
 - Such books only encourage youth, who should be doing more profitable work, to waste their time.
 - Singing, and likewise playing instruments, probably keeps some young folks out of more serious mischief.
53. The good citizen examines the theory of "equality" and concludes
- that equality of opportunity is a sound principle, indispensable to ideal human society, automatically providing for varied achievements by individuals of varied abilities.
 - that the term is a sentimental expression, contrary to the law of survival, which requires that each individual seek fullest self-realization.

- c. as a realist, that the phrase is a verbalism that can be only roughly approximated, since inequalities in numerous respects exist.

FORM B

PART VII NEWS

DIRECTIONS: WORK FAST! If you consider the item reported good news, mark a circle around G; if you consider it bad news, mark a circle around B.

- G 54. A high ranking government official, attending a banquet honoring certain U. S. Naval heroes, turned his wine glass upside down commenting, "More victories have been won on water than on wine."
- B
- G 55. The Smith Products Company has announced that its bonus system is to be changed, bonuses hereafter to be awarded on the basis of quality of workmanship instead of above-standard quantity.
- B
- G 56. The Council of Churches voted to undertake a program of group and individual counseling and guidance, open to everyone, with the purpose of associating religion with the mental hygiene movement.
- B
- G 57. A home economics department has announced that, beginning next term, grades will be weighted one-third on the basis of health habits of the student, only two-thirds on class recitation and written tests.
- B
- G 58. Taking as his cue the plot of a motion picture, "If I Had a Million," a wealthy industrialist has distributed his accumulated fortune; however, he selected social agencies as beneficiaries.
- B
- G 59. Again college education has been ridiculed by a popular lecturer as highbrow, spawning bookworms, making promising youth starry-eyed dreamers, too much enamored of ideas to live wholesomely with people.
- B
- G 60. A widely known columnist has written, "Freedom of speech is a very nice-sounding idea; but to permit freedom of speech to those who disagree with the accepted American way is to invite the destruction of our culture."
- B
- G 61. The Hutchins Code of American ideals represents a radical change from the traditional lists of traits of good citizens to a series of descriptions of wholesome ways in which good citizens behave, with suggestions as to the value of such behavior.
- B

- G 62. "Golden Rule Nash" adopted the plan of dividing all
B profits of his manufacturing concern among his
workers, permitting them to decide how much should
go into business expansion. Very cordial working
relations resulted; and apparently sound plan of
expansion was adopted.
- G 63. The president of a municipal university announced
B the appointment of a famous atheist as head of the
philosophy department. He explained that in this
scientific age the university did not feel called
upon to promote the traditions and superstitions
in the verbiage of religion that have come down from
an unscientific age.
- G 64. An official of the National Education Association
B reports that there is evidence of a consistent
campaign, country-wide, to prevent public school
pupils from discussing current political and social
issues. "Indoctrinate children in the American Way"
is the slogan of this highly vocal group.
- G 65. An analysis of the health habits of the students in
B Central High School revealed that less than 50%
slept on an average the minimum number of hours
recognized by health authorities as safe for
permanent health, or ate what could under any
definition be called a balanced diet.
- G 66. The conference of high school coaches and teachers
B of physical education has voted to give letters not
only to participants in inter-school competitive
games, but to all who consistently play in any
sports that can be continued in business or pro-
fessional life, such as handball, golf, and tennis.
- G 67. A prominent manufacturer has decried the "pressure"
B of colleges to get students to take courses in
poetry, music, and art, on the ground that these
"frills" warp the ideas of college graduates and
make them impractical in this scientific age. He
proposes to make no more gifts except to colleges
emphasizing science and making fine arts courses
genuinely elective.
- G 68. A new popular book on anthropology develops the
B thesis that man's evolution continued as long as
individual struggle for survival dominated life, but
that the idealism of western culture has emphasized
altruism to the point where sacrificing self-interest
to the good of others is causing retrogression and
threatening serious deterioration of the race.

A P P E N D I X C

DATA USED IN STUDY

Key:

- Age - As of September, 1954, to nearest half year
 H.S. GPA - High school grade point average
 Col. GPA - College grade point average, September 1954 -
 June 1955
 ACE - Raw score on American Council on Education
 Psychological Examination
 AIP Fall - Raw score on Adult Interest Profile,
 administered September 1954
 AIP Spring - Raw score on Adult Interest Profile,
 administered May 1955
 AIP Diff. - Difference in raw scores on Adult Interest
 Profile, between Fall and Spring
 administration

