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CRITERIA FOR THE CONSTRUCTION OF
COMMUNITY JUNIOR COLLEGE CURRICULA

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

by
Howard Hayes Crouch, B.Sc., M.S. In Education

* * * * * *

The Ohio State University
1964

Approved

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Studies in Guidance and Counseling Psychology. Professors Anthony C. Riccio and Francis P. Robinson

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CHAPTER I

STATEMENT OF THE PROBLEM

This is to be a descriptive survey study of the existence and use of biological, sociological, psychological characteristics as a source of criteria for the construction of curricula at the community junior college level.

Purposes

The purposes of this study are as follows: first, to ascertain from the bio-socio-psychological characteristics of the post-adolescent major problems of living faced by this group; second, to derive criteria implied by these problems to guide community junior college curricula construction; third, to discover to what extent authorities in the area believe each criterion to be of importance; fourth, to determine, if possible, the extent to which present community junior college curricula meet these criteria; and, fifth, to recommend standards to community junior college curricula makers based on these findings.

Propositions to be studied

1. Sufficient research exists in the various areas of bio-socio-psychological growth of the eighteen to twenty-two-year-olds to establish reliable characteristics for this age group from which generalizations can be drawn for the development of criteria to guide curricula construction in the community junior college.

2. Once these characteristics are identified and criteria developed, it will be found that they are not being
Background and Significance of the Problem to be Investigated

In the last two decades this country has witnessed an increase in the number of public two-year institutions of higher learning. The increase has nearly doubled the number of such institutions in existence since 1940. This rapid growth, fostered by Americans' ever increasing faith in education, has been accompanied by a broadening of purposes for this institution. This, in turn, has created a need for the development of criteria to guide the construction of new curricula and the revision of existing curricula. Morrison, writing of the junior college, states that "there is need to explore what experimentation and research is needed in curriculum revision so that the programs offered may more adequately serve the student, the community, and the nation. More specifically, what are the characteristics of junior college students' educational goals?"¹ Medsker suggested in his report on recent research findings that "the growing number and diversity of students have numerous implications for the two-year college of the future."² He continued by stating that one implication was the need for each college to "accumulate a body of facts about its student body which will serve as a guideline for

It would seem that these men have implied the need to broaden the criteria for curricula construction to reflect all the major characteristics of living which influence the life of the prospective student.

The original purpose of this two-year institution and the criteria for developing this purpose were set in 1892 when President William R. Harper separated the first and last two years of the University of Chicago. Thornton has divided the growth of the two-year institution into three periods. These serve well to explain this first period, as well as subsequent periods of growth, as this institution evolved from a junior college with but a single major purpose to the present day concept of the community junior college with its opportunity for a multi-purpose, democratic approach to education.

In a period from 1850 to 1920 the emphasis was on a curriculum that would provide for the first two years of study ordinarily presented in the four-year institutions. This, Tappan stated, would rid the universities of their secondary aspects of education that they might then become "purely universities without any admixture of collegial tuition." Tappan was joined by such men as Folwell and

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3Ibid.


Lange in emphasizing the importance of students receiving their first two years of post-high school education in a two-year institution. However, it was not until Harper's division of the four-year program at the University of Chicago that their idea became reality.

Curriculum construction for the early junior college was not particularly difficult. Since the primary aim of the institution was preparatory, then as Proctor has stated "variations in offerings will be determined only by the lower division patterns of the higher institutions chosen as models, and the ability of the local college to carry out these duplications." The decision as to what higher institutions were to be used as models was usually based on a survey. This survey determined what institutions the greatest number of students, going to college, had enrolled in during years past or would desire to enroll in at a later date. On the basis of this information the junior college attempted to develop a curriculum that would best meet student needs by duplicating the first two years of the model institutions.

This approach remains as one method for curricula construction in the present day community junior college. It will undoubtedly continue to serve as long as this institution provides transfer


preparation for study at higher institutions. However, Thornton has stated a precaution that has implications for the problem being developed in this proposal. "The effective preparation of transfer students must be safeguarded, but too frequently this safeguarding has resulted in unnecessary and hampering restrictions on the right of the junior college to develop its own program for its own students." Medsker added to this precaution when he stated that in the attempt to provide courses to enable students to transfer to four-year institutions "the results are that some two-year colleges identify themselves so closely with a four-year institution that they organize and teach most courses in exactly the same manner as in the particular four-year colleges. When this happens, the junior college forfeits its identity and its opportunity to experiment in the development of a program most appropriate for it." It would appear that both of these men are suggesting that criteria for curricula development based on a more thorough study of local community and youth needs be developed. A portion of this study will be directed toward this end.

A second period of expansion for the junior college program was from 1920 to 1945. During this time the concept of terminal education came into effect. The curricula expanded to offer vocational, semi-professional, and general education courses to students not wishing to continue on for two additional years training at a

9Thornton, op. cit., p. 65.
10Medsker, op. cit., p. 53.
college or university. Earlier Lange had expressed the need for a semi-professional curriculum for those persons not going on to further education and Hill, principal of Chaffey Junior College in California, claimed for that institution the distinction of offering the first terminal courses in 1916 but it was not until 1925 that these courses were added in great numbers to the junior college curricula.

Through many developments involving the rapid mechanization of industry, increased unemployment, and closer ties with the community in which it existed the junior college moved into activities which no longer were either secondary or higher education. These activities now involved an identity and a set of purposes unique to this institution. With the addition of new purposes came a need for broadening the scope of the terminal curriculum. The broadened scope called for additional criteria. In 1927 Proctor recommended that "recognition must be given to the interests and potential requirements of those who would not otherwise be served by an institution offering collegiate instruction." Rosenstengel, in his doctoral dissertation of 1931, developed the following considerations for the establishment of terminal curricula in the junior college.

11Lange, loc. cit.
13Proctor, op. cit., p. 63.
1. What are the terminal curricula which high school Juniors and Seniors desire to pursue in a local public junior college?

2. What are the occupations actually pursued by the high school graduates who did not continue their education in higher institutions?

3. What are the occupations actually pursued by the junior college graduates who did not continue their education in higher institutions?

4. What are the needs of the local community for semi-professionally trained men and women?

5. Where are the junior college graduates who did not continue their education in higher institutions?¹⁴

This set of questions, developed by Rosenstengel could be translated into criteria for curriculum development. It is an early example of the community survey approach which developed as a result of the need to determine guides for the development of the terminal curriculum.

The community survey procedure is further exemplified by the many master's theses developed under the direction and supervision of Eikenberry.¹⁵ These were summarized by this educator in a ninety page paper-back volume entitled The Need for the Upward Extension of Secondary Education in Ohio published in 1954. Many of these research problems, completed in the 1930's and 1940's, emphasized the survey of felt-interests of the prospective students for specific courses.


¹⁵H. Eikenberry, "The Need for the Upward Extension of Secondary Education in Ohio" (College of Education: The Ohio State University, 1954), 89.
They also surveyed the need of individual communities for trained personnel in specific areas. From this information criteria was created for the establishment of the curriculum. Medsker, in discussing terminal programs, made mention of the use of job analysis as a means of determining the courses of training needed in the curriculum so that students were served.

There has been little written of a negative nature regarding the use of community surveys and/or job analysis as means of establishing terminal curriculum. However, there are indications that these procedures by themselves are not sufficient to determine satisfactory course content. They fail to take into consideration all the aspects of life which influence the post-high school student who may attend the college. Bass came closest to presenting this broader purpose when, as he discussed guidance programs for junior colleges, he stated that the properly functioning guidance program required "first of all, knowledge of the abilities, interests, and environment of a student." Bass tended to emphasize more than just the felt-interests of the group or the expressed needs of the community. This study seeks to broaden the base of community junior college curricula development.

The third period of growth for the two-year institution, as presented by Thornton, began in the middle 1940's and continues.

16Medsker, op. cit., pp. 53-55.

today. During the present period adult education and community services are becoming a part of the junior college curricula and guidance services are assuming a prominent role in the functions of this institution. It is at this point that Thornton's statement that "the concept of the community junior college has been fully developed. . ."\(^{18}\) takes on meaning. The purposes which are necessary to make this institution functional have now been established. The objective of the community junior college is to serve the total population of the area in which it exists. If this is accepted, there remains the need to develop broad criteria that will serve to guide the development of curricula if this institution is to achieve this objective.

As before, the addition of new functions to the curricula of the community junior college has created an additional demand for criteria to guide the construction of the new programs. Since these programs are new there seems to be little written or researched in terms of the establishment of needed criteria. Thornton, however, does state that "the community college must take the lead also in studies of the community to analyze needs for adult education which might not otherwise be made known."\(^{19}\) This would indicate that the establishment of courses and procedures for this portion of the curricula will follow much the same methods as those of the previous

\(^{18}\)Thornton, op. cit., p. 54.

\(^{19}\)Thornton, op. cit., p. 67.
stages of development. They would be based on community surveys, analysis, and determination of individual interests.

This presentation of the growth and development of the junior college reveals the accompanying development of existing criteria for curricula construction. In summary, these criteria have been determined by (1) surveys to ascertain what courses higher institutions will require of transfer students; (2) surveys of community needs; (3) job analysis within the community to be served; (4) surveys of the prospective student. One or all of these may be used depending on the area or areas emphasized in a given two-year college. But as pointed out earlier in this proposal, this new institution with its opportunity to meet the needs of the youth it serves still tends to rely heavily on duplicating the curricula and procedures of those institutions of higher learning which most closely affect its transfer program.

If this new community junior college is to fulfill its promise of being a democratic educational institution in our public school system, then there is a need for further development of criteria for curricula construction. There is a need to move beyond the ideas of the duplication of curriculum already in existence and develop curricula that uniquely meets the social and personal needs of the community to be served. The survey and analysis methods already in use will serve to set criteria to develop the curriculum that will meet the societal needs. However, there is still a definite lack of procedures by which a curriculum, directed toward helping students with their total personal needs, can be developed.
As pointed out in the review the sole means of involving personal needs in the construction of curricula to date would appear to be the use of a survey of stated interests. Lacking is consideration for those biological, sociological, and psychological aspects of living which serve to hinder or enhance the total development of an individual.

This may be a serious omission from the practices now used to construct curricula for the community junior college. If this is to be truly a community junior college then it will need to provide for all areas of growth and development that are pertinent to the age group it serves. Havighurst, in discussing developmental tasks of early adulthood, makes the following statements regarding this problem.

Of all the periods of life, early adulthood is the fullest of teachable moments and the emptiest of efforts to teach. It is a time of special sensitivity and unusual readiness of the person to learn. Early adulthood, the period from eighteen to thirty, usually contains marriage, the first pregnancy, the first serious full-time job, the first illnesses of the children, the first experiences of furnishing or buying or building a house, and the first venturing of the child off to school. If ever people are motivated to learn and to learn quickly, it is at times such as these.

Yet the amount of educative effort expended by society on people is probably less during this period than during any other period except old age ... if we make the proper exception of college and university education, which are usually an extension of the schools, and seldom deal with the developmental tasks and problems of young adults. It makes one wonder what education is about, after all, if it is not directly concerned with helping the individual to meet such problems.

In 1948 Havighurst brought forth his concept of the developmental

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tasks involving several stages of biological, sociological, psychological growth and development for various age groups and then drew implications from these for education. He felt that there were two reasons why these tasks, once identified, would be useful to educators. "First, it helps in discovering and stating the purposes of education in the schools... The second use of the concept is in the timing of educational efforts." There had been recognition given to this approach before Havighurst's presentation. The Progressive Education Association, when they sponsored the eight-year study, recognized the need to develop curricula that included opportunity for students to develop in those areas. Havighurst later referred to the areas as developmental tasks. It was not, however, until after Havighurst's concept was placed before educators that the tasks were given more serious consideration as possible clues for curricula construction. Unfortunately for the community junior college any consideration given this concept seems to have been restricted to the elementary area. Little concern has been shown at the secondary level, and, according to a review of the literature, no consideration given in the construction of the curricula of the community junior college.

Britton and Winans have presented a similar approach for young adulthood. They have given consideration to the four areas of mental, physical, social, and moral-spiritual development but in

21 Ibid., p. 5.
doing so tend to question how useful these areas would be as guides to curricula construction. They state that "as youth approach young adulthood there are few dependable generalizations that can be made about their characteristics . . . because of contact with many environmental factors there is an enormous range in interests, goals, activities, and achievements . . . these young people vary widely in degree of independence and responsibility . . . many of these youth are still striving for a sense of adequacy in their everyday social relationships." Here are presentations of two different views concerning the reliability of bio-socio-psychological growth characteristics as a basis for criteria to guide the construction of curricula at the junior college level. Havighurst has indicated a faith in such characteristics as guides while Britton and Winans indicate that, although the characteristics exist, they are unstable and do not permit generalizations that could serve directly to guide curricula construction.

Throughout the preceding pages the need is indicated for:

(1) the broadening or revision of criteria for construction of curricula at the community junior college level; (2) the identification of criteria consistent with the democratic possibilities of the community junior college and the diversity of its student body; (3) further exploration and research to ascertain whether bio-socio-psychological characteristics exist at this age level from which

generalizations can be drawn on which to base criteria for curricula construction.

A review of the literature reveals no attempt to establish new or extended criteria, based on such characteristics for the total community college curricula. Also, it does not reveal any attempt to establish or disprove bio-socio-psychological characteristics as a source of criteria for curricula development, therefore the following questions seem to be relevant.

(1) What research has been completed that would establish or disprove the existence of reliable bio-socio-psychological characteristics of the prospective junior college students?

(2) If these characteristics exist, what generalizations can be drawn that would serve as a basis for criteria for curricula construction at the community junior college level?

(3) To what degree are these various criteria deemed important by authorities in the community college area?

(4) To what degree are the use of these criteria evident in existing curricula?

To answer these questions it would seem desirable to undertake a survey and analysis of: (1) existing research in all areas pertaining to the characteristics in question; and (2) authorities in the field.

**Significance of the Study**

1. It will contribute to the research in the development of standards for curricula construction in the community junior college and encourage the construction of curricula that will foster the democratic possibilities of this institution.

2. It will identify the existence and use of bio-socio-
psychological characteristics as possible bases for curricula criteria.

3. It will enable this writer to understand better this age group as he prepares to work with them in later years.

Definitions

1. Community junior college . . . that two-year post high school institution that aims to meet the needs of the entire community in which it is located, including preparation for institutions of higher learning, general education for those who are not going beyond graduation from the junior college, vocational training for particular occupations usually designated as semi-professional vocations, and short courses for adults with special interests and needs.23

2. Curricula . . . all those activities provided for the students which contribute to their learning and are under the direct control of the institution.

3. Standard . . . a goal or objective of education expressed philosophically as an ideal of excellence.

4. Criterion . . . a standard, norm, judgment selected as a basis for qualitative comparison.

5. Democratic institution . . . that institution which provides for all, with a need, the opportunity to study and work in an atmosphere of cooperation, inquiry, and reflective thought. That institution which encourages its students to use the scientific approach in problem solving.

Related Studies

A review of the literature discloses very limited attention given to the identification of characteristics of the age group

23Medsker, op. cit., p. 43.
involved in this research. Hagelberg\textsuperscript{24} studied students enrolled in extension credit courses at Northwestern Michigan in an attempt to define their goals and characteristics. Bushnell\textsuperscript{25} attempted, through a review of the Vassar Study, Jacob's writings on values, and other major works pertinent to college students, to determine the changing characteristics of the undergraduates and the meaning of these changes for a program of general education. Grossbeck\textsuperscript{26} designed his study to ascertain the characteristics and academic progress of students who began their liberal arts studies in Michigan Community Colleges and continued them in Colleges of Literature, Science, and the Arts of the University of Michigan. However, none of these three studies succeed in identifying the complete range of characteristics proposed in this research nor do they involve the eighteen to twenty-two-year-olds as a total group. All three worked with selected groups without age as a stated factor of comparison.


\textsuperscript{25}John Bushnell, "What are the Changing Characteristics of the Undergraduate and What Do These Changes Mean for Programs of General Education?", \textit{Current Issues in Higher Education} (Association for Higher Education. A Department of National Education Association: 1959), 137-142.

Coinciding with the work of this investigator, Medsker reports an undertaking by the Center for the Study of Higher Education of California. This group, through a longitudinal study of some ten-thousand 1959 high school graduates selected from midwestern and western communities, is attempting to determine the major pursuits of high school graduates and to gain information concerning characteristics of this group. Medsker states in the same source that "information on the characteristics of young people who enter college and of their performance there is essential if educational programs are to be planned realistically." It would also seem that Project Talent, a recently developed study of thousands of high school seniors, might add to the understanding of the age group involved in this paper. However, neither the study reported by Medsker nor Project Talent have advanced far enough to provide sufficient amounts of information to answer the questions being considered in this research.

Limitations of Study

1. The survey of research will be limited to that completed since 1950 with the exception of major significant studies.

2. The survey of research will be limited to that pertaining to the 18 to 22 year old age group. Medsker reports that this age group constitutes better than

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51 per cent of the community junior college full time student body.

3. Authorities to be contacted in the survey will be limited to a group selected from those active in community junior college work at the present time and to those who have demonstrated a concern for the curricula of this institution through their writings.

4. Bulletins to be analyzed will be selected from those institutions that profess to present the broad curricula and services necessary to establish the institution as a community junior college as defined in this proposal.

5. Where data have been treated statistically they will be used as primary bases for criteria. Other studies, not statistically treated, will be used as supporting data.

6. The research of research will be limited to those areas pertaining to biological, sociological, and psychological growth.

7. The analysis of bulletins will be limited by the possibility that many institutions may well not put into practice what they state in their brochures or do not indicate what criteria are being met.

Procedures and Sources of Data

This investigator proposes to collect, and assimilate, the data necessary to prove or disprove the first proposition through the following procedure.

1. A thorough review of the Psychological Abstracts, Sociological Abstracts, and Biological Abstracts will be made to identify and compile, from these sources, a list of research that would seem to be relevant to the problem at hand. This review will begin with the 1951 volumes of each group of abstracts and continue through the most recent publication at the time of writing.

2. A thorough review of the Children's Bureau Clearinghouse publication entitled Research Relating to Children will be made to determine past and present research that would appear to include the age group involved in this
paper. After selecting such work from this source, this investigator will direct personal correspondence to those persons in charge of such research to ascertain if they have identified material useful to this paper and if this material is available for use. Material gathered will be listed for review to determine relationship to problems involved in this paper.

3. A review of the bibliographies of a select group of books and periodical articles, relating to human development, will be made to further supplement the data.

4. In addition to the previous steps to be undertaken by this investigator to compile data, the Western Reserve University Center for Documentation and Communication Research, Cleveland, Ohio 29 will be requested to carry out an electronic search of material through their pilot information service. Although this process for research is in the experimental stage, the additional coverage will add thoroughness to the compilation of data by this investigator.

After the list of relevant research has been completed through the preceding four steps, this investigator will then review each piece of research to gather from it the following information:

(1) name and area of research; (2) title and source of the presentation of the data; (3) the propositions or hypotheses being tested; (4) the group researched and the instruments used; (5) the statistical significance of the research; and (6) the findings and the conclusions reached.

To expedite the categorizing of the data gathered, this investigator will review several books on human development - books in which the authors discuss development beyond the adolescent stage.

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29 The Process used to locate information at the Center for Documentation and Communication Research is described in detail in The Library of Tomorrow—Today, the final report for the first year of this project for the U. S. Office of Education. It is available from the Center for $5.00.
From these books, there will be developed a series of questions to be used as guides in presenting the data in Chapter Two. The questions for this purpose will be selected on the basis of the emphasis given them by the various authors and on the assumption that they will represent a more specific guide to identify and present the bio-socio-psychological characteristics sought in this study.

To undertake the collection of data to support or disprove the second proposition the following steps will be followed after the determination of criteria has been made.

1. A list of authorities in the community junior college area will be compiled. Representation on this list will be on the basis of (a) recent writings in the area of community junior college curricula; and (b) position as head administrator or dean of curriculum of an institution fitting the definition previously given in this paper.

2. These authorities will then be sent a simple rating opinionnaire, developed on the findings in the first set of procedures, to ascertain (a) to what degree they feel the criteria are important for developing community junior college curricula; and (b) to what degree they believe the various criteria are generally being met in present day community junior colleges.

3. The data gathered will then be tabulated and presented in Chapter Three. It will be used to formulate and support recommendations to be made in Chapter Five.
PREVIEW OF SUCCEEDING CHAPTERS

This investigator will present in Chapter Two, the following information: (1) an individual summary of research pertaining to the identification of characteristics for each of the three categories, biological, sociological, and psychological; (2) a series of generalizations based on the data available for each of the three categories; (3) a series of hypotheses, based on the need for additional research, to serve as a possible guide for such research; (4) a summary of the patterns of post-adolescent characteristics; (5) finally, a summary of curricula criteria based on these patterns of characteristics.

Chapter Three will contain the following material: (1) reference to the authorities selected for contact by opinionnaire and a review of the means used to select these persons; (2) a review of the method by which the opinionnaire was developed; (3) a charting of the data obtained from opinionnaires returned by the authorities; (4) finally, a set of conclusions drawn from the data.

Chapter Four will present a summary of the conclusions, as developed by this investigator, and drawn from the two phases of the problem. Chapter Five will present the recommendations of standards for community junior college curricula development based on the findings of this work.
CHAPTER II

SUMMARIZATION OF RESEARCH

This chapter presents a summary of the research, reviewed by this investigator, pertaining to the identification of characteristics for each of three categories, biological, sociological, and psychological. Each piece of research for a given area is presented as it relates to the various questions developed from this investigator's review of several books on human development. The summarization for each is followed by a set of generalizations based on the research available and by a presentation of the patterns of post-adolescent characteristics that have been tentatively identified. Finally, a summary of curricula criteria, developed from these patterns, is presented at the end of each category.

Patterns of Biological Characteristics

A thorough review of research undertaken in the areas of biological development discloses very little of significance in the last decade. Prior to 1950 there was considerable data gathered through major research. A portion of this material has been reviewed in Zubek and Solberg.\(^{30}\) This investigator will refer to their book on human development as the major source of data relevant to the

questions pertaining to biological characteristics. This is done on the assumption that they, as authorities, have selected and presented the most significant research.

One of the major questions concerning biological characteristics, as determined from authoritative sources, asks "What are the patterns of physical growth which are prevalent during the age eighteen and twenty-two?" Zubek and Solberg have presented the only data relevant to this question in their aforementioned book and it is presented here as data pertinent to this question. Zubek and Solberg report research by Pressey, Janney, and Kuhlen (1939)\(^{31}\) which indicates, through development of height and weight curves, that humans reach a maximum height in the late teens but will continue to gain weight until the middle fifties. Todd (1942)\(^{32}\) observed that in both males and females the skeletal muscles increase in bulk and density until age fifty, and Meredith (1935)\(^{33}\) and Metheny (1941)\(^{34}\) both reported that grip strength continues to increase beyond the age of twenty. Zubek and Solberg also quote results of research by Fisher and Birren (1947)\(^{35}\) which indicate that muscular strength increases up to the late twenties.

Greulich (1944)\(^{36}\) undertook research which indicates that the human body does not acquire its adulthood level of bones (206) until beyond the age of seventeen for girls and nineteen for boys. The

\(^{31}\text{Ibid.}, \text{pp. 108-110.}\)
\(^{32}\text{Ibid.}, \text{pp. 125-127.}\)
\(^{33}\text{Ibid.}\)
\(^{34}\text{Ibid.}\)
\(^{35}\text{Ibid.}\)
\(^{36}\text{Ibid.}, \text{p. 120.}\)
fusion of childhood bones takes place for several years beyond these ages. Ingalls (1931), working with one hundred males from nineteen to seventy-eight years of age, found that the peak of bone weight occurred around age thirty-five when the skeleton is in its prime. Anderson and Goodenough (1930) report that final permanent teeth arrive between the ages of seventeen and thirty-five.

Rossle and Roulet (1932), Timme (1938), and Carlson (1949) all developed research which indicates that the pituitary gland does not attain its maximum size and weight until age thirty-five. Hamburger (1948) reported a study of the secretion of the hormones androgen and estrogen. He found that secretion of these hormones, both of which aid in the development of sex characteristics, does not reach its peak until well into the twenties. Harrison, Jackson, Paterson, and Seammon (1930) reported their findings which indicate that endocrine glands tend to reach their maximum weight between ages fifteen and twenty. The same researchers found that the thyroid gland attains its maximum weight between ages fifteen and twenty and that the parathyroid gland reaches its maximum size in the late twenties for the male and not until fifty for females.

Gibbs and Gibbs (1941) determined the age range of the electrical activity of the human brain. They found that the waves

\[37\text{Ibid.}\]
\[38\text{Ibid.}\]
\[39\text{Ibid., pp. 74-94.}\]
\[40\text{Ibid.}\]
\[41\text{Ibid.}\]
\[42\text{Ibid., pp. 58-69.}\]
which control muscle reflexes reach the adult stage between age nineteen and twenty. Others place the age of maturity in this respect at anywhere between nineteen and thirty years. Bernhard and Skoglund (1939) and Steward (1922)\(^{43}\) report that although adult breathing rate is reached near ten years of age, the full adult capacity of the lungs is not reached until the seventeenth year for girls and several years later for boys.

The authors, Zubek and Solberg,\(^{44}\) review numerous pieces of research on the development of various parts of the nervous system. Although most of the research reported indicates deterioration in later years there is a consistency in all research reported indicating that peak growth takes place at approximately twenty years of age. Through their review of other research, these authors indicate that other organs, including the heart, reach adult proportions by the late teens.

This entire body of research fails to comply with the limitations, provided for within this study, that only data from the last ten years will be used. However, this investigator's review of research disclosed nothing significant during the last decade; therefore it became necessary to make use of data prior to 1950. The data would seem to indicate that, in general, those persons in the age group eighteen to twenty-two are still in a period of physical growth and, in areas where growth has ceased, they are in

\(^{43}\)Ibid.

\(^{44}\)Ibid.
a period of entrance into adult patterns of physical development. If this is so, as the data indicate, then it would seem advisable that this group be provided with continued opportunity to study, discuss, understand and develop the physical aspects of their life.

A second question, closely related to patterns of physical development, asks "What are the patterns of development of the senses of the eighteen to twenty-two-year-old?" A review of research over the last decade discloses nothing of significance applicable to this question. This investigator found it necessary, once more, to draw data from the work by Zubek and Solberg.

Ferree (1934)\textsuperscript{45} found that the eyes of children between ages nine and fifteen are less sensitive in the dark than are those of post-adolescents. Similarly, Hunt (1941)\textsuperscript{46} noted that the eyes of children between ages twelve and nineteen are less sensitive than are those of adult subjects. A combination of these data would seem to indicate that sensitivity of the eye in the dark is poor in children, improves until late adolescence, remains fairly stationary up to middle age, and declines after age fifty.

Galton (1884) made some seventeen measurements which included visual acuity, using as subjects over 7,000 visitors to his laboratory. These visitors ranged in age from six to eighty years. Ruger and Stoessiger (1927)\textsuperscript{47} undertook the task of developing a statistical

\textsuperscript{45}Ibid., p. 179.
\textsuperscript{46}Ibid.
\textsuperscript{47}Ibid., pp. 182-183.
analysis of Galton's data. The results indicate that visual acuity is poor in the young, increases rapidly until a maximum is reached around age twenty, and declines slightly between ages twenty and forty-five and more rapidly thereafter. Chapanis (1950)\textsuperscript{48} did research that tends to verify Galton's findings.

Tiffin (1946)\textsuperscript{49} has contributed the only available data on age changes in depth perception in later years. He studied 8,142 industrial workers between ages twenty and seventy years. According to his findings, the ability to discriminate distances increases until age thirty-five, remains constant until age fifty, and then declines rapidly. In the studies of perception of incomplete figures, Cameron (1946)\textsuperscript{50} presented ten incomplete pictures of such common objects as ships and aircraft to a varied group of 100 subjects, aged sixteen to twenty-three, and to 30 professional people, aged thirty-five to fifty-six years. The younger subjects were able to identify the objects much more quickly than were older subjects.

Zubek and Solberg\textsuperscript{51} report that it has been established that the ability to match colors improves from age two to seventeen. Smith (1943)\textsuperscript{52} has provided some data for later years. A group of 199 subjects, ranging in age from five to eighty-seven years, was required to match colors on a basis of hue, saturation, and brightness.

\textsuperscript{48}Ibid. \hfill \textsuperscript{51}Ibid.
\textsuperscript{49}Ibid., pp. 184-185. \hfill \textsuperscript{52}Ibid.
\textsuperscript{50}Ibid.
The ability apparently increases rapidly from age five through adolescence, reaching a maximum around age twenty-five. No significant changes occur from early adulthood until age sixty-five, at which time the ability begins to decline.

In answer to the question concerning the developmental stages of the senses, data are incomplete. In general, it can be said that the sense of sight is still in the developmental stage or at its peak efficiency between ages eighteen and twenty-two. It would seem that this age group should be provided with facilities to continually check, understand, and develop their sense of sight. There is a paucity of data involving the developmental patterns of the sense of sound, taste, touch, and smell. This is unfortunate, especially in the case of the sense of sound. More research needs to be undertaken to determine the developmental stage of the various senses.

The third question, thought pertinent by authoritative sources, concerns itself with "What is the pattern of motor skill development found in the eighteen to twenty-two-year-old?" Zubek and Solberg state that "most of the evidence to date points to an increase in efficiency of motor performance throughout childhood, adolescence, and early adulthood."53 Lehman (1951)54 researched the annuals of sports to find the year that seemed to be most productive for the greatest number of players in a given sport. He found that sharp

53Ibid., p. 155.

increase in proficiency occurred at age twenty for those involved in such sports as baseball, golf, and football. Increases in proficiency occurred for those involved in boxing and tennis at the approximate age of sixteen. Those involved in bowling and varying use of firearms began an increase in proficiency at the approximate age of eighteen. This latter finding also includes both auto racers and the rural competition of corn-husking.

Bachman (1961) attempted to investigate the influence of age and sex on the amount and rate of motor learning. He tested 320 subjects, ranging in age from six to twenty-six and divided into twenty groups of eight boys and eight girls, on the pivotboard and the vertical ladder. Success in both tasks required learning to coordinate large muscle movements. Bachman found that the amount of improvement caused by practice did not change significantly between ages six and twelve in either task. He found, also, that variance analysis showed that in both tasks there is a significant upward trend for both sexes between ages twelve and seventeen and that this is followed by a decline in the effect of practice by age nineteen and no systematic change thereafter. Bachman concluded that motor learning progresses in accordance with an exponential law of diminishing effectiveness of practice and that the rate of learning large muscle skills is independent of age and sex over the range six to twenty-six years. He further concluded that there are no sex

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differences in motor learning ability over the same age range.

Rupiper (1961)\textsuperscript{56} sought to determine the number of failures on the Kraus-Weber Tests for physical fitness that were evident among college male students enrolled in physical education classes and to compare the mean differences in age, height, and weight between pass and fail groups. The same instructor gave sub-tests in basketball, soccer, beginning golf, tumbling, badminton, handball, tennis, volleyball, and beginning swimming to 119 undergraduates at the University of Oklahoma. Rupiper determined that the mean age difference between the pass and fail groups is statistically significant beyond the .05 level of confidence. The pass group was 12.58 months older than the fail group. There is no indication that height or weight is a significant factor in the pass or fail groups and the majority of failures, sixty per cent, are attributed to the test of flexibility.

These three projects do not represent sufficient research to substantiate definitely any generalization concerning the eighteen to twenty-two age group. Rupiper's study involved only college enrollees and had no age limitation. Lehman's study can be said to represent only those proficient enough to participate as professionals in the world of sports, and Bachman's study tends to present negative findings as related to increased proficiency in motor skills. However, from this limited data a tentative generalization can be made

\textsuperscript{56}Omer J. Rupiper, "Status of College Male Students on Kraus-Weber Tests," \textit{Research Quarterly}, XXXII, No. 3 (October, 1961), 419.
that humans in the age range of eighteen to twenty-two are capable of changes in motor skill and that there are indications that this may well be their period of peak proficiency.

If this be true, then this group should be provided with the opportunity to understand and further improve their proficiency in all areas of motor skill development.

The fourth and fifth questions, relating to biological characteristics discussed by authorities, concerned the following patterns. "What is the pattern of the role of physical appearance for the eighteen to twenty-two-year-old group?" and "What are the patterns of physiological tensions and discomforts of this age group?" This investigator's review of research failed to disclose any research, within the past decade, which could be used to substantiate any generalizations involving these two areas. Authoritative sources speak of the two questions in theoretical terms without significant research to support the ideas put forth.

There would seem to be a need for interested persons to develop research to gather data concerning both the role of physical appearance and that of physiological tensions and discomforts in the life of the eighteen to twenty-two-year-old. This investigator would hypothesize that

1. Concern for physical appearance, at the eighteen to twenty-two year age level, is a major factor in choice of occupation, heterosexual relationships, social contacts, and one's positive or negative concept of himself.

2. Concern for physical appearance will appear earlier in the female than in the male and manifest itself in different ways.
3. Physiological tensions and discomforts, though not overtly expressed, nevertheless are major covert factors in the determination of social participation, level of mental efficiency reached, and general self-perception of this age group.

The roles played by these two areas might well be continuously changing; and therefore would need to be constantly checked.

The last area of major concern, as determined by this investigator's review of authoritative writings, concentrates on the question, "What are the specific health problems of the eighteen to twenty-two-year-old?" Bernard states that "good health during the years of youth is the rule. Although the death rates are higher than in adolescence the proportion of hospitalization is smaller." Bernard also presents the following information. Motor vehicles account for 63 per cent of deaths of boys and 26.6 per cent of deaths of girls in the eighteen to nineteen age bracket. A steady decrease in the age of marriage unfortunately is linked to death of girls due to childbirth, since about one-fourth of mothers having their first child are less than twenty years of age which is some years below the optimum age for childbearing. While research has resulted in steady decrease over the years in death from diseases, death from accidents and childbirth have been increasing. The author concludes that "concern about health and welfare of youth should

57 Harold W. Bernard, Human Development in Western Culture (Boston: Allyn and Bacon, Inc., 1962), 278.

58 Ibid., pp. 278-279.
focus on educational approaches to safety practices and discussions of the phenomenon of early marriages.\textsuperscript{59}

Summerskill and Darling (1961)\textsuperscript{60} attempted to determine sex differences in performances demonstrated by students in their classes. The study was based on the individual records of the entire class of 1818 freshmen who entered Cornell University in September of 1948 for a regular four-to-five-year undergraduate program. They found from all available data over the four-year period until June 1952 that there was a significant difference at the .05 level of confidence in the health records of the two sexes in favor of the men. Hathaway, Milone, and White (1960),\textsuperscript{61} while attempting to determine the efficiency of several forms of health survey in bringing health problems to the attention of the student health service, collected the following data pertinent to health problems of a college age group. The data were collected from entering freshmen candidates for freshman football, and through routine examinations at the health clinic. The final analysis, limited to chronic health problems, was based on findings from 1,000 students from two successive freshman classes.

Chronic problems found most common fell into four groups:

\textsuperscript{59}Ibid., p. 279.