Student	Sex	Age	H.S. GPA	Col. GPA	ACE	AIP Fall	AIP Spring	AIP Diff.
1	F	18-9	3.50	2.45	116	86	88	2
2	F	17-9	3.25	3.00	- -	78	83	5
3	F	18-3	3.77	3.03	132	78	73	- 5
4	F	17-9	3.25	2.35	88	84	78	- 6
5	M	18-3	3.00	2.16	114	76	83	7
6	F	18-3	3.27	2.39	114	74	67	- 7
7	F	18-9	2.89	3.62	115	69	81	12
8	F	18-3	3.50	3.28	101	91	91	0
9	F	18-3	2.41	2.47	106	77	89	11
10	F	18-3	2.72	3.12	- -	81	69	-12
11	F	18-3	3.64	2.28	122	75	76	1
12	F	18-9	3.87	2.97	158	71	65	- 6
13	M	17-9	2.23	2.28	118	65	82	17
14	F	18-3	3.64	3.31	115	67	78	11
15	F	18-3	3.75	3.35	108	80	82	2
16	M	18-9	2.10	2.38	76	63	58	- 5
17	F	17-9	3.60	2.68	120	81	84	3
18	F	18-3	2.56	2.18	89	89	63	-16
19	F	19-3	2.86	3.44	- -	62	73	12
20	F	17-9	3.50	2.63	121	88	98	10
21	M	18-3	2.43	1.52	106	75	85	10
22	F	18-9	3.27	2.42	- -	71	90	19
23	F	18-3	3.75	3.27	157	90	93	3
24	M	18-9	2.00	2.47	96	85	77	- 8
25	F	17-9	2.50	2.04	112	90	69	-21
26	F	17-3	3.54	2.46	180	65	69	4
27	F	17-9	3.83	3.80	- -	70	85	15
28	M	17-9	2.70	2.78	- -	90	84	- 6

Student	Sex	Age	H.S. GPA	Col. GPA	ACE	AIP Fall	AIP Spring	AIP Diff.
29	F	19-3	2.70	1.81	101	73	72	- 1
30	M	18-9	1.85	1.30	- -	72	59	-27
31	F	17-9	2.56	2.32	129	62	82	20
32	M	18-9	2.00	2.70	138	74	83	9
33	F	18-3	3.90	2.50	141	70	81	11
34	M	17-9	1.83	2.15	115	78	86	8
35	M	19-6	- -	3.04	124	88	81	- 7
36	F	19-3	3.75	2.46	108	84	90	6
37	F	18-3	2.65	2.27	128	82	89	7
38	F	17-9	3.93	4.00	115	66	82	12
39	F	18-9	3.29	2.80	134	81	97	16
40	F	17-9	2.75	2.45	115	66	82	12
41	M	19-6	3.08	2.23	133	73	71	- 2
42	F	18-9	2.77	2.66	- -	75	89	24
43	M	18-3	1.81	1.83	70	60	56	- 4
44	F	17-9	2.64	1.86	72	92	86	- 6
45	F	17-9	3.36	2.30	94	68	93	25
46	M	18-3	2.42	2.00	120	54	63	9
47	M	17-9	2.00	2.00	87	77	72	- 5
48	F	18-3	4.00	3.26	- -	73	94	21
49	F	18-9	3.60	3.67	181	82	86	4
50	F	18-9	3.00	3.50	- -	54	51	- 3
51	M	18-9	2.90	3.53	123	74	92	18
52	F	18-3	3.86	3.33	- -	81	84	3
53	M	18-3	2.67	1.50	- -	69	56	-13
54	F	18-3	2.75	2.48	151	71	60	-11
55	F	17-3	3.64	3.12	- -	96	102	6
56	F	18-3	2.55	2.51	125	81	74	- 7
57	F	17-3	3.94	3.71	- -	77	80	3
58	M	17-9	1.79	1.30	80	52	60	8
59	F	18-3	2.38	1.31	- -	90	90	0
60	F	18-3	3.92	3.70	- -	83	87	4
61	F	18-3	3.29	2.97	138	99	96	- 3
62	F	17-9	3.67	3.38	151	76	91	15
63	M	19-6	1.75	1.25	104	72	57	-15
64	F	17-9	2.50	2.54	149	77	90	13
65	F	17-9	3.67	2.83	86	92	86	- 6
66	F	18-3	3.88	2.80	125	68	75	7
67	F	18-3	3.58	2.83	80	87	94	7
68	M	19-6	2.06	1.86	122	60	51	- 9
69	F	18-3	3.75	3.77	- -	71	96	26
70	F	17-9	3.64	2.75	138	66	81	15
71	M	18-9	2.17	1.90	94	63	62	- 1
72	M	17-3	2.81	3.94	128	74	87	13
73	M	18-3	2.00	1.71	120	71	66	- 5
74	M	17-9	2.38	2.06	112	72	45	-27
75	F	18-9	3.94	3.74	91	86	85	- 1