\textsuperscript{60}John Summerskill and C. Douglas Darling, "Sex Differences in Adjustment to College," \textit{Journal of Educational Psychology}, XLIV (1955), 355-361.

\textsuperscript{61}J. Hathaway, H. Milone, and C. White, "Health Problems and Health Survey of College Students," \textit{American College Health Association Journal}, IX (February, 1961), 211-217.
(1) eye, ear, nose, and throat, most of which was defective vision, corrected; (2) traumatic bone and joint, most in conjunction with sports; (3) allergies, of which only a fraction needed diagnostic consideration; (4) psychobiological adjustment most of which required further evaluation, and about two-thirds needed some degree of therapeutic advice. The authors concluded that the incidence of organic disease is very low but that data confirms the finding that adjustment problems and functional difficulties have a high prevalence and represent an important health problem in the college group.

Hanson and Amidon (1961), reporting in the same article, found that, of 953 university freshmen, there was an overall incidence of 16.5 per cent involving cardiac murmur in the group.

This represents the extent of published research concerning health problems, reviewed by this investigator. With the exception of data presented from the book on human development by Bernard, the data have been the result of research with a select group, those who have enrolled in college. This does not permit any substantial generalization concerning the total eighteen to twenty-two-year-old population. However, it is indicated that accidents are a major health problem of this age group and that, on the basis of data from the select groups, mental health problems are of major concern for the eighteen to twenty-two-year-old. This suggests the need for this group to be provided with opportunities to study, evaluate, and discuss their role in safety practices, both at home and in society.

62 Ibid.
They should be provided with a source to which they may turn to receive help in finding answers to adjustment problems which influence their mental welfare.

This investigator would hypothesize that a study of the total group of eighteen to twenty-two-year-olds would show much the same pattern of health problems as that demonstrated by the limited research presented here.

In summary, there is a lack of sufficient research to substantiate any of the generalizations drawn here with the exception, perhaps, of the first one involving the patterns of physical growth. However, this investigator believes that enough data exist to permit the development of tentative generalizations summarized as follows:

1. In general, those persons in the age group eighteen to twenty-two-years are still in a period of physical growth or, in areas where growth has ceased, they are in a period of initial entrance into a period of adult patterns of physical characteristics.

2. Though data are lacking on most of the physical senses, it can be tentatively generalized that sight is still in a development stage or at its peak proficiency during the ages eighteen to twenty-two.

3. It can be tentatively generalized that persons in the age range eighteen to twenty-two are capable of changes in motor skills and that there are indications that this may well be their period of top proficiency.

4. It is indicated that accident and mental health problems
are major problems of the age group eighteen to twenty-two and that disease and illness are of minor importance.

These generalizations, in turn, suggest the following standards to be used as guides for the selection and presentation of opportunities for this age group to help them meet and solve problems arising from biological needs.

1. Youth should be provided with continued opportunity to study, understand, and develop their patterns of physical growth.
2. Youth should be provided with facilities to continuously check, understand, and develop their sense of sight.
3. Youth should be provided with the opportunity to understand and further improve their proficiency in the area of motor skill development.
4. Youth should be provided with opportunities to study, evaluate, and understand their role in safety practices, both as it relates to themselves and to society.
5. Youth should be provided with a source to which they may go to receive help in finding answers to adjustment problems which influence their mental health.

Patterns of Sociological Characteristics

A review of research pertinent to the identification of sociological characteristics discloses more data available in this area than in the preceding area. However, little of the research corresponds to the limitations of statistical significance or age range imposed by this problem. The data presented have been selected
on the basis of being the best available upon which generalizations concerning youth can be constructed.

A question, receiving major emphasis by authorities writing of human development, asks "What are the patterns of youth-parent relationships of the eighteen to twenty-two-year-old group?" Lloyd (1952) designed a study to determine the extent to which the youths involved were experiencing conflicts or irritations with their parents, to see whether patterns emerged, and to determine whether these conflict patterns were similar to those of other periods. Using a combination of a questionnaire and a check list, supplemented by informal interviews and discussions, the author collected data from 1,000 students on the campus of five colleges in South Carolina.

Lloyd found that the data seemed to indicate that the youths involved were dependent to a large extent on their parents for the planning of their social life. The findings also revealed a relatively low amount of parent-youth conflict over the school's role in modifying student behavior. In addition, Lloyd's data indicated that 47.8 per cent of the subjects were convinced that they were "slightly" or "definitely" mistreated while approximately the same percentage felt that they received a fair share of parental attention. The author concluded that areas of least conflict were social planning and home government and those of greatest conflict involved family

status and parental decision. Lloyd felt that his findings indicated an explosive situation, since almost 50 per cent of the subjects indicated conflict between peer group relationships as compared with parental demand and the "slighting" of the youth by their parents.

Yuthas (1955) investigated student mortality in the engineering schools of Purdue. After questioning 225 male subjects who voluntarily withdrew between September 1950 and September 1952, the author concluded that one of the major factors involved with dropout was the fact that this group maintained their social ties with the home. Wilson (1953) focused on the question of whether college girls conformed to the standards of their parents and the reasons of conformity or non-conformity. The author selected 100 subjects, average age eighteen, from an eastern university. Data were collected from written case studies prepared by the students and supplemented by interviews. Twelve areas of parent-daughter relationships were obtained including dating, mate selection, girl friend, vocational choice, religion, earning money, spending money, drinking, smoking, visits to relatives, household duties, and choice of college.

Wilson's data indicate that girls are relative conformists. They accept parent standards in ten out of twelve areas. Most prominent conformity is in the areas of drinking and choice of college

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65 Margaret Wilson, "Do College Girls Conform to the Standards of Their Parents?", *Marriage and Family Living*, XV (1953), 207-208.
which seems to have as its basis objective rationality of the daughter, fear of an authoritarian parent, one-fifth of the students indicated such a parent, immaturity and dependency on the parents. Non-conformity is indicated, to the greatest degree, in the areas of indifference to parents' standards, evasion of standards, and attempts to change the standards by reasoning with parents.

Beier and Ratzeburg (1948), Groesbeck (1954), Berdie (1953), and Campbell and Horrocks (1961), all have undertaken research to determine the influence of parent and home on educational choice and activities of the college bound youth. However, the data collected in these works is not pertinent to the question of identification of patterns of characteristics.

The data presented here does not permit this investigator to draw a positive generalization concerning youth-parent relationships of the eighteen to twenty-two-year-old group. It was collected from "selected" subjects, involves subjects whose ages go beyond the range limit of this problem, and the data were not statistically treated. However, the following tentative generalization, based on the available data, is made concerning that group of youth who attend college.

Those who attend college tend to experience a continuing strong tie with their parents. This is especially true concerning standards which govern their social life even though youth indicate that they experience considerable conflict with parents involving the changing or relaxing of these standards. This indicates a need to provide students with an opportunity to study, discuss, and
understand their growing desire for independence and to provide them with opportunities to become involved in a social life which will permit them to develop beyond the patterns formerly set as an adolescent member of a family.

A second question, emphasized by the authorities, is very closely related to that of youth-parent patterns. "What are the patterns of peer-group relationships experienced by the eighteen to twenty-two-year-old?" Bernard, in discussing human development as it occurs in our western culture, theorized that perhaps one of the major manifestations of growing independence is seen in the decline of dependence on the peer group. Friendship tends to be within smaller groups and there is much less sex exclusion than was typical during the gang years. Moreover, these friendships are likely to be based on similarity of interests, intelligence, and education than were those at an earlier age when propinquity and accessibility were determining factors. 

Bernard adds that the pace of social development during youth is influenced more by one's socio-economic status than it was during earlier phases... There is an increase in social discrimination which results in the individual's tendency to avoid those whom he considers inferior because of morals, education, religion, or socio-economic status. The overt manifestation of this tendency quickly wanes as his contacts expand.

Research tends to lend support to certain portions of the preceding quotes from Bernard.

66 Bernard, op. cit., p. 281.
67 Ibid., p. 282.
Dilley (1957)\textsuperscript{68} developed a study to gain new insight into the personal values which were held by college students who entered into the teacher education program at Ohio University. A forced-choice, paired comparison scale was given to 356 subjects; 266 enrolled in undergraduate education courses and 90 enrolled in engineering orientation courses. The author found, pertinent to the question of peer-group relationships, that these young people demonstrated a hunger for companionship. This was indicated by the fact that subjects in both groups studied ranked solitude at the bottom of list of values. Because of the high positive rank correlation of .85 found to exist between the two groups, Dilley concluded that this personal value, in addition to all others involved, was characteristic of college youth in general regardless of professional choice.

Kidd (1951)\textsuperscript{69} attempted a study, based on the proposition that a high degree of acceptability to one's peer is educationally desirable. He had some success in identifying and analyzing a few factors which were significantly associated with peer relationship involving a group of 96 male subjects living in a residence hall at Michigan State University. It had been determined that these 96 males had the lowest acceptability status to the others in a group of 639 of which they were a part. The author gave the entire group of men a

\textsuperscript{68}Norman E. Dilley, "Personal Values Held by College Students Who Enter a Teacher Education Program," \textit{Journal of Teacher Education}, VIII (1957), 289-294.

sociometric type questionnaire. The top 102 subjects were then compared with the bottom 96 subjects with regard to various characteristics. Kidd found that rejection, as opposed to acceptability, was significantly related to nationality, class rank, family income, self-perception, tendency to select few others as best friend, little extra-class participation, and low prestige and leadership rating.

Carr (1955) attempted through his study to ascertain the problems of a selected group of superior and inferior college students in each of the eleven areas of the Mooney Problem Check List and to find the relationship between these groups. He further attempted to evolve conclusions to make it possible to work more intelligently with problems of superior and inferior students. The author selected, as subjects, 300 undergraduates from the first semester of 1951-52 at Florida State University. One hundred fifty subjects were in the highest 10 per cent of their class and 150 subjects were in the lowest 10 per cent as determined by their AGE scores and their grade transcripts. Carr found, pertinent to the question involving peer-group relationship, that both groups of subjects were inclined to list more problems in areas of personal and social adjustment than in other areas. Another finding of interest was that inferior students were able to make adjustments in areas involving social activities easier than were superior students.

70James F. Carr, Jr., "The Problem Areas of Selected Group of Students at Florida State University as Indicated by the Mooney Check List," Dissertation Abstracts, XV (1955), 1524-1525.
Bushnell (1959) reviewed and discussed data from the Vassar Study, Jacob's review of value orientation, and other major research pertinent to characteristics of college students. The author concluded the following as a result of his synthesis of these works. Ideally, interpersonal relationships of the college youth are characterized by harmony with a liberal dash of tolerance for those who deviate from the established norms. These norms include traditional moral virtues, conventional religious faith, and a desire to enjoy the material goods of life. The Vassar Study affirmed that the peer group is the fundamental social unit for the vast majority of students and, as the peer group goes, so goes the individual's education. Approval of age-mates is placed above consideration of parent or faculty. Bushnell concluded that a change of campus peer-group relationships might well bring about some welcomed improvement in the educational process on campus.

Medsker (1963), in his paper presented at the annual meeting of the American Educational Research Association, related preliminary findings of the study undertaken by the Center for The Study of Higher Education of California. In attempting to find those forces which bear on all the immediate major pursuits of 10,000 high school graduates from the year 1959 the author found,

\[ \text{Bushnell, op. cit., pp. 137-142.} \]

pertinent to the question of peer-group relationships, that there is
definite evidence of peer-group influence in college attendance. Of
those who actually enrolled in college, a much higher percentage had
reported, the previous spring, that their closest friends were going
to college than had those who did not enter college. This was still
ture when ability was held constant.

Once again, this investigator finds it impossible to develop
any all-inclusive generalization concerning the peer-group relation­
ships of the eighteen to twenty-two-year-old group. The data pre­
presented here represents a rather broad sampling but it not confined
within the age limits set for this problem nor does it represent
the total group since most data were derived from "select" groups.
Also, the lack of statistical treatment is evident in all but the
studies by Dilley and Kidd.

It is possible, however, to tentatively generalize that, on
the basis of the data available, peer-group relationships seem to
be of major importance for and an influence on this age group.
Furthermore, there are indications that a tendency exists for youth
to become more narrow in their selection of friends based on such
factors as nationality, intelligence, self-perception, and socio­
economic status. There would seem to be a need to provide this age
group with the opportunity to work with and understand the great
complexity of make-up involved in the society of which they are a
member and to give them continuous opportunity to study and analyze
their present and future needs involving peer-group relationships.

"What are the patterns of heterosexual relationships and
marriage of the eighteen to twenty-two-year-old?" is discussed widely by those authorities writing of the post-adolescence. Bernard states that "parallel with the small group friendships there is a concern about dating. . . In short, the trend of social development is clearly that of a progression toward social intimacy, which will reach its culmination in marriage and parenthood." He adds further in a quote from Herrocks and Wear (1953) that "boys admire girls who have a sense of humor, and though when younger they liked quiet and inactive girls, at this age they now are more likely to admire the ones who are spontaneous and daring. Girls admire boys who are masculine, well-groomed and dressed, and who have a sense of humor."

Anderson and Hines (1959) undertook to identify the dating values and norms on a small negro college campus and to rank the former in importance and the latter in prevalence. Two hundred students, 83 males and 117 females, of which 108 were nineteen or younger and 92 were twenty or older, were asked to complete a questionnaire and to express their views on any aspect of dating behavior on the campus. Unstructured interviews and pretesting helped construct a questionnaire containing twenty-eight values and twenty-two normative items.

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73 Bernard, op. cit., p. 281.
74 Bernard, op. cit., p. 283.
The authors found that females placed more emphasis on such values as good dressing ability, good mixing ability, and intelligence. Men assigned greater weight to good manners. In general, both sexes gave significantly higher evaluation to internal personality characteristics and skills of social relations than to overt personal characteristics and evidence of individual achievement. Going steady was the most prevalent pattern of dating relationship while dancing, necking, and telephone talk were by far the most popular activity patterns. Favored dating locations included the dormitory recreational room, college library, athletic events, and college canteen. This investigator wishes to point out here the rather narrow dating locations indicated by these students and the implications they have for the restricted movement of the Negro in a southern state. Double dating and restriction to social class were unpopular as was partying, petting, drinking, and interest in night clubs. Coeds emphasized reception room dates more than men while men emphasized athletic events. Sophomores assessed going steady and seasonal dating higher than did other classes while freshmen assessed them lower.

Vail and Staudt (1950) attempted to investigate the attitudes toward dating, mate selection, and marriage of college men and women whose personality adjustment was average or better as determined by psychological measurement. One hundred and eighteen unmarried white

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males between the ages of eighteen and twenty-two, attending an eastern college, were given the Bell Adjustment Inventory and the Student Opinion Survey. Persons scoring unsatisfactorily on the Bell form were eliminated from the problem.

The authors found that the majority of college males and females studied preferred the college date with females showing a significantly greater preference at the .01 level of confidence. The chief reason advanced by both groups for this preference was similarity in interests and background although men tended to make derogatory remarks concerning college women. Both groups emphasized moral character, similarity of interests, and intelligence, in that order, as essential characteristics in a potential mate. Significant differences in the responses of male and female to the least essential characteristics in potential mates occurred in beauty, good looks, and congenial in-laws. The majority of men tended to consider congenial in-laws least essential and several tended to attach more importance to beauty and good looks. The majority of the women tended to minimize the importance of good looks and emphasize congenial in-laws.

Fairly general agreement existed among both sexes in respect to the attitude that a college man should marry a college woman, with a greater percentage of women holding this position. There was an even more significant agreement that college women should marry college men, with the women again placing a greater emphasis on this attitude. The majority of both groups agreed on a one year engagement period although the women preferred six months while men
tended to prefer two years. Females, in general, were far more positive in their opinions while males tended to withhold judgments or qualify their answers.

Staudt (1952)\textsuperscript{77} supplemented the preceding piece of research with additional work with the same groups to gather more data on attitudes toward marriage. He found that the majority of subjects considered twenty-three to twenty-five as the ideal age for men to marry while women should be twenty to twenty-two-years-old. The vast majority were not in favor of entering marriage while either party was still in college with no significant difference between the two groups in this attitude. There was a variety of views as to possible familial opposition to inter-faith marriage with no significant difference between the two groups as to whether these marriages should occur. The majority of males and females felt marriage should be postponed if it meant living with in-laws. There was no significant difference in the two groups. Staudt recommends the need for practical marriage education especially in respect to financial problems since both groups tended to ignore the importance of savings and substantial income as necessary factors for marriage.

Goldsen et al. (1952)\textsuperscript{78} attempted, through a major piece of survey research referred to as the Cornell Values Study, to discover


how college students see the world they live in, what they want from it, and why. The evidence came from a randomly chosen cross section of the male students at eleven universities representing various regions of the country. There was a total of 4,585 subjects, although at times student opinion across the nation was based on 2,975 samples chosen from each of the eleven universities so as to represent a true distribution. The data were gathered through questionnaire, interview, and conversation, with some data treated statistically, while others were presented as the subjects said it. Two hundred fifty women, enrolled at Cornell University, were also used to supplement the data, when the need arose.

The authors found, pertinent to the question of heterosexual relationships and marriage, that approximately 70 per cent of the group felt that dating was an important part of college life. The majority of the group had less than two dates a month while the next largest group had one a week to two per month. When the subjects were asked to list those activities in their life they expected to give them the most satisfaction, family relationships was most often chosen. Sixty-five per cent of the girls wished to marry between the ages of twenty-two and twenty-three, while the model age for men was twenty-four to twenty-five. Men felt that love, interest in having a family, and appearance were the most important attributes for a woman to possess. Women listed love, competency in a profession, and interest in having a family as most important attributes for a man to possess. Both listed previous sex experience and having money at time of marriage as least important. When asked under what
circumstances they felt pre-marital sex relations were justified, approximately 50 per cent of the women felt that it was never justified, while approximately one-fourth felt that it was justified if they were in love at the time. The women who were more career oriented tended to be more liberal minded than did girls who were less career minded. Approximately 40 per cent of the men felt that pre-marital sex relationships were never justified, while approximately one-fourth justified it if they were in love at the time. Again, the more professionally oriented men tended to be most liberal. Eighty-two of the subjects say they expect to have families of two to four children; the women tend to want larger families.

Landis (1963) attempted to determine whether a causal relationship existed between marital happiness of parent and marital happiness of their children. The author hypothesized that a significant difference between children from happy and unhappy marriages exists in their progress in establishing adolescent heterosexual relationships and that a significant difference would exist, between the same two groups, in reported self-confidence and their reported confidence in heterosexual relationships.

Three thousand college students from eleven colleges and universities were asked to rate their parents' marriage happiness on a five-point scale. The results were then tabulated into two groups: (1) happy, (2) unhappy. There were 70 per cent in the first group.
group and 30 per cent in the last group. Landis felt that this group was representative of college population but not general population. He found, pertinent to the question concerning patterns of heterosexual relationships, that those from happy marriages started dating earlier. This was significant at the .01 of confidence for boys and at the .05 level for girls. These from happy marriages dated more frequently in college, had fewer steadies in high school, had fewer engagement understandings and had less doubt about their ability to make a successful marriage. The latter finding was significant at the .01 level of confidence for both boys and girls. In addition to research related to heterosexual relationships, research involving sexual maturity and problems of marriage would seem to lend itself to the identification of patterns in this area.

Zubek and Solberg\(^{80}\) reported findings of the Kinsey report which indicated that sexual activity in the human male is at a maximum during the late teens while women's peak is in the late twenties and early thirties. Dilley (1957)\(^{81}\) in attempting to gain new insight into the personal values which were held by 356 undergraduates at Ohio University, found the desire to marry and to have children to be strong in this group. He concluded that this was more a general characteristic of young people rather than a characteristic of students in any specific profession.

\(^{80}\)Zubek and Solberg, op. cit., p. 92.

\(^{81}\)Dilley, loc. cit.
Fernandez (1953)\textsuperscript{82} attempted to determine the interpretations of marital roles of men and women as understood by certain women college students. The roles investigated were of provider, homemaker, child-guide, and lover. The attempt was made to relate these to the factors of years in college, marital status, race, and religion. A sample of 200 college women from New York University were chosen as subjects. These subjects were shown a film "Who's Boss" and the film was followed by a questionnaire. Additional data was gathered on personal data sheets.

The author found that the data indicated no clean-cut interpretation along developmental or traditional lines but rather a transitional stage existed at this age level with regard to the marital roles for men and women. Fernandez found, furthermore, that freshmen were decidedly more traditional in their interpretations for marital roles studied than were the three upper-class groups. Sophomores were the least traditional, while Juniors were slightly less traditional than the Seniors in their interpretations. White students were more traditional in their interpretations, especially for homemaking and provider roles, than were Negro students and religious groups interpreted the homemaker and provider roles as being more traditional than developmental. Protestants were more traditional than Catholics, and the Jewish were least traditional. The author concluded that these findings had implications for

\textsuperscript{82}Louise S. Fernandez, "An Exploration of Women College Students Interpretation of Marital Roles of Men and Women," \textit{Dissertation Abstracts}, XIII (1953), 515-516.
content, method, and techniques of a family life course. The course should contain a study of marital roles, and instruction and stimulation of students through the use of motion pictures, filmstrips, and recordings.

Langhorne and Secord (1955) studied the variations in traits ascribed to the ideal mate which occurs as a result of variations in regional location, sex, age, and marital status. The authors attempted to answer the following questions: (1) Do persons living in one part of the United States have different conceptions of the ideal mate from those living in another part? (2) Do persons of different ages, sex, or marital status have a somewhat different definition of the ideal mate? Five thousand students in colleges in six states were given questionnaires and the returns were divided according to geographical area of birth and residence. The unmarried males in this group had an age range of eighteen to twenty-two while the unmarried females ranged in age from seventeen to eighteen. The authors found that patterns of marital needs were essentially the same for individuals residing in different regions of the United States, for married and unmarried persons, and for the two extremes of college age, seventeen to twenty-two. Any difference was not statistically significant. The significant findings involved differential patterns in the relative strength of marital needs within a given sex, and comparison of marital needs for the two sexes.

Men and women tended each to agree significantly with their own sex but differed significantly between sexes as to the ideal mate. The various need patterns which were found appeared to be a function of the prevailing sex roles and value orientations of our culture.

Supplementary Reports of the Bureau of Census provide additional data directed particularly at the number of youth married or married and separated in this age group. According to this report 25 per cent of the white males, in the age range eighteen to twenty-two, are married while 23 per cent of the non-white males of this same age are married. Fifty-one per cent of the white females are married in the eighteen to twenty-two age group while 46 per cent of the non-white females are married.

Broken marriages because of divorce, death, and separation is a problem for this age group. Better than 3 percent of the white males of this age range experience broken marriages for one of the reasons previously listed. Approximately 6 per cent of the white females experience broken marriage. Six per cent of the non-white males experience broken marriages while 12 per cent of the non-white females suffer such experience.

Lantagne (1956) developed research to ascertain the items of interest of college students in order to plan, organize, and

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present a course in marriage and parenthood that was significant and meaningful to the students. A sixty item interest inventory was planned, developed, and directed by the author. Two thousand students, 1,000 men and 1,000 women, were given this inventory in eight different California junior colleges. Correlations of .83 and .87 were obtained on retest and .93 on split half.

The author found that there was a high level of pupil interest in marriage and parenthood problems and that these interests developed around common cores for both groups. A high relationship of interest between men and women throughout the study indicated the desirability of developing coeducational classes. Interest in problems of religion in marriage and causes of divorce proved to be high and, it appeared that, differences of religious beliefs of college students did not materially affect the responses to items of interest in marriage and parenthood. Lantagne concluded that similarity of interests of men and women should encourage coeducational classes and that religious differences should not be the basis for segregation of the students. He suggested that Curricula Deans and Administrators should recognize the place of marriage instruction in the general education program and encourage it.

Itkin (1952), Martinson (1956), Yuthas (1955), and Jenson and Clark (1957), all developed research pertaining to the relationship of attainment in college and marriage. The findings from these works do not pertain directly to the question to be answered but might be of interest to readers as they seek to determine the effect of marriage upon academic achievement.
The research performed by Vail and Staudt meets the limitation of age range set for this problem although the data was collected from a "selected" group of subjects. The data from the census report meets both the criterion of age limit and that of general population. However, the data from the remaining projects presented do not permit more than tentative generalizations to be drawn concerning patterns of heterosexual relationships and problems of marriage.

The following generalizations are suggested by the preceding data. The eighteen to twenty-two-year-old is involved in heterosexual relationships with marriage as the ultimate goal. They tend to feel that marriage and family life will offer them the satisfactions they seek in life but the data indicate that they are not consistent, either between sexes or between white and non-white, in their views of the important factors involved in boy-girl relations or marriage.

As suggested by several of the researchers, and supported by the data presented here, it would seem advisable to provide this age group with the opportunity to study, discuss, and acquire the understanding of the various factors involved in their dating and marriage problems. This to be done through coeducational groups without segregation because of religion or race.

The next question, assumed to be of importance as judged by the emphasis of the authorities, involves vocational interests. "What are the general patterns of vocational interests of the
eighteen to twenty-two-year-old age group?" Blum (1961) attempted to find conclusions to the following hypotheses: (1) that the degree of emphasis placed upon security as a factor in vocational choice exists as a trait of some comprehensiveness that can be measured reliably; (2) a positive relationship exists between emphasis upon security in vocational choice and the actual choice of a job situation of a secure type; (3) significant relationships exist between emphasis upon security in vocational choice and normal personality variables as measured by the Edwards Personal Preference Schedule; (4) significant relationships exist between emphasis upon security in a vocational choice and background factors.

A security inventory was developed by Blum, and used with the Edwards Personal Preference Schedule. A twenty-four-item biographical questionnaire was given to obtain data from 513 junior and seniors, all under thirty, enrolled in five institutions of higher learning throughout New York state. Three hundred and forty-six of these subjects met the qualifications of upperclassmen and their information was used.

Blum found that an analysis of results indicate that a desire for security in choosing a job exists as a trait that can be measured reliably and that it is related to the actual job choice. This is significant at the .01 level of confidence. In addition, it appears

that personality background are correlates of the desire for security. This appears significant at the .05 level of confidence.

Powell (1955) hypothesized that the intensity of conflict in the area of vocational outlook would be found to be greater, and would appear at an earlier age in males than in females. He also hypothesized that the vocational outlook would become an area of conflict during early maturity. A total of 488 subjects, 224 males and 224 females, ranging in age from ten to thirty were confronted with a list of stimulus words having emotional association with each adjustment area. The subjects gave verbal responses.

Powell found, pertinent to this question, that the area of vocational outlook reached maximum conflict at late adolescence and continued as an area of conflict through early maturity. Also, he found that, contrary to the hypothesis, conflict appeared earlier for females than for males in the area of vocational outlook. In general, however, the results did not yield significant differences related to the hypotheses.

Singer and Steffre (1956) explored the problem of racial differences in job values and desires by a comparison of the job value choice of Caucasian adolescent males with those of Negro

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adolescent males. The sample was composed of 290 male high school seniors seventeen to eighteen years of age. The subjects were from a large school system and were matched for age, sex, grade, and socio-economic level. The Job Values and Desires Check List was used. This instrument contains ten different value preferences.

The authors found the comparisons were significant at the .05 level of confidence for two areas. "A very interesting job" selection was positively related to being Caucasian. In fact, the authors felt that there were signs of over-concern for job interest. The Negro group had a significant tendency to be much more concerned with "a job which you were absolutely sure of keeping." None of the other comparisons were statistically significant. The authors concluded that, on the basis of this study, it would seem that race is associated with job values in a manner which is independent of the occupational level of the respondent's home and which is compatible with the present relationships of race and occupational opportunity.

Slater (1956) tested the hypotheses that (1) when college and curriculum are not specified, male students whose father's occupations are classified will not differ in their rates of persistence; (2) for male students, in the population being studied, persistence will be greater in curricula that have specific vocational objectives which can normally be achieved in four years than

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in curricula that are not oriented toward some specific vocational goal; (3) when male students are enrolled in a college which prepares them to enter occupations similar to those in which their fathers are employed, persistence will be greater than for others in the same college whose fathers are otherwise employed.

One thousand and twenty-three males, registered at the Urbana Campus of the University of Illinois on September of 1950 in the Colleges of Agriculture, Commerce and Business, Engineering, Liberal Arts, and Science, were studied. Their official university records were examined in the summer of 1955 to gather data on their persistence. The father's occupation was classified according to the Dictionary of Occupational Titles.

Slater found his results indicated that, except for the first hypothesis, each of the other two could be accepted at the .05 level of confidence. Persistence was greater for men enrolled in curricula whose vocational implications were obvious and rather immediate than for men enrolled in curricula which lacked specific vocational objectives. Persistence was greatest when vocational orientation of the college was a familiar one, that is, similar to the father's occupation.

Terrance (1951) studied the ability of entering college freshmen to evaluate their scholastic aptitudes, achievement in

English and Reading, and their vocational interests. He examined changes occurring in a five day orientation period. One thousand and fifteen freshmen entering Kansas State College were asked to make estimations as how they would stand in relation to their classmates. At the end of the orientation and testing period they were asked to re-estimate their standings. The subjects were allowed to "rationalyze" about their performance, predict their grades, and indicate vocational interests after which they took the Strong Vocational Interest Blank.

The author found that significant changes in the direction of more accurate evaluation occurred during the course of the five day orientation program. Also, about 50 per cent were able to evaluate their measured vocational interests accurately. The author concluded that entering freshmen have unrealistic concepts of their scholastic aptitude and achievement ability.

Dilley (1957),\(^{91}\) in his work to gain new insight into personal values of a group of 356 students, found that pride in their work was thought to be of considerable importance by students in all groups involved. Goldsen (1952),\(^{92}\) reporting on the Cornell Values Study, found the following data pertinent to the question of vocational interests. When asked what three activities they expected to give them the most satisfaction in their life, the group gave "career or


\(^{92}\)Goldsen *et al.*, *op. cit.*, pp. 23-59.
occupation as their second choice. When asked what importance the various occupational requirements should have for satisfying a career, 78 per cent of the group felt that it should give them an opportunity to use their special abilities or aptitudes, while 61 per cent felt it should enable them to look forward to a stable, secure future. Forty-eight per cent listed that it should permit them to be original. Women tended to list as most important the opportunity to use special abilities, permit them to work with people rather than things, and permit them to be creative and original. Women did not list "security" as either most or least important.

Sixty-nine per cent of the subjects stated that they expected to go into the occupation they wanted to enter while only 12 per cent felt they would have to make compromises. Golden concluded that the students tended to not be wholly realistic about job opportunities. When asked what two qualities they thought most apt to get a young person ahead the fastest, 57 per cent felt that having a pleasant personality was most important and 62 per cent chose "hard work" as most important.

In answer to the pattern of felt needs stated by youth, as they pertain to the general patterns of vocational interests, the many master's theses developed under the direction of Eikenberry.

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and the dissertation by McQuown (1947) demonstrate what many other similar works have found. Youth, entering this age range, have a great diversity of interests in relation to what they feel they need to further their preparation for life.

Data compiled to answer the question concerning patterns of vocational interests does not permit anything more than a tentative generalization concerning the eighteen to twenty-two-year-old group. With the exception of Powell's study, the information was gathered from "select" groups that contained subjects outside the age range limitation of this problem. It would seem that data support the tentative generalization that vocational choice becomes of maximum importance at this age level with indications that women face the problem earlier than men. Furthermore, the choice of vocation to follow can be as varied as the persons making the choice. Job security is of prime importance to this age group with Negroes emphasizing the point more than Caucasians. Data indicate that job interest is also selected by many as important. Finally, indications are that youth in this age group are unrealistic in their vocational choices as well as their estimation of their own strengths and weaknesses and tend to follow those occupations with which they are best acquainted.

This generalization suggests the need to provide opportunities

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for youth to study, discuss, and understand their interests, aptitudes, and abilities in relation to appropriate job opportunities. Also, they should be provided with the opportunity to further their preparation for future employment through both general and technical education.

The authorities, reviewed by this investigator, emphasize the question "What are the patterns of personal and moral values held by the eighteen to twenty-two-year-old group?" Jacob (1960), in his analysis of some three hundred pieces of research related to changing values in higher education, presented the following point of view concerning the values held by college students today. He arrived at his conclusions through the analysis of a combination of experience and a review of research. Jacob admitted that there is great need for more research in the area of determining student values but he believes that there is remarkable consistency in the studies that have been done and that this allows for some tentative conclusions.

Jacob listed the following dispositions as those most often expressed in student behavior and attitude. The students express an absorbing self-interest directed essentially toward satisfying desires for material well-being, privacy within one's own male-oriented family domain, and relief from boredom. They express group dependence, which causes students to bring personal conduct and standards into line with the expectations of groups to whom they turn

95Phillip E. Jacob, "Social Changes and Student Values," Educational Record, XLI (1960), 338-342.
for a sense of "belongingness" or look to as vehicles of self-
advancement. The students express an instrumental approach to reason
and mortality which pulls both reason and the moral code into the
service of present personal goals rather than acknowledge them as
guides to truth and controlling rules of conduct.

Jacob believes that research and observation presents a highly
significant pattern of student values. Significant enough to permit
the following generalizations about these students in comparison to
students of a decade ago. Today's student exhibits less personal
autonomy and more social flexibility. They have greater tolerance
for human idiosyncrasy but care less for people. The student is
dutiful toward government but less public spirited. They adhere more
closely to conventional standards and doctrines, but are less pro-
foundly motivated by religious impulse or moral commitment. They
are more responsive to work in the organizational harness, but have
less respect and enthusiasm for work itself. The students have a
higher estimate of the practical value of education, but are less
susceptible to a rule of reason in making significant decisions about
their attitudes and conduct.

Jacob concludes that the answer to developing human values
within each individual lies in deliberately undertaking to increase
the potency of liberal educational influence on individuals to
counteract the non-liberalizing impact of the social atmosphere of
the mass.

Jacob's generalization that today's students are less
susceptible to a rule of reason in making significant decisions about
their attitudes and conduct is given support from data gathered by Rice (1961). The author did a study to discover how divergent were the philosophical outlooks of junior college administrators, teachers, and students. He especially tried to answer the following questions: (1) Do administrators, teachers, and students hold mutually exclusive opinions concerning the aims of junior college education? (2) Can certain qualitative generalities be made concerning these differences?

A list of seventeen possible aims of a junior college was constructed by Rice from various sources of authority on higher education. A group of fifteen junior college administrators, thirty junior college teachers, and sixty sophomore junior college students, representing fifteen different institutions, were asked to rank these aims or purposes. They were asked to rank them from most essential to least essential for a college's existence. Of interest to the question of patterns of personal and moral values, the author found that subsequent, subjective interviews revealed that students rejected interference by an institution in the spiritual, moral, psycho-sexual, social, and maturity areas of their lives. The students tended to give very strong indications that they wanted no interference with their value system.

Rettig and Pasmanick (1958) presented a paper whose purpose


it was to report patterns of change in moral values. The paper gave details of an investigation of the changes in moral judgments of college students from 1929 to 1958. Crissman investigated in 1929, 1939, and again in 1949. Rettig and Pasmanick repeated the study again in 1958 at The Ohio State University. Crissman's questionnaire was administered to 489 undergraduate students, 204 males and 285 females, in an elementary sociology class. Fifty moral prohibitions were given them and they were asked to indicate the degree of "rightness" or "wrongness" of each. The authors concluded the following pertinent to the question asked in this section.