Student	Sex	Age	H.S. GPA	Col. GPA	AGE	AIP Fall	AIP Spring	AIP Diff.
76	F	17-3	2.46	1.78	- -	76	81	5
77	F	17-9	3.18	2.64	90	90	93	3
78	F	18-3	3.83	2.97	147	70	67	- 3
79	F	18-3	4.00	4.00	146	98	99	1
80	M	18-3	2.00	1.60	85	60	79	19
81	M	18-9	2.00	1.43	97	75	82	7
82	M	17-9	3.56	3.18	- -	55	49	- 6
83	M	19-3	1.80	2.56	99	65	79	14
84	M	18-9	3.67	3.41	127	94	93	- 1
85	F	18-3	3.80	2.43	- -	71	71	0
86	F	18-3	2.50	2.31	101	70	77	7
87	M	18-9	3.75	2.63	137	77	79	2
88	F	17-9	4.00	3.31	108	83	65	-18
89	F	18-3	2.38	2.20	- -	76	76	0
90	F	17-9	2.21	2.08	113	64	66	2
91	M	18-3	3.00	2.52	121	79	76	- 3
92	F	17-9	3.43	3.34	132	60	78	18
93	M	18-3	2.36	2.26	101	66	62	- 4
94	F	18-3	3.60	2.93	- -	82	86	4
95	F	18-9	1.93	1.93	116	76	84	8
96	F	18-3	2.80	1.90	120	66	82	16
97	F	18-3	2.92	1.71	85	57	66	9
98	M	18-9	- -	1.73	133	73	57	-16
99	F	17-9	3.80	2.23	110	73	77	4
100	F	18-9	2.62	1.65	83	52	78	26
101	F	17-9	3.38	3.03	132	85	65	-20
102	M	17-9	2.83	2.74	115	97	92	- 5
103	F	17-9	3.86	2.79	90	74	87	13
104	F	18-9	3.38	2.67	99	82	93	11
105	M	18-9	2.08	2.77	110	71	82	11
106	M	17-9	3.19	2.45	- -	90	91	1
107	F	18-3	2.38	2.27	84	85	91	6
108	F	18-9	3.40	2.52	100	72	79	7
109	F	18-3	3.64	3.28	- -	90	91	1
110	M	17-9	2.56	2.33	141	69	59	-10
111	F	18-9	2.60	0.89	81	66	65	- 1
112	F	18-3	2.77	2.17	90	83	83	0
113	M	18-3	3.36	2.60	140	67	61	- 6
114	F	18-3	2.90	2.44	122	81	78	- 3
115	F	18-9	2.93	2.11	92	73	83	10
116	F	18-3	2.76	2.21	122	59	69	10
117	F	18-3	3.94	3.97	118	94	90	- 4
118	F	17-9	2.50	2.29	- -	75	65	-10
119	F	18-3	3.80	3.62	- -	75	73	- 2
120	F	18-3	2.23	2.33	118	59	73	14
121	F	18-3	3.44	2.71	115	74	83	9
122	F	18-9	3.50	2.45	- -	42	50	8