There appears to be an increase in the severity of moral standards in those prohibitions that may be associated with the sanctity of the individual's life and those that assure the basic democratic form of voting behavior. There has been a marked increase in religious values and those violations of collective irresponsibility. The exploitation of weaker nations has become increasingly acceptable. The latter data tend to support Jacob's conclusion that today's student is involved in self-interest and is socially indifferent.

The data further indicated that students are increasingly accepting those violations that involve corporate morality such as low wages, living beyond means, selling below cost for purposes of competition, living on inherited wealth, and misrepresenting the values of investment to induce buying. These students appear inconsistent in that they place greater condemnation on "mercy killings" and "suicides" but condemn less the use of poison gas on other
nations or on civilian enemy. The authors concluded that this apparent inconsistency may be the result of the indefiniteness of responsibility for the crime. The more indefinite the responsibility the more vague their reactions. The individual feels powerless over one but can effect the other. The students seem to find any means which increases the efficiency of obtaining rewards highly valuable. The cultural and religious heritage of moral values as opposed to the practical morality in American society has produced a double standard.

The authors closed with the statement that it is impossible to determine from the data the degree to which the differences obtained is a function of a genuine change in moral values over time, a difference in the regional backgrounds of various college samples, or an increase in a superficial verbal adherence to mores. They suggested that research should be done to ascertain if these results are applicable to a non-college population of similar age, especially from different strata of society.

Muhl (1950)\textsuperscript{98} attempted to answer the following questions:

(1) Does ethical insight improve during four years of college?
(2) What categories are least well understood? (3) In what categories is improvement most marked? (4) Is there difference in ethical insight between students from private and those from public schools? (5) Is there a difference between those who attend church

regularly and those who do not attend? (6) Is there a difference between students who provide for their own finances in college and those who do not? (7) Is there a difference between those students who break rules of the honor system and those who do not?

The author selected 440 students from Sweet Briar in the spring of 1950. She gathered her data with the use of Hollingsworth's Instructional Plan Four and Test Form R and supplemented this with personal information on each of the subjects. The subjects were tested on the imperatives of beauty, custom, duty, completeness, inference, justice, law, safety, utility, and welfare. The author found that there was a significant improvement in ethical insight during a four year liberal arts residential college course. This tends to provide data in opposition to Jacob's conclusion that values change little, if at all, during the college years. Muhl also found that the requirements of custom and law are fairly well understood but that those of safety and completeness are poorly understood. Private school entrants could not be distinguished from public school entrants in respect to ethical insights but self-help students were superior in ethical insights to the non-self-help student, matched for intelligence and college class. Regular church attendance may enhance ethical insights but supporting data were not conclusive. Offenders against rules of honor system may be inferior in ethical insights especially in the categories of beauty and law. Offenders were found to be less successful academically than non-offenders.
Orwig (1953)\textsuperscript{99} attempted a study with objectives similar to that of Muhl. He sought to gain information concerning the types and frequency of problems students had relating to their value standards of truth, good, beauty, right, and religion. The author gave a questionnaire check list of possible value problems to 522 freshmen and sophomores in the Basic College at Michigan State University. Twenty items were constructed for each of five areas on the basis of a common series of problems.

The author found the following pertinent to the question of patterns of moral and personal values for the eighteen to twenty-two-year-old. More students checked items in the area of truth than in any other area while the mean number of items checked per student tended to be highest in the area of religion. The author stated that individual items checked by 10 per cent or more suggested important general patterns for each of five value areas. The subjects showed concern for problems of clear thinking, for adequacy of goals and objectives in college and life, for adequacy of aesthetic judgment, and for more knowledge and understanding with respect to religion. Freshmen, students of average scholastic ability, humanity students, those regularly attending church, those of lower level occupational background, and students of farm backgrounds tended to check proportionately more problems. Fifty per cent of the subjects said

that value problems represented their most important concern and 50
per cent felt that these problems were not of major concern.

Pressey and Jones (1953)\textsuperscript{100} attempted a comparative study,
similar to that of Rettig and Pasmanick's, to determine the attitudes
of adolescents both in age comparison and comparison over a longi-
tudinal study of aging. Eighth grade, high school, and university
students checked a set of 375 items in 1923. The study was repeated
in ten-year intervals. The present account is based on the replies
of 1,723 students in 1923; 1,706 students in 1942; and 842 college
freshmen and seniors in 1953. The authors found a significant trend
pertinent to the question of patterns of moral and personal values.
Between 1923 and 1943 and again between 1943 and 1953 there was a
decrease in number of items disapproved by college students.

The authors found other items somewhat less significant but
indicating that the over-all trend was toward a relaxing of stand-
ards, both with increasing age and at any period of time in our
society, in general, as the years go by.

Goldsen et al. (1952),\textsuperscript{101} in his review of the Cornell Values
Study, indicated the following findings pertinent to this question.
When asked if they had ever used crib notes or copied on an examina-
tion while in college, the majority, 65 per cent, denied cheating

\textsuperscript{100}S. L. Pressey and A. W. Jones, "Age Changes in Moral Codes,
Anxieties, and Interests, as Shown by the X-O Tests," \textit{Journal of

\textsuperscript{101}Goldsen et al., \textit{op. cit.}, pp. 387-402.
quite heavily. Those who carried a high cumulative grade point average, and those who felt that the opportunity to go to college was of great importance tended to admit to cheating less but not to a significant degree from their opposites. Those students who indicated the most interest in their major area tended to admit to cheating the least. Those who tended to see their assignments as not important, those who felt what they were doing at college was a waste of time, and those who cut classes most often were the subjects who admitted to cheating most often.

Of interest to the question concerning moral values was student's opinions of war and related issues. Sixty per cent thought war morally wrong while 18 per cent were not sure. However, 75 per cent felt that human life was not too important to be sacrificed for protection of any form of government. Forty per cent felt it was not a sign of weakness in a peoples' character to instigate a war, while 34 per cent felt it was, and 26 per cent were not sure. Forty-seven per cent disagreed with the statement that a soldier should obey all rules and regulations without question while 40 per cent felt he should and 13 per cent were not sure. Sixty-one per cent felt those in the armed forces were doing something worthwhile for their country.

Sixty-five per cent did not agree with the statement that it was not fair for one man to be excused from military service while others were not. Twenty-four per cent felt it was not fair. Sixty-eight per cent disagreed with the statement which asserted that only
moral cowards would refuse to serve their government but 66 per cent felt that they owed it to their government to protect it in return for more important privileges. The confusion concerning the issues of war, military service, and personal dedication to one's country was best illustrated by the answers to the following question. When asked if they felt it would be worth fighting an all-out war to stop communism, or whether they felt it would not be worth-while, 26 per cent felt it would be worth-while, 14 per cent felt it fairly worth-while, 18 per cent felt it hardly worth-while, and 24 per cent felt it not worth-while at all. Twelve per cent were undecided and 2 per cent gave no reply.

The entire data presented here in an attempt to find patterns of personal and moral values has been gleaned from research with selected subjects. In addition, the age range of the various works does not correspond with that of the problem being dealt with in this paper. However, there seems to be sufficient information to permit certain tentative generalizations concerning those of the eighteen to twenty-two-year-old group who go on to college.

Indications are that there is a definite lack of consistency in values as shown by the variance in subject reaction to questions concerning personal and societal responsibility. The groups researched tend to accept values that aid them in reaching self-centered and materialistic goals. The groups surveyed, in general, demonstrate a faith in values of immediate practical worth but reject or remain neutral toward those involving time and/or space. The indications are, also, that over the years there has been a relaxing of moral
values and that this age group tends to find itself in conflict with the moral standards brought to it through our cultural heritage.

If these generalizations be so, then it would seem necessary to provide youth, in the eighteen to twenty-two year age group, with the following opportunities. They should receive the opportunity to study and discuss the sources and rationales behind the multitude of moral and personal values confronting them so that they may have a better understanding of these values. They should also have the opportunity to develop, understand, and test the meanings of those moral values they accept as guides for their individual lives.

Closely related to the question of moral and personal values is the area of religious beliefs and attitudes. Authorities tend to emphasize the question "What is the pattern of religious beliefs and attitudes of the eighteen to twenty-two year age group?" Vincent (1956) sought information concerning the spiritual and religious needs of university students, assuming that there are definite religious needs in a college population and that many of these needs remain unsatisfied. One hundred students were given the Thurstone-Chave Experimental Study Schedules, the Michigan Sentence Completion Test, and personal data sheets were completed. Data were gathered to assess their attitudes, ideologies, and conduct relative to God and to the church. The subjects included 56 Protestants, 20 Jews, 14 Catholics, and 10 others. Their average age was 18.25.

The author found that a functional belief in God and/or sin was not correlated with formal church affiliation but that high church attitude correlated at the .01 level of confidence with religious experiencing. Parental and student attitudes toward God and toward the church differed at the .01 level of confidence. Similar differences emerged even though the student tended to identify with one parent or both. Those subjects, who were highly oriented toward God through experience or conditioning, tended to feel heavier stresses of super-ego strivings than the neutrals or negatives. The highly or mildly positive were significantly different at the .01 level of confidence from the neutrals or negatives in matters of conscience, right or wrong, moral, ethical, or religious convictions.

Funk (1955)\textsuperscript{103} attempted to determine whether religious conflict and change of religious beliefs during college residence are correlated with manifest anxiety. Furthermore, he attempted to discover the relationships among certain religious attitudes and personal data variables. Two hundred and twenty five subjects, enrolled in a beginning psychology class at Purdue University, were given a questionnaire entitled "A Survey of Attitudes Toward Religion and Philosophy of Life" which was constructed for this research by Funk. The majority of the subjects were in the School of Science and ranged between ages seventeen and nineteen. The Protestants

greatly outnumbered the Catholics and Jews. Men outnumbered women 3 to 2.

The author found that religious conflict seemed to be positively correlated with manifest anxiety. The majority of students expressed some religious conflict and, as a group, students attended church less frequently than they did in their childhood. High anxiety students expressed more religious doubts, more guilt about not living up to their religion, and more need for religious consolation than did the low anxiety students. The author concluded that anxiety is unrelated to orthodoxy, religious preference, belief in a philosophy of life rather than a religion, hostility to religion, or change of religious attitudes during college residence.

Orwig (1953),\textsuperscript{104} whose study was reviewed in an earlier portion of this chapter, found, in his work to determine student problems, that the mean number of items checked per student tended to be highest in the area of religion. Also, the students indicated that they needed more knowledge and understanding with respect to religion. Rice (1961),\textsuperscript{105} in his study of the divergent views of junior college administrators, teachers, and students, toward a list of tentative aims, found that students resent college interference in spiritual areas.

\textsuperscript{104} Orwig, \textit{op. cit.}, pp. 274-275.

\textsuperscript{105} Rice, \textit{op. cit.}, pp. 165-172.
Goldsen (1952), reporting on the Cornell Values Study, offered the following data concerning patterns of religious beliefs and attitudes. When asked what three things or activities in their life they expected to give them the most satisfaction, they tended to reject heavily the area of religious beliefs and activities. Interestingly, however, 80 per cent stated a felt-need for religious faith and 48 per cent stated a belief in a divine God. Only 27 per cent stated that they attended religious services once a week or more.

The southern campuses were found to be most religious in attitudes, the eastern campuses were least, while the western campuses were more like those of the eastern section. Catholics tended to score the highest in response to attitudes of religiousness, Jewish students were most likely to score the lowest, with Protestants scoring somewhere between the other two. In response to a question asking the students what characteristics they considered essential before they would accept a religious or ethical system as ideal, the students responses tended to fall into three categories. The greatest number felt that it must provide personal values to be ideal. The second largest group felt it highly important that religion bring man and man, man and family, and welfare groups together. Most students felt that it was of little importance that it be based on a supreme being or that it provide salvation or redemption.

The data indicated that students who were rated as "believers"

were, if anything, more likely to testify to feelings of racial and religious intolerance. There also seemed to be a certain absence of identification with religion and even a marked absence of intense commitment to religion. The student's beliefs tended to be secular in the sense that religious activities could not compete with the place of family, work, or leisure time in their society. Goldsen concluded that religious belief, on these campuses, was widespread and the philosophical climate was essentially non-religious. The religious values the students preferred seemed to be broadly dispersed, highly personal, relative, and vague. The beliefs and values seemed to be only weakly involved in the opinions, attitudes, and behaviors they reported in other spheres of their life. Goldsen felt that there was definite indication that the young people on these campuses were dissatisfied with the philosophical climate in which they existed. The students said that there was a need for religious or philosophical guides to provide orientation and meaning to their lives.

Nelson (1950) developed a study, to investigate questions concerning patterns of age changes in religious attitude, that is pertinent to this section. He attempted to find answers to the following questions: (1) Are there discernible patterns in shifts of students religious attitudes from college to fourteen years later?

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(2) Do college attitudes toward religion tend to persist more than attitudes toward other values? (3) Is there a significant relation between religious attitudes indicated on paper pencil tests and overt behavior fourteen years later? (4) Do regional differences in these attitudes tend to follow a pattern? (5) May we expect to find consistency in shifting beliefs in Deity as compared with attitudes toward the church or toward Sunday observance?

Originally the Thurstone series was given to 3,749 students in 1936. They came from a variety of institutions east of the Mississippi but both north and south of the Mason-Dixon Line. In 1950, eight hundred ninety-three were retested and the results compared to their own 1936 test data. The author found that there was a more favorable attitude toward the church after fourteen years, significant at the .01 level of confidence. However, attitudes toward the church were more stable than other areas in the problem. Regional differences were present, both in 1936 and in 1950. Ex-students from southern schools remained more pro-church than those from the north but the magnitude of difference declined. There was a shift toward more overt indication of church as measured by attendance but not significantly so. There was a significant shift, at the .01 level of confidence, toward attitudes more favorable to God and in the conviction that God influences conduct.

As in the questions which preceded, the data presented here, in an effort to arrive at an answer to the question of existing patterns of religious attitudes and beliefs, is limited. It has been obtained from work with select groups and does not come specifically
from groups within the age range set for this problem. There is, however, evidence presented that supports a tentative generalization concerning those youth who attend college. They tend to find themselves in conflict with the religious attitudes instilled in them at an earlier age. This conflict seems to bring about anxiety and doubt. This group tends to differ from their parents in attitudes toward religion only to return to traditional approaches in later life. The college age youth is inclined to show his confusion with religious attitudes and beliefs by a decline in church attendance, and a tendency to place religious activities secondary to activities of work, family, and leisure time.

Indications are that religious attitudes and beliefs vary with geographical location and the religion with which the youth has been affiliated. Youth in the South and those of the Catholic faith tend to indicate more religious faith than those of other areas or faiths. Research by Orwig and that by Goldsen both indicate that youth are in search of more knowledge and understanding of religion.

If this tentative generalization is supported then it would seem advisable that youth be provided with the opportunity to thoroughly study, discuss, and gain understanding of their own religious beliefs, attitudes, and values as well as those of other members of society. This, in order that they might accept or reject, individually, that which seems to support the ideals they hold.

Emphasized by authoritative sources, is the question "what are the patterns of political-socio-economic attitudes of the eighteen to
Davidson and Kruglow (1953) investigated the influence of some social-cultural and personal background factors on the personality characteristics and attitudes of young college men. The authors studied class status, educational level, major area of interest, and age as factors involved. Five hundred students, at City College of New York, were given an attitude personality test along with questions dealing with background factors. Of this group 79.2 per cent ranged in age from eighteen to twenty-two years.

The authors found a tendency for older, educationally more advanced students to be more democratic, that is, more flexible, more accepting, less authoritarian than younger students. This difference was significant at the .05 level of confidence. The older, more advanced students showed a more critical kind of patriotism than did younger students. The difference was statistically significant at the .05 level of confidence. There was no significant difference in age for attitudes on political-economic areas and neither parental birthplace nor parental occupation had much influence. The authors concluded that personal-experiential factors seemed to have greater influence on attitude-personality characteristics of young college men than do social-cultural factors.

Nogee and Levin (1958) undertook to collect data concerning


the political behavior and attitudes of young college students of voting age, and to analyze the relationships between their attitudes and political views and those of their parents. From various colleges at Boston University 374 students, between the ages of twenty-one and twenty-five, were sent a personal letter and asked to appear for an interview. Complete information was secured from 314 subjects. The authors found the following pertinent to the identification of patterns of political-socio-economic characteristics.

A greater proportion of young college students voted than did the general population. Large numbers of young voters who preferred either political party professed ideological views which were traditionally associated with party preference. The young voters saw themselves as ideologically distinct from the partisans of the opposition party but the basis for voting very often seemed to be the personality of the candidate rather than issues. The political attitudes of these college youth were strikingly similar to their conception of their parent's attitudes. Striking differences were found in political attitudes when factors of difference in colleges or religious preferences were examined.

Maccoby, Matthews, and Morton (1952)110 developed a study (1) to determine to what extent young people follow their parent's lead politically; (2) to determine, if when they do differ from their

parents in politics, do they move in the democratic direction, or are there counter-balancing changes in both directions?; (3) to determine what are some of the psychological and sociological variables involved when the young person does take a political position different from that of his parents.

The authors conducted their work in Cambridge, Massachusetts, with 339 people aged twenty-one to twenty-four inclusive. This was a group eligible to vote in a presidential election for the first time in 1952. The range of the sample is more important than its representation. This research was conducted in a democratic stronghold and the authors found that agreement on candidate and party choice was highest between the young person and his family. Next highest was with his friends, and lowest with his fellow workers. Voting and party choice of young people was not generally accompanied by appropriate ideology. Young people who were well educated changed away from the political orientation of their parents more often than did the poorly educated young people. Furthermore, better education was accompanied by a more appropriate, more rational, change in ideology.

Stillman, Guthrie, and Becker (1955)\(^1\) constructed research to test determinants of political party preference. The study began in 1955 with between 500 and 600 male university students. This group was surveyed in December 1955, April 1956, and again in October

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1956. Information was gathered by questionnaire, scores were obtained on the F Scale, social status striving scale, and a test of gullibility. Four hundred thirty-one subjects, at Penn State University, completed the data and the following was found to be statistically significant in the youth's choice of party preference.

Subjects tended to follow the political viewpoint of their parents and also seemed to hold the same viewpoint they perceive their friends to hold. Subjects whose parents were undecided or independent were more likely to be undecided or independent than those whose parents were divided with one Democratic and one Republican. Students, proclaiming membership in either party, tended to show high gullibility scores in the direction of their respective parties. In addition, the subjects tended to show favorable bias toward the party of their preference. The members of the outnumbered party, Democrats in the case of this research, had more political information than the party in the majority; and independents had more political knowledge than those who were undecided.

The authors also found a significant relationship between high interest in politics and amount of information. The student's social aspirations and party preference appeared to be related and his party identification was associated with a tendency to attribute popular causes and national policies of long standing to his party.

Blau (1952), in conjunction with the Cornell Values Study,

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examined the attitudes of students toward international affairs, with special reference to their ideas on the prevention of war. The author analyzed recent changes in these attitudes. Part of Blau's survey was based on a survey of the cross-section of 2,975 undergraduates used in the Cornell Values Study in 1952. The analysis of change in political opinions was based on comparison of the 1952 Cornell group to the results of an interview of a panel of male and female students at Cornell in the spring of 1950. The author found the following, pertinent to the question at hand.

Conservatism was found to be associated with power orientation toward international affairs while a progressive philosophy was related to faith in international cooperation. The conservative faith was more frequent among students who were not very ambitious and among those who were relatively successful in their personal lives, than among the unsuccessful strivers. The student's political ideology partly determined the friends with whom he discussed politics and those individuals who had many friends in different groups tended to shift political views frequently. As a result they tended to lose interest in politics. Students who had few social contacts and were not well integrated at college were least likely to change political opinions in any direction.

Goldsen (1952) presented additional findings based on information gathered through the Cornell Values Study. Indications were

113Goldsen et al., op. cit., pp. 125-152.
that the tendency was for the college student to develop more apathy toward political affairs rather than less as he progressed. A very strong tendency to echo the father's political preference existed. The students tended to support a "rugged-individualism" approach to an economic system. Fifty-nine per cent stated that they felt that the Welfare State tended to destroy individual initiative. When it came to current economic issues about half of the students consistently expressed attitudes linked with conservatism. Goldsen concluded that the study suggested that the over-all impact of the college years is to nurture a conservative economic philosophy with seniors expressing more conservative views than freshmen.

In their reaction to questions involving privileges guaranteed by the government, the indications were that college students give their allegiance to the traditional democratic rights and civil liberties of our society. It was interesting to note that 76 per cent supported freedom of expression but 30 per cent agreed that those who talk politics without knowledge of the subject should be kept quiet. Twenty-nine per cent felt that college professors should be free to express their opinions only if they do not go out of their own field to express divergent ideas. By far the largest majority expressed a faith in the goodness and cooperativeness of mankind. In general, there was a strong tendency for those students who believed in suppression in special cases to be strongly in favor of "freedom of speech, thought, and ideas."

Goldsen drew the following conclusion from this portion of the
Cornell Values Study. The present generation of college students is politically disinterested, apathetic, and conservative. Social movements and social philosophies do not arouse their interests or command their commitment. The college students studied, by and large, withdrew from political and economic issues and did not become involved in them.

Noble and Noble (1954)\textsuperscript{114} investigated the attitudes of college students toward the protection of civil liberties, and to see what effect the threat of totalitarian aggression might have on these attitudes. At a professional and technical school in New York City 125 students were given a questionnaire consisting of twenty statements each dealing with a separate civil rights issue. They were to answer "agree," "disagree," or "no opinion" and to state briefly in writing the reasons for their answers. The authors found that a significant number of these students supported traditional American civil liberties except where the right of Communists to teach or hold government jobs was concerned. They tended to restrict activities of Communists on the basis that they advocate the forceful overthrow of our government.

Thwin (1952), Meresko et al. (1954), and Suchman, Williams, and Goldsen (1953) have all reported research which relates to the area of political-socio-economics but did not present data pertinent

to identification of patterns of characteristics in this area. There is a paucity of research which might be used to identify patterns of social maturity and social participation. The research presented here tends to concentrate heavily on the political-economic situation. The data presented does not meet the limitations of age range and the groups used as sources were "selected." The data do permit a tentative generalization concerning those youths who attend college.

The indications are that those youth who attend college are traditional in their approach to political, social, and economic issues. They express an ideology that is closely related to that of their parents and, in general, one that shows little resemblance to their covert actions. They are unrealistic and subjective concerning the strengths and weaknesses of the work, both present and past, of the political party to which they claim affiliation. Their attitudes and ideologies tend to shift in relation to the social group to which they belong at any given time but data are presented to indicate that as the student progresses through college he becomes more realistic and critical. As Goldsen suggests, students appear to treat political, social, and economic issues and problems with indifference and apathy.

This investigator would emphasize the difference indicated between patterns of religious beliefs and attitudes and those involving political-socio-economic attitudes and beliefs. In the former the student tends to move away from the traditional and from parental standards while in the latter he tends to hold close to
parental ideologies. The situation indicates a need to provide youth with the opportunity to thoroughly study and discuss the many political, social, and economic issues and problems so that he may develop an individual understanding, interest, and approach to these problems and issues. He should be provided with the opportunity to understand the viewpoint of others. In addition, he should be provided with and encouraged to find ways and means to apply and test the beliefs he comes to accept as his own.

With the gradual shortening of the work-week, authorities are emphasizing the importance of leisure time activities in the life of youth. "What are the patterns of leisure time activities held by the eighteen to twenty-two-year age group?" Swenson and Rhulman (1952) wished to plan a program to meet the leisure time needs of students. They attempted to find answers to the following questions: (1) What time for leisure time activities, if any, is most convenient for commuting students? (2) What are their reasons for not participating? (3) What can be done to enrich the campus life? The authors administered a questionnaire to 3,897 sophomores ranging in age from seventeen to thirty with a mean age of nineteen. There was a return of 32 per cent with men outnumbering women 2 to 1 on information returned.

The authors found indications that women were slightly more

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interested in campus leisure time activities than were men with the highest percentage of participation, for both groups, in social living groups. Women appeared to be more interested in noon concerts, art exhibits, lectures, theatricals, and recreation. Athletic events were the most popular spectator type activity for both groups.

Commuting time and employment seemed to account for the chief difference in the amount of leisure time enjoyed although commuting time influenced men less than women. Those who did not work and/or lived closer to the campus participated more than those who worked and/or lived farther away. Commuters expressed a need for lounge type facilities. Study interference, sufficient outside interests, transportation problems, lack of information, work interference, lack of orientation, sufficient living-group interest, and a lack of atmosphere all appeared to be common reasons for non-participation.

Mornings and weekends appeared to be the least desirable times to instigate programs. Activities at noon and between classes were attractive and the varying of time and offering some activity in both afternoon and evening seemed to be of benefit. The authors concluded that it appears that a program is needed more for those who do not belong to organized campus-living groups.

Goldsen (1952), reporting on the Cornell Values Study, provided the following data pertinent to the question of leisure time activities. When asked what three things or activities they expected

\[ \text{116} \text{Goldsen et al., op. cit., pp. 61-80.} \]
to give them the most satisfaction in life, the students ranked leisure time activities third behind family life and employment. Fifty-three per cent of the subjects took part in two or more extra-curricular activities and an additional 17 per cent participated in at least one activity.

Zubek and Solberg\textsuperscript{117} reviewed a study by Pressey in which he attempted to determine the change in interests and recreations through the adolescent age. In an extensive study of well over 4,000 subjects, grades six through college, he gave his subjects a long list of activities and requested that they check those items in which they were interested and to double check those of special interest. He found the most striking feature to be the trend toward decline of certain interests as others emerged. Boys in grades six and seven were highly interested in such activities as horse-back riding, fishing, cycling, and roller skating. These preferences diminished rapidly, reaching a low during college years. On the other hand, interests of a social-sexual nature, such as dancing, dress, and social gatherings, began to gain importance in junior high school and became more and more important with advancing age. In general, the developmental picture was the same for both sexes, although girls were less active than boys at any age represented in the study. Furthermore, in line with their earlier physical maturation, girls evidenced social-sexual interests sooner than boys. Pressey stated,

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\textsuperscript{117}Zubek and Solberg, \textit{op. cit.}, p. 370.
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in summary, that interests of an active type decline with age, while those of a social-sexual type increase.

Zimmerman (1954) sought to determine which activities the student had liked in high school and in which of these there remained sufficient interest to want to continue that activity during college life. A statement of activities they had disliked was also sought and the subjects were asked to designate the physical activities they wished to learn in college.

The author gave 267 college freshmen women a questionnaire which he had constructed and had checked for clarity and reliability by trial with the sophomore class. The questionnaire provided for an opportunity to check where the activity took place and for rating the student's degree of like or dislike for each activity. It also provided for indicating activities with which they had had no previous experience but would like to learn.

Zimmerman found that physical education classes provided the greatest amount of contact with physical activities. Softball, basketball, and volleyball dominated both class and extra-class activities. Approximately 50 per cent of the group had had no experience with fall field sports such as hockey, speed ball, or soccer and over 37 per cent had had no experience with rhythmic activities. Many had received no instructions in dual or individual sports during

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their high school years and a great majority expressed a desire to learn such activities. Social dancing was the most popular activity away from school. The author concluded that the opportunities for learning tennis, swimming, bowling, golf, and archery need to increase. Students should be encouraged to participate in a variety of dance forms and they need more experience in fall field sports. Coeducational classes should be offered in dual sports.

Powell (1954)\textsuperscript{119} instigated a study, supported by funds from the Carnegie Foundation for the Advancement of Teaching, which sought to (1) ascertain the reading interests of 366 students; (2) ascertain the relationship of these interests for developing and stimulating reading. From eleven Negro institutions 366 subjects were sent questionnaires. These were sent in equal proportion to the academic areas, intelligence levels, and both sexes. No names were affixed and inquiries were informal.

Powell found that, in reply to the question of criterion for selecting a book, the largest per cent used type as their criterion. Binding, physical features, pictures, and size were all listed as means of choosing a book. Books, once acquired, were held in esteem. In competition with other commodities, books ranked among the least popular. Only 115 students stated that, if given $500, they would spend all or part on books. A total of 43 preferred reading during

\textsuperscript{119}A. Scott Powell, "Reading Interests of 366 College Students," \textit{Journal of Negro Education}, XXIII (1954), 183-185.
tense moments. Two hundred and nineteen subjects admitted that the more they read the more they wished to read. Two hundred and two said it made them ambitious. One hundred and one said they were less confused and 19 said reading confused them more.

Profane language impressed a majority of students with the book's frankness and censorship of a book made the large majority want to see what was inside. In answer to the type of books selected, 155 selected novels of love; 151 selected social problem stories; 100 chose novels of conflict; the remainder selected books of tragedy, psychological appeal, happy endings, and revenge. In answer to type of leisure time activities, 147 preferred playing cards; 76 preferred television; 73 preferred listening to music; 63 preferred athletics; 34 selected reading; 32 preferred other activities.

Jones (1949)\textsuperscript{120} attempted to answer the following questions through a survey: (1) What books, magazines, and newspapers do college students read voluntarily, for enjoyment, or for information? (2) Is their reading done at home or in the school library? (3) How many read periodicals edited by "educated people," such as Harpers, The Nation, etc.? (4) Is there a difference between men and women in extracurricular reading? (5) Do reading interests of seniors differ from that of freshmen? (6) How many students do little or no reading and what reasons do they give?

\textsuperscript{120}Harold D. Jones, "The Extra-curricular Reading Interests in a State College," \textit{School and Society}, LXXII (1950), 40-43.
During the Fall of 1949, four hundred ninety-eight full-time students, most of them day students living on campus, contributed information through a questionnaire. The author found that 98 per cent of the students indicated they read local newspapers for their information or enjoyment and four out of five were frequent readers of popular mass-circulated magazines. Eighty-three per cent said they did their reading at home rather than in the college library. Only 2 per cent indicated that they were regular readers of the critical or thought provoking magazines and few read the New York Times. About 50 per cent indicated they were frequent voluntary readers of books for pleasure or information with the strongest preference for novels appearing on the best-sellers list. There appeared to be no difference between the kind of periodicals read most frequently by freshmen and by seniors. The periodicals included Life, Reader's Digest, Saturday Evening Post, Look, and Time. There was a slight tendency for students at the senior level to read more educational magazines than did freshmen, but not a significant difference.

Jones concluded that the extracurricular reading habits of the college students, for the most part, are formed before they reach college and there is little change or modification during college.

Abraham (1952)\(^{121}\) did a study of the reading choices of college

students. He selected 1,212 subjects as a cross-section representation of the student bodies of nine colleges and universities. The subjects were asked to complete a questionnaire consisting of forty-one questions which sought personal data about themselves and their reading habits.

Abraham found that these college students did about the same amount of outside reading as the general population. Indications were that any book or author discussed by students was not a result of recent readings for the amount of reading was negligible. Fiction was chosen over non-fiction with adventure, characterization, humor, fantasy, and social awareness most popular type books. Negroes tended to read Negro authors. Most students stated a desire to read more but gave heavy assignments as the greatest excuse for not being able to do so. They did read more as they progressed through college. Picture magazines were their top choice for reading with Life, Reader's Digest, Saturday Evening Post, and National Geographic their selection in that order.

The author summarized his data by concluding that, although college students read considerable fiction and non-fiction in magazines and newspapers and would like to read more, they actually devote only a few hours a week to reading that is not required. Furthermore, even though they can list numerous well-known authors and books, their reading of books is extremely limited in number. Little reading is done in scholarly or professional magazines and a
rather discouraging indication exists that a high percentage of students spend some of their time reading comic books.

Chapin (1951) attempted three different studies in an effort to determine the recreational reading habits of students at the University of Illinois. The reading habits were to exclude classroom assignments. The first study used a sample of 100 names drawn at random from the pages of the student directory. This group was interviewed, mostly by phone. The second study was performed with 400 students. This group was asked to fill out a questionnaire at the circulation desk, reserve book room, or browsing room of the library. The third study was a composite of the information on the books and magazines listed in the two previous studies.

Chapin found that the typical student spent four hours each week on his recreational reading and that there was no significant difference between sexes or marital status in the findings. Veterans tended to do more recreational reading. As a student progressed from freshman to senior year there was an increase in the amount of recreational reading he did. Those students engaged in extra-class activities tended to read more than those not so engaged. The typical student read one book or less per month, two or more magazines per week, and two or more papers daily. Sixty-one per cent of the books he read were fiction with historical, geographical, or travel his top choices in non-fiction. Chances were 1 to 3 that he read Life each week. The magazines he read were standard or below in difficulty.
Flanagan (1960), working with the Project Talent program, discovered the following concerning the reading situation with boys and girls just prior to their leaving school and entering work or college. From among several selections from each of ten periodicals, two were chosen as typical of the reading matter in the periodicals. Questions were written to judge the completeness of the reader's understanding of words or sentences and were aimed at determining the broader ideas, purposes, and implications contained in the paragraphs. This material, plus many other questions, was administered to 440,000 students in March of 1960 over a two day period. These students represented senior groups from 1,353 secondary schools selected to represent the high schools of the United States.

It was found that the average twelfth grader was able to score high on questions from such magazines as Movie Screen or Silver Screen. However, he gradually declined in ability to answer questions as the questions were drawn from magazines with more difficult content. The subjects proved to be very poor in ability to score on questions from such magazines as Saturday Review or Atlantic Monthly. Flanagan pointed out that there is much, even in some of the relatively popular magazines, which is beyond the level of reading comprehension attained by graduates of high school. Similar tests were developed involving the writings of known novelists so as to obtain comparative results.

The results indicated that the average high school graduate can not comprehend fully ideas that the authors of many of our classic novels attempt to convey.

Matteson (1951) attempted a study to validate the following hypothesis concerning experience-interest changes in students. In general, it is hypothesized that interest patterns will be modified in ways associated with the broadened experience patterns available through a program of general education. The author gave an activity check list of two hundred items, validated on 2,000 freshmen, to approximately 700 freshmen. Thirty-seven of this group were retested at the end of the first year and 170 at the end of the second year. Comparisons of the pre-test and retest were then made. There were ten areas of experience-interest to be checked.

Matteson found that interests in activities increased after one to two years of college experience. This was significant at the .01 level of confidence. There were indications that these interest gains were related in kind and amount to the new experiences encountered. Gains were found to be significantly associated with extent of initial experience and interest disparity. There were only three of the ten areas in which experience and interest disparity scores decreased over two years. Matteson concluded that student's interests, insofar as determined by this type of measurement, apparently do

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become modified in accordance with the broadened experience patterns available to them in the first two years of college.

Mueller and Mueller (1953)\textsuperscript{125} devised a study to test the hypothesis that social class origin has a direct effect upon career selection and campus participation. A continuing study was made of 2,580 women at Indiana University during the early 1950's. Of interest to the question concerning leisure time was the following findings of the authors.

Participation in extra-class activities tended to decrease with a decrease in the socio-economic level of the student. In cases of campus entertainment there was a sharp decline where admissions were charged and there was a less noticeable decline where admissions were free. Convocations and Little Theatre tended to increase in importance according to the maturity of the student. However, more than 50 per cent of the group fell far short of benefits to be claimed for participation in extra-class programs. Finally, there was an increasing proportion of the lower socio-economic class becoming involved in national Panhellenic groups.