Student	Sex	Age	H.S. GPA	Col. GPA	ACE	AIP Fall	AIP Spring	AIP Diff.
123	F	17-9	3.04	2.30	- -	83	91	8
124	F	17-9	2.15	2.00	91	69	86	17
125	F	17-9	3.91	3.13	114	79	86	7
126	F	17-9	3.73	2.88	136	99	94	- 5
127	F	18-3	3.31	2.84	- -	77	83	- 6
128	F	17-9	3.30	2.58	79	65	61	- 4
129	F	18-3	3.10	2.15	124	82	71	-11
130	F	17-9	2.75	2.42	- -	73	77	4
131	F	17-9	3.46	3.11	- -	76	89	13
132	F	17-9	3.65	2.50	136	80	90	10
133	F	17-9	2.50	1.27	92	53	53	0
134	F	18-3	3.31	3.33	97	94		- 3
135	M	18-3	2.18	1.45	112	86	81	- 5
136	F	17-9	2.63	2.13	89	64	68	4
137	F	18-9	3.33	3.24	99	79	81	2
138	M	18-9	2.46	2.06	145	83	75	- 8
139	F	18-3	- -	2.71	143	84	88	4
140	M	18-3	2.55	2.26	101	70	77	7
141	M	18-3	1.50	1.69	85	66	68	2
142	F	18-3	3.53	2.38	118	93	89	- 4
143	F	18-3	3.45	2.69	- -	67	85	18
144	F	18-3	3.92	3.09	133	82	93	11
145	M	18-3	2.08	1.93	102	72	59	-13
146	M	17-9	3.46	3.21	138	78	83	5
147	F	17-3	3.15	3.33	147	68	77	9
148	F	18-3	3.93	3.93	124	86	83	- 3
149	F	18-3	- -	2.10	87	73	84	11
150	M	17-9	2.25	1.97	88	72	69	- 3
151	F	18-3	3.71	2.69	118	77	91	14
152	M	18-3	3.60	2.38	125	62	68	6
153	M	- -	- -	2.77	108	90	89	- 1
154	M	18-3	2.69	2.41	118	90	89	- 1
155	F	17-9	3.15	2.19	116	80	80	0
156	F	19-6	2.55	2.21	- -	59	76	17
157	F	18-3	3.08	3.13	142	80	75	- 5
158	F	18-9	2.86	2.53	107	85	91	6
159	F	18-3	3.45	2.83	123	79	94	15
160	F	18-3	3.00	2.73	109	80	77	- 3
161	F	18-3	2.55	2.47	98	79	85	6
162	F	18-3	3.15	2.67	102	86	93	7
163	M	17-9	4.00	3.13	146	89	80	- 9
164	F	17-9	3.51	3.23	138	80	85	5
165	M	19-6	2.25	2.72	99	76	69	- 7
166	F	18-3	3.93	2.65	115	74	64	-10
167	F	17-3	2.36	2.04	86	78	69	- 9
168	F	18-3	3.57	2.89	134	92	95	3
169	F	18-3	3.54	2.69	106	74	77	3

Student	Sex	Age	H.S. GPA	Col. GPA	AGE	AIP Fall	AIP Spring	AIP Diff.
170	F	18-9	3.00	3.13	91	88	95	7
171	M	18-9	2.20	1.68	58	64	72	8
172	F	17-9	3.87	3.29	- -	96	93	- 3
173	F	18-9	2.54	0.61	128	63	61	- 2
174	F	18-3	3.92	3.30	99	89	77	-12
175	F	18-3	3.13	3.00	144	91	86	- 5
176	M	18-3	2.53	1.69	87	50	69	-19
177	M	18-3	2.76	2.21	144	89	83	- 6
178	M	18-3	3.11	1.97	- -	80	88	8
179	F	18-3	3.50	2.34	112	83	78	4
180	M	17-9	2.36	2.25	110	97	92	- 5
181	F	18-3	3.18	2.60	91	74	79	5
182	M	18-3	2.00	1.63	100	71	52	-19
183	F	18-9	3.10	2.26	101	83	88	5
184	M	18-3	3.09	2.45	116	76	68	- 8
185	M	18-3	2.07	0.89	99	51	48	- 3
186	M	18-3	3.07	2.63	125	73	76	3
187	F	- -	- -	1.60	79	50	47	- 3
188	F	17-3	2.87	2.56	100	86	82	- 4
189	M	18-3	2.10	1.86	114	68	70	2
190	F	18-3	3.92	4.00	119	97	101	4
191	F	17-9	3.38	4.00	118	75	77	2
192	M	18-3	2.64	2.81	148	83	75	- 8
193	M	18-9	2.18	2.30	99	41	65	24
194	M	19-6	2.50	2.33	82	97	79	-12
195	F	17-9	2.40	2.15	86	71	73	2
196	F	19-3	3.71	3.71	123	99	79	-20
197	F	17-9	3.25	2.39	110	77	86	9
198	M	18-3	1.73	1.96	81	60	74	14
199	F	18-3	2.24	2.04	79	65	75	10
200	M	17-9	3.08	3.20	126	51	62	11
201	M	18-3	2.40	1.97	101	63	82	19
202	M	18-9	2.94	2.29	138	84	72	-12
203	M	17-9	3.18	2.54	145	86	84	- 2
204	M	17-9	3.93	3.31	84	96	74	-22
205	F	18-3	3.86	3.31	115	95	91	- 4
206	M	18-3	1.92	1.35	67	63	60	- 3
207	F	17-9	3.57	2.97	- -	69	72	3
208	M	18-3	2.31	2.63	95	72	80	8
209	F	17-9	2.75	2.43	117	70	84	14
210	F	17-9	3.94	3.23	149	83	97	14
211	F	18-3	3.74	3.72	137	81	76	- 5
212	F	18-3	4.00	3.87	- -	88	104	16
213	F	18-3	4.00	3.85	153	71	89	18
214	F	18-3	2.61	3.10	114	73	84	11
215	M	18-9	2.62	2.38	115	66	78	12
216	F	17-9	3.50	3.27	131	51	83	32