Hollis (1953), and Schweiker (1959) both developed research pertaining to factors affecting interest of youth in various activities but these offered little additional data for this question. It is interesting to not that the research by Schweiker was one of only

\textsuperscript{125}Kate H. Mueller and John H. Mueller, "Class Structure and Academic and Social Success," \textit{Educational and Psychological Measurements}, XIII (1953), 486-496.
three, found in other than professional and college journals, that pertained to this paper.

There is not sufficient data here to support a generalization that would involve the total group of eighteen to twenty-two year olds. All the data presented were collected from selected subjects on college campuses with the exception of that of the Project Talent. In addition, none of the research was restricted to the age group involved in this problem. There is need for information to be gathered from the eighteen to twenty-two-year-old that is not in college to determine his interests and leisure time activities. Also, this investigator found little research which offered information as to the place of radio and television in the lives of this group, even those on the college campus. The information provided does support a tentative generalization about youth who attend college.

College youth tend to combine their growth into areas of social-sexual interests with a desire to learn to participate in individual and dual sport activities. In general, they express a desire to develop their ability and their participation in leisure time activities but do not bear this out in action as indicated by data showing a lack of participation in extra-class activities. Indications are strong that this college age group demonstrate a lack of interest in reading as a leisure time activity and that what they do read tends to be of no more than average difficulty in content. They tend to ignore the "professional" books and periodicals unless assigned. Generally, the time spent reading and the level of difficulty tends to
increase as the group advances through college as does their participation in extra-class activities. As socio-economic status decreases or commuting distance increases, participation in extra-class activities decrease. Finally, the tendency is for choice of leisure-time activities to vary with the person and for there to be little difference demonstrated between white and non-white.

If youth are to develop a meaningful use of leisure time, they must be provided with the opportunity to study, understand, and develop a positive attitude toward this portion of their life. In addition, they should be provided with the opportunity to participate in individual, dual, and group activities that will contribute to their physical and mental health as well as their educational advancement. These activities should supplement those already available in the community or in social groups on campus.

Authorities place heavy emphasis on the following question.

"What are the patterns of educational interests of the eighteen to twenty-two-year-old?" Supplementary Reports of the 1960 Census of Population present the following information concerning the age group involved in this investigator's problem. There has been an approximate doubling of enrollment from 1920 to 1960. Both the number and per cent enrolled increased from 1920 to 1960 for each single year of age five to twenty with the increases most pronounced

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at ages five and six and at ages seventeen to twenty. Over the last
decade the enrollment rate for non-whites has been as great as for
whites, in fact, greater for non-whites at age five and at age sixteen
to eighteen. An average of 29.8 per cent of all persons between the
ages of eighteen to twenty-two are enrolled in school. Of this age
group 34.6 per cent of the boys and 25.4 per cent of the girls are
enrolled. The rate for whites is slightly higher than for non-whites.
The bulk of eighteen-year-olds enrolled in school are concentrated in
the twelfth grade and freshman year of college. The bulk of nineteen-
year-olds are distributed between the twelfth year of high school,
freshman and sophomore year of college. The bulk of twenty-year-olds
are in the sophomore and junior classes of college and the bulk of
twenty-one-year-olds are in the junior and senior years of college.
It is of interest to note that girls in the eighteen, nineteen, and
twenty-year-old groups tend to obtain junior and senior rank in
college in greater numbers than do boys of the same age.

Torrance (1951),\textsuperscript{127} in his attempt to study the effect of a
five day orientation period on student self-evaluation, presented
earlier in this paper, found the following concerning educational
interests. The results of his work indicated little relationship
between self-estimates of scholastic aptitude or achievement and
actual standings on these measures. Over-evaluation tended to be
related to factors of being a male, complaints of headaches and

\textsuperscript{127}Torrance, \textit{op. cit.}, pp. 607-609.
nervousness, parents with a lower level of education, low social prestige of father's occupation, withdrawal before end of first semester, and dismissal for failure. Females who had the ability of good communications, were of methodist affiliation, were either age seventeen or eighteen, and who participated in leadership training projects tended to evaluate their situation very well. The author concluded that entering freshmen hold unrealistic concepts of their scholastic aptitude and achievement level. Most freshmen gradually modify their self-concepts in the direction of reality.

Washburne (1953) developed a study to test the hypothesis that variations of certain attitudes theoretically expected to vary with urbanization could be predicted among college students in terms of the relative urbanism of their background and the socio-economic status of their families. From Southern State College 544 subjects were given a specially developed scale to measure five attitude areas and two independent areas.

Washburne found that the degree of urbanism of an individual's residential history was significantly associated with several areas of his attitude structure. The more rural the background, the greater the regard men had for higher education and the more positive the orientation women had for college. Socio-economic status was found to be associated with traditionalism and familism but not with other

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attitude areas, including education. In general, urbanism had greater influence on attitude than did socio-economic status.

Berdie (1953) sought to determine what were some of the factors determining whether or not high school graduates attend college. The author hypothesized that it was more than the lack of funds. One year after graduation from high school, a random sample of 2,700 graduates, in the State of Minnesota, were sent a questionnaire to determine what they had done after graduating. He obtained a 78 per cent return. The sample was sub-grouped into six areas.

The author found, pertinent to educational interests, that students coming from homes relatively high on the education-occupation ladder tended to be the students who followed their original plans. Approximately twice as many metropolitan boys as farm boys planned to enter college while twice as many farm boys intended to work. Those students from homes with high culture-economic levels attended college to a far greater extent than did those lower down the scale. Causes of failure of high ability students to attend college presented a complex pattern of many factors including funds and home cultural status. Parent activity in the community, books in the home, and educational level of parents were all factors involved. Berdie concluded that any counseling and guidance program which wishes to affect

129Ralph F. Berdie, "Why Don't They Go to College?," Personnel and Guidance Journal, XXXI (1953), 352-356.
the decision of students toward college must influence the attitudes of both the parents and the student.

Mueller and Mueller (1952) hypothesized that the higher the social class origin the greater the effect upon career selection and campus participation. They found that higher socio-economic groups had an affinity for Arts College while the School of Education attracted a disproportionate number of the middle group. Carr (1955) attempted a study to ascertain the problems of a select group of superior and inferior college students in each of eleven areas of the Mooney Problem Check List and the relationship between these areas. He also attempted to evolve conclusions to make it possible to work more intelligently with problems of superior and inferior students. Three hundred undergraduates from Florida State University were selected from the first semester of 1951-52. Carr found, pertinent to the question of patterns of education interests, that superior students showed decided preference for the College of Arts and Science while inferior students enrolled more frequently in the College of Education or of Business.

Johnson (1958) developed a study to investigate the relationship of education interests of Negro students enrolled in various


131James F. Carr, Jr., "The Problem Areas of a Selected Group of Students at Florida State University as Indicated by the Mooney Problem Check List," Dissertation Abstracts, XV (1955), 1524-1525.

curricula at Prairie A and M College during the academic years 1956-57 and 1957-58. The Mitchell-Roeber Interest Check-List was given to 1,513 men and 1,620 women and the information checked by T-Test for correlation between curricula. The formula of expected value was employed to determine agreement between men and women. Johnson found that women tended to show greater interest than men in such areas as language, arts, aesthetics, secretarial, and homemaking. Men indicated more interest in advanced mathematics, physical science, and mechanical arts and crafts.

Orwig (1953), in his attempt to examine the sources where students felt they should receive help and where they felt they have received help relative to their problems, found the following pertinent to this question. The students indicated considerable concern for adequacy of goals and objectives in college and life, problems of clear thinking, and adequacy of aesthetic judgments. Hagelberg (1959) did an analysis of the goals and characteristics of the students enrolled in extension courses offered by Michigan State University in Northwestern Michigan during the Fall of 1959. One hundred and thirty students representing eighteen county areas were given questionnaires. Hagelberg found that the goals most mentioned were to be "more effective on the job," "to obtain a teaching certificate," and "to obtain an undergraduate degree." The students

\[133\] Orwig, op. cit., pp. 274-275.

encountered the most difficulty in finding time, in selection of courses, and in financing their education.

Holland (1957)\textsuperscript{135} designed his study to provide approximate answers to the following questions: (1) What are the most common ways of selecting a college? (2) Do men and women differ in what they look for in a college? (3) Do students select "unpopular" colleges? (4) What explanation of choice is given by students selecting institutions with high indices of scientific productivity as opposed to students selecting institutions with low indices?

The sample employed in the analysis was taken from 7,500 finalists in the 1957 National Merit Scholarship Program in which 162,000 high school seniors participated. The author found that approximately 50 per cent of both sexes selected college because the college was the best or had a good depth of academic offerings. Both sexes ranked academic standing and colleges close to home as highly desirable. Typically, men wanted a college close to home and having a good physical plant while women tended to choose on the basis of academic standing, small size, religious affiliation and coeducational status. Both of these groups of factors were significant at the .05 level of confidence.

Men selecting a popular institution did it on the basis of academic standing, good faculty, prestige, physical facilities, and a

liberal arts orientation. Men selecting less popular institutions did it on the basis of nearness to home, low cost, small size, and religious affiliation. The difference for women was similar except that women who selected popular institutions were more concerned with the coeducational aspects. On the basis of productivity, men and women tended to select alike. If students desired a college of high productivity they looked for academic standing, small size, research reputation, or liberal arts orientation. Students looking for institutions with low productivity tended to select on the basis of nearness to home and the prestige.

Goldsen (1952), reporting the results of the Cornell Values Study, offered the following data pertinent to the question of patterns of education interests. Students, in general, indicated enthusiasm for the job the colleges were doing and felt that the college was worth-while and important. They did have criticism for certain characteristics and practices such as administration policies which bring about impersonal mass-approach to education. They charged colleges with production-line teaching methods and that only a few, if any, of the professors took a personal interest in their students.

In general, 74 per cent of the students felt that an ideal college education was one that stressed general education or appreciation of ideas. Sixty per cent of the students said they felt that the college should develop those skills in vocational skills

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136 Goldsen et al., op. cit., pp. 23-59.
and techniques that were directly applicable to their careers. Seventy-two per cent felt that developing their ability to get along with all kinds of people was an appropriate chore of the college. Fifty per cent stressed the institution's role in training for citizenship and 45 per cent rated the moral functions of higher education as important.

The opinion that vocational education should be most important took precedence over any other purpose for freshmen and sophomores. In the senior year the opinion that the college ought to provide chiefly for basic education and appreciation of ideas was emphasized. When taken on the basis of the students self-rating according to socio-economic groups, all groups agreed that providing a basic general education and getting along with others were to be emphasized by the college. All groups ranked the preparation for happy marriage and family life as least important for the college to emphasize.

Rice (1961)\textsuperscript{137} found, in his comparison of the views of junior college administrators, teachers, and students concerning aims of the institution, that students tended to rank all types of guidance as very essential. In general, students tended to view the aims of the institution from a framework of their own needs and expectations. Medsker (1959),\textsuperscript{138} reporting on the research of the Center for the Study of Higher Education, stated that the percentage of families

\textsuperscript{137}Rice, \textit{op. cit.}, pp. 165-172.

\textsuperscript{138}Medsker, \textit{op. cit.}, pp. 4-6.
which send their children to college declined steadily with the decline in the level of the father's occupation. It was found that the father's occupation appeared to affect college attendance of sons more than that of daughters. It also was found that college attendance was even more closely related to father's occupation than to ability level. From an analysis of college going as related to father's occupation and mother's education it appeared that a mother's education was at least as important as the father's occupation in affecting the decision to go to college. Furthermore, the graduates who went to college came from homes with the lowest level of parental divorce.

As might be expected, the graduates from the highest occupational levels went to college regardless of their literary and musical tastes. Even so, the higher the level of cultural interests, the more likely were the graduates to continue their education, thus suggesting that students who go to college show more interest, while still in high school, in cultural activities.

The Center's study found persistence to be surprisingly high. As would be expected, the higher the ability of the students, the higher the rate of persistence. Yet of all those who dropped out of college during the first year, a preponderance were in the upper three quintiles of ability. From this Medsker suggested that lack of ability was but one reason, and perhaps not even a major one, for dropping out of college. It was found that the percentage of students completing their first year of college decreased steadily
with the occupational level of the father. Almost a fourth of the students with fathers in semi-skilled and unskilled occupations failed to complete the first year. Even from the limited data provided by this research project to date, it seems clear that the forces which are related to college attendance are numerous, complex, and inter-related.

Bragg (1954) attempted to prove that there was no statistically significant difference in the academic performance of those students who withdrew and those who continued, on the basis of selected criteria considered relevant to withdrawal. Bragg studied a random sampling of 100 cases from the freshman class of 1952 of a midwestern city college. The class contained 724 students, 305 continued and 419 withdrew during the two year period September 1952 through May 1954.

The author found that there was a statistically significant difference in the performance of those students who continued and those who withdrew on the criterion of high school grade average. There was no significant relationship between age and continuation. However, those in the withdrawal group had a higher mean age and a wider range than those that continued. There was statistically significant difference between withdrawal and those that continued on the criterion of grade point average made during the first semester.

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with the continuing group making the highest grade point average. There was no significant difference between sex and continuation or withdrawal. Bragg concluded that more counseling is needed for older persons and more matching of person to curriculum.

Lehr (1954) made a study of the factors related to the holding power of a college. He did a statistical comparison of 343 non-drop-outs and 174 drop-outs at Northwestern State College, Ada, Oklahoma. Only students enrolled for the first time September 1950 through September 1954 were included. Lehr found that grade point average was significantly higher for non-drop-outs than for drop-outs. There was no evidence that any relationship existed between drop-outs and their age at the time they entered college. A significant difference favored the non-drop-out group over the drop-out in the factor of "course load." No evidence was available to relate commuting distance, English or reading ability, housing, marital status, or military status to the drop-out. Furthermore, in opposition to Medsker's data, there was no evidence of relationship between parent occupation and drop-out. Although not significant, there was a tendency for females to drop out at a greater rate than males. The level of intellectual ability was not appreciably related which led Lehr to conclude that most of the drop-outs are sufficiently intelligent to do college work.

Hanks (1953) did his study to analyze the nature, extent, and reasons for freshman withdrawals at the University of Arkansas and to determine whether there was significant difference between those who withdrew and those who remained in school. During the school years 1950-1953 the author studied 1,902 full time freshmen. Of this number 595 failed to enroll for their second year.

Hanks found that most students withdrew voluntarily. Only 12.6 per cent were asked to leave. The reasons given for leaving involved transfer to another school, entering military service, financial difficulties, going to work, deficiency in scholarship, lack of interest, family difficulties, and wrong objectives. Sixty-nine per cent indicated that they planned to return to college or had done so. Significant differences were found between the two groups. The dropouts demonstrated less scholastic ability as measured by the ACE examination. They had less mastery of English and had a lower high school cumulative grade point average. Only the latter agrees with data from Lehr's study.

The author recommended that, in light of his data, the schools' scholarship program be revised, the orientation program be revised, exit interviews be instigated, and guidance procedures improved with continuous study made of retention and withdrawal.

Matson (1955)\textsuperscript{142} did a study to identify relevant characteristics and attitudes of students who withdrew from public junior college. The author selected 144 students who officially withdrew during fall and spring semesters and compared these to 217 students in day school. Information on twelve characteristics was collected and studied for both groups. Statistical tests were made to determine significant differences and attitudes as measured by means of an open-end sentence questionnaire.

Matson found statistically significant differences between the two groups in the following factors. The students who withdrew tended to be older, many had not graduated from high school, few were preparing for further college work, and many had planned for only a brief training period. There was no significant difference in sex, marital status, military status, high school attended, socioeconomic status, academic aptitude, or grade point average. The author concluded that "if the democratizing function of the public junior college is considered to be the extension of opportunity for free education to all young people, the evidence of this study may reflect on how effectively it is being carried out."

Goble (1954)\textsuperscript{143} attempted a study to compare the scholastic and personal characteristics of a group of students from the Miami


University September 1950 class of freshmen, who withdrew prior to graduation, with those of a group matched in age, sex, and ACE scores who continued on to graduation by June of 1954. Information was gathered by both questionnaire and interview. Data from the registrar's file were used for comparison. After sampling procedures 326 persons were selected for study from an original group of 1,473 students.

Goble found that, since less than 50 per cent of the drop-out group had obtained a grade point average of 2.00 at time of withdrawal, it was apparent that more than a causal relationship existed between student mortality and deficiency in academic achievement. Military service for men, and marriage for women, were the most often offered reasons for dropping out. Drop-outs tended to represent the lower quartile of their high school graduating class. Drop-outs demonstrated less integration with the total college program and it appeared that they had less than desirable relationship with their college advisors. No significant relationship could be established between persistence in college and age at matriculation, type of residence on the campus, or the need to work to remain in school.

Fullmen (1952), Groesbeck (1954), Warmath and Fordyce (1961), Summerskill and Darling (1952), Hardway (1952), and Zahn (1961), all present research studies of educational progress and persistency in school but the data from these works do not pertain directly to the identification of patterns of educational interests.

This investigator has found little research which would provide support for any generalization involving the eighteen to
twenty-two-year-old who has not been or is not now involved in college preparation. All the data reported here, with the exception of that offered by Medsker and Berdie, involves only that group in attendance at college or those who have attended and have withdrawn. There is a paucity of experimentation involving the eighteen to twenty-two-year-old as a group.

Indications are that youth who do attend college present a varied pattern of educational interests and objectives. The occupational level of the home seems to be a major factor in the decision to attend college as well as an influence on the objectives of the student. Also, whether the youth comes from urban or rural areas influences the decision to attend. Once in college, there are indications that youth are persistent in search of their goals, however, many fail to complete their higher education. The reasons for withdrawal are varied with college grade point average tending to be the only consistent factor presented here as significant with drop-out. In general, indications are that youth hold unrealistic concepts of their scholastic abilities and their ability to achieve chosen objectives.

It would seem that youth need to be provided with a variety of opportunities in education based on the needs of the group to be served. Also, it seems advisable to present youth with the opportunity to develop a more realistic concept of their abilities and to help them align these concepts with more realistic educational objectives. This suggests the need for a guidance program which would
contact youth before the matriculation and be available for their use throughout the two years of the community junior college, perhaps even longer. The program, to be effective, would need to follow Berdie's suggestion and work with parents as well as potential students.

"What are the patterns of prejudice and bias of the eighteen to twenty-two-year-old?" Prothro and Jensen (1952) attempted to determine the attitude of Negro college students of the deep South toward white Americans and Jews. They wished to compare these attitudes with those held toward Negroes and Jews by the white students in nearby colleges, and to ascertain the relationship between these ethnic attitudes and attitude toward church. The subjects were 489 Negro and white students selected from Tuskegee Institute, Alabama Polytechnic Institute, Florida A and M, and Florida State University. The subjects were given a four part questionnaire as a part of a regular class in psychology and education. The questionnaire consisted of a data sheet, the Grice-Remmers Generalized Attitude Scale, and the Thurstone-Chave Scales for Measurement of Attitude toward Church.

The authors found that the attitudes of Negro students toward whites were no more favorable than the attitudes of white students toward Negroes. The attitude of Negro students toward Jews was generally favorable, as were those of Southern white students toward

the Jewish. There was a slight but statistically significant positive relationship, at the .01 level of confidence, between the Negroes' attitude toward Whites, the majority group, and Jews, the minority group. Resentment toward Whites is not coupled with a favorable attitude toward the Jewish student. There was a slight, but significant positive relationship, at the .05 level of confidence, between the Negroes' attitude toward the Church and his attitude toward Whites.

Richards (1950)145 devised a study to (1) determine some of the attitudes toward ethnic groups in the United States that predominate among white students in the Southwest; (2) point out the extent to which these attitudes are positive or negative; (3) ascertain the relative importance of several possible sources of ethnic attitudes among college students. The author administered his own questionnaire to 1,672 white college students enrolled in universities located in the States of Arkansas, Louisiana, Oklahoma, and Texas.

Richards found that these white students had accepted many of the stereotypes concerning ethnic groups in the United States that are prevalent among the masses of people. Although these students were in the process of developing scientific thinking and depending on scientific information for solution of many problems these activities were playing little part in the shaping of attitudes that the students reflected toward ethnic groups. White students in the southwest

tended to be much more negative in their reactions toward Japanese, Negroes, and Mexicans than they were toward Indians, foreign born white, native born white, Jews, Chinese, or Filipinos. Although the students responding had had high school and college instruction in the social sciences they acknowledge that their attitudes were conditioned by other than scientific instruction. The students tended to rely on friends, newspapers, and magazines for their information.

The author concluded that there is need for plans that would encourage college students to learn more about the major ethnic groups. There is also need for psychology and sociology teachers to give more attention to the development of ethnic attitudes. Furthermore, constructive leadership and guidance should be provided to develop positive ethnic attitudes.

Plant (1955) undertook to study the change in ethnocentrism associated with a two-year college experience. This was one of the very few studies that offered limited data on the situation involving non-college students. Plant hypothesized that subjects who discontinued their education or who intended to enroll but did not, would not change significantly in ethnocentrism during a two year period and that those who completed two years would change significantly.

The author used the Total Ethnocentrism Scale, the Public Opinion Questionnaire E, and the ACE for Freshmen. He administered

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these in May of 1953 to 1,049 persons applying for admissions at San Jose State College. In April 1955, the author retested 568 of the original group, who were still enrolled, with the E test. Of those who had dropped or never had enrolled 250 were retested on the E test. The author found that there were significant sex differences, at the .01 level of confidence, so the two groups were divided according to sex. It was further found that on-campus groups changed significantly in the direction of decreased ethnocentrism, and that off-campus groups did not change significantly. The changes in ethnocentrism for the on-campus groups were in the direction of decreased acceptance of ethnocentric ideology.

Kidd (1951)\textsuperscript{147} found in his study of relationships in a residence hall that rejection of a person was significantly related to being a foreign national. Gray and Thompson (1953)\textsuperscript{148} attempted a comparison of several factors as they might be related to prejudice against other ethnic groups. Factors of color, age, education, and education of parent were considered. Four hundred white students at the University of Georgia and 300 Negro students in three state supported Negro colleges were asked to rate twenty-four ethnological groups on the basis of several questions.

The authors found that acquaintanceship with at least five

\textsuperscript{147}Kidd, \textit{op. cit.}, pp. 581-582.

individuals of an ethnological group raised the social rating of both whites and negroes. This was significant at the .05 level of confidence but did not include the Mexican group. Negroes rated all groups lower than the ratings given these groups by white students, with the exception of their own. This was significant at the .05 level of confidence. Freshmen were found to be less liberal than seniors and older students less liberal than younger students. Negroes whose parents had a college education were more liberal than negroes whose parents had but a high school education. Religion and income did not effect the degree of liberality.

Himelhock (1952)\(^{149}\) tried to determine what factors tended to support a prejudice attitude toward ethnic groups. At New York University 490 students and 235 parents were given a series of questionnaires and scales to determine attitudes.

Himelhock found that prejudice toward one group correlated significantly with prejudice toward other ethnic groups indicating a general common attitude prevailed. Jews were less prejudice, conservative, and authoritarian than Non-Jews. Women were somewhat more tolerant than men. Age, veteran status, and social class status did not show any influence upon ethnic ideology. Students were extremely more tolerant, liberal, and non-authoritarian than their parents.

Goldsen (1952) offered the following data, pertinent to the question of prejudice and bias, from the Cornell Value Study. Even though 92 per cent of the students subscribed to religious freedom, when it came to guarding against the power of the catholic church 24 per cent agreed that we must. Twenty-three per cent felt that religions which preached "unwholesome" ideas should be suppressed. Indications were that student's belief in religious freedom gave way to suppression in specific cases.

Eighty per cent of the students supported the unrestricted right to vote for every citizen, yet 47 per cent agreed that the general public was not really qualified to vote on today's complex issues. There was a strong tendency for those students who believed in suppression in special cases to be strongly in favor of basic freedom. The students were trusting but tended to temper this trust with a wariness.

Wrightsman, Radloff, Horton and Mecherikoff (1960) developed their study to determine the relationship between candidate preference and authoritarian syndrome. A total of 1,142 students in nine colleges and universities, representing four sections of the country, indicated their preference for president as a part of a voting questionnaire in February of 1960. Each subject responded to

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twenty-eight paired-comparisons involving eight possible candidates. Each subject also answered the California Scale of Authoritarianism, Ethnocentrism, and Conservatism and the Christie New Machiavellianism Scale. This Scale attempts to identify the person who employs a negative attitude toward people in order to manipulate them. These subjects were too young to represent the voting population but they might adequately represent some freshmen and sophomore populations.

These authors found the highest scores on the ethnocentrism scale occurred, to a significant degree, in southern schools. To a significant degree, the lowest scores on the ethnocentrism scale occurred at Fisk College, a predominately negro school. Through southern schools tended to be higher on the authoritarian scale, regional differences were not clear cut. Significant differences in religious groups were found on three scales. Jewish subjects and subjects not members of an organized religion tended to be less authoritarian and prejudiced but have a more cynical attitude toward the motives of others.

Chou (1959) designed his study to identify facts concerning foreign students and the foreign students' program at the University of Georgia from the academic year 1948-49 through the academic year 1958-59. The major source of data important to this study was the use of a questionnaire given to the American students at the university.

to obtain information as to their awareness of and concern for the some 299 foreign students in the ten year span.

The author found that the American students were aware of the presence of foreign students on the campus but were not aware of the diversity of social and cultural backgrounds represented by the foreign student. There were signs to indicate the presence of race consciousness among the Americans toward non-white foreign students and also signs to indicate the absence of American students' interest in other nations and cultures.

Badt (1957) devised his study to ascertain attitudes toward the administration of special education programs, toward exceptional children as a group, and toward various categories of exceptional children. Badt's study was based on another by Kvaraceus in which he studied the reaction of a group of education majors toward exceptional children. Kvaraceus found lingering prejudice among a group supposedly able to accept all kinds of students.

One hundred forty education students and sixty-six students from other curricula, from the University of Illinois, were given a questionnaire utilizing objective-type items. The responses were kept anonymous to encourage frankness. Responses from the two groups were compiled separately so as to determine differences. The author found students recognized a need for special services for the exceptional

child but made a clear indication that they were unwilling to participate in these services. Different categories of exceptional children were found to have different social stimulus values to the respondents. Those with physical impairment were looked on as needing special work in a regular classroom atmosphere. Those with mental impairment were to be institutionalized, and those who were gifted were not recognized as a problem. These attitudes were consistent throughout the questions.

There were some differences between the two groups of college students but, in general, acceptance-rejection cut across the grouping. The education group were just as unwilling to teach special classes as were the others and showed less acceptance of crippled children than did other respondents. Non-education students indicated open hostility to this group while education students wanted segregation of the group.

Golde and Kogan (1959)\textsuperscript{154} developed a study to test the hypothesis that attitude toward old people was qualitatively different from those concerning the broader class of "people in general." An instrument containing twenty-five matched experimental-control completion sentences was given to fifty men and fifty women undergraduates at Brandeis University. The age range of the subjects was from seventeen to twenty-three.

The authors found that of seventeen "old people" vs. "people in general" items, sixteen yielded significant differences at the .05 level of confidence. Of eight items to which no exact control questions had been constructed but it had been assumed that they were analogous to other controls, seven yielded significant differences at the .05 level of confidence. The authors felt that these results clearly confirmed the basic hypothesis that beliefs and attitudes toward "old people" differ from those held toward "people in general."

There was a tendency to view the aged in common with the minority groups in American society.

The research offered here, in an attempt to identify patterns of prejudice and bias, is not sufficient to support a generalization to include the total group of eighteen to twenty-two-year-olds. It has been obtained from "select" groups with age ranges which extend beyond those of interest for this problem. However, there is support for a tentative generalization concerning youth, of this age group, who attend college.

Youth tend to hold the same patterns of prejudice and bias as the general population from which they come. Patterns tend to vary some with the sex of the individual and the geographical location but patterns are present in both the white and non-white students. Further education for youths has shown little effect on their patterns of prejudice and bias except perhaps as they come in contact with and get to know members of different ethnic groups. Patterns of prejudice and bias tend to extend beyond attitudes toward ethnic groups to include
exceptional children and the aged. Affiliation with certain religions has some effect on these patterns causing them to vary.

If youth is to develop more liberal attitudes toward various ethnic and special groups in society they must be provided with the opportunity to objectively study, discuss, and understand the cultural background and contemporary thought of the various groups which make up our pluralistic society. In addition, they should be provided with the opportunity to come in social contact with members of other groups to enhance the understanding.

In summary, there is a great amount of work and research needed to provide information concerning the patterns of characteristics involving the entire group of eighteen to twenty-two-year-olds. What research that is available has been accomplished mostly with groups selected from youth attending college and contain data from many persons whose ages range above and below that usually related to youth. The data presented here in an effort to identify patterns of sociological characteristics does not permit any generalization involving the entire group of eighteen to twenty-two-year-olds. However, this investigator believes that sufficient data exist to permit the tentative generalizations drawn, and summarized as follows.

1. Those who attend college tend to experience a continuing strong tie with their parents. This is especially true concerning standards which govern their social life even though youth indicate that they experience considerable conflict with parents involving the changing or relaxing of these standards.
2. Peer-group relationships seem to be of major importance for and an influence on this age group. Furthermore, there are indications that a tendency exists for youth to become more narrow in their selection of friends based on such factors as nationality, intelligence, self-perception, and socio-economic status.

3. The eighteen to twenty-two-year-old is involved in heterosexual relationships with marriage as the ultimate goal. They tend to feel that marriage and family life will offer them the satisfactions they seek in life but the data indicate that they are not consistent nor realistic, either between sexes or between white and non-white, in their views of the important factors involved in boy-girl relations or marriage.

4. Vocational choice becomes of maximum importance at this age level with indications that women face the problem earlier than men. Furthermore, the choice of vocation to follow can be as varied as the persons making the choice. Job security is of prime importance to this age group with negroes emphasizing the point more than caucasians. Data indicate that job interest is also a factor for many. Finally, indications are that this age group are unrealistic in their vocational choices as well as their estimation of their own strengths and weaknesses and tend to follow those occupations with which they are best acquainted.

5. There seems to be a definite lack of consistency in values as indicated by variance in subject reaction to questions concerning personal and societal responsibility. This age group tends to accept
values that aid them in reaching self-centered materialistic goals.

In general, this age group demonstrates a faith in values of immediate practical worth but reject or remain neutral toward those involving time and/or space. The indications are, also, that over the years there has been a relaxing of moral values and that these groups of subjects tend to find themselves in conflict with the moral standards brought to them through cultural heritage.

6. This age group tends to find itself in conflict with the religious attitudes instilled in them at an earlier age. This conflict seems to bring about anxiety and doubt. The group differs from their parents in attitudes toward religion only to return to traditional approaches in later life. The college youth is inclined to show his confusion with religious attitudes and beliefs by a decline in church attendance, and a tendency to place religious activities secondary to activities of work, family, and leisure time.

7. Indications are that those youth who attend college are traditional in their approach to political, social, and economic issues. They express an ideology that is closely related to that of their parents and, in general, one that shows little resemblance to their actions. They are unrealistic and subjective concerning the strengths and weaknesses of the work, both present and past, of the political party to which they claim affiliation. Their attitudes and ideologies tend to shift in relation to the social group to which they belong at any given time. Data suggest that there is some tendency for this group to become more realistic and critical as they advance
through college. The group tend to treat political, social, and economic issues and problems with indifference and apathy.

8. Youth tend to combine their growth toward social-sexual interests with a desire to learn to participate in individual and dual sport activities. They express a desire to develop their ability and their participation in leisure time activities but do not bear this out in action as indicated by data showing a lack of participation in extra-class activities. This age group tends to demonstrate a lack of interest in reading as a leisure time activity and what they do read tends to be of no more than average difficulty in content. They tend to ignore the "professional" books and periodicals unless assigned. The time spent reading and the level of difficulty tends to increase as the group advances through college as does their participation in extra-class activities. Leisure time activities vary with the person and there is little difference demonstrated between the white and non-white student.

9. Indications are that youth who do attend college present a varied pattern of educational interests and objectives. The occupational level of the home seems to be a major factor in the decision to attend college. Whether the youth comes from urban or rural areas also has an influence on decision for further education. Youth demonstrate considerable persistency in their search for educational objectives but many fail to complete college. The reasons for withdrawal are varied. Indications are that youth hold unrealistic concepts of their scholastic abilities and their ability to achieve chosen objectives.
10. Youth tend to hold the same patterns of prejudice and bias as the general population from which they come. Patterns tend to vary some with the sex and geographical background of the individual but similar patterns are present in both white and non-white. Further education has shown little effect on changing patterns of prejudice and bias, to date. Contact with members of other ethnic or special groups tends to decrease the ethnicological bias of youth. The patterns of prejudice and bias tend to include exceptional children and the aged. Affiliation with certain religions has some effect upon these patterns.

These generalizations, in turn, suggest the following standards to be used as guides to provide opportunities for this age group as they meet with and try to solve the problems prevalent in their age group.

1. Youth should be provided with an opportunity to study, discuss, and understand their growing desire for independence and to provide them with opportunities to become involved in a social life which will permit them to develop beyond patterns established as an adolescent member of a family.

2. Youth should be provided with the opportunity to work with and understand the great complexity of make-up involved in the society of which they are members and to give them continuous opportunity to study and analyze their present and future needs involving peer-group relationships.
3. Youth should be provided with the opportunity to study, discuss, and acquire the understanding of the various factors involved in their dating and marriage problems. These provisions should be carried out in a coeducational situation free from segregation because of race or religion.

4. Youth should be provided with the opportunity to study, discuss, and understand their interests, aptitudes, and abilities in relation to appropriate job opportunities. Also, they should have the opportunity to further their preparation for future employment through both general and technical education.

5. Youth should be provided with the opportunities to study and discuss the sources and rationales behind the multitude of moral and personal values confronting them so that they may have a better understanding of these values. They should have the opportunity to develop, understand, and test the meanings of those moral values which they accept as guides for their individual lives.

6. Youth should be provided with the opportunity to thoroughly study, discuss, and gain understanding of their own religious beliefs, attitudes, and values as well as those of other members of society. This, in order that they might accept or reject, individually that which seems to support the ideals they hold.

7. Youth should be provided with the opportunity to objectively study and discuss the many political, social, and economic issues and problems so that he may develop an individual understanding, interest, and approach to these problems and issues. He
should be provided with the opportunity to understand the viewpoint of others. In addition, he should be provided with and encouraged to find ways and means to apply and test the beliefs he comes to accept as his own.

8. Youth should be provided with the opportunity to study, understand, and develop meaningful use of leisure time. They should be provided with the opportunity to participate in individual, dual, and group activities that will contribute to their physical and mental health as well as their educational advancement. These activities should supplement those already available in the community or in the social groups on campus.

9. Youth should be provided with a variety of opportunities in education based on the needs of the group to be served. It is advisable to present youth with the opportunity to develop a more realistic concept of their abilities and to help them align these concepts with more personal educational objectives. This suggests the need for a guidance program which would work with youth, parents, and community both before they enter school and during and after completion of college.

10. Youth should be provided with the opportunity to objectively study, discuss, and understand the cultural background and contemporary thought of the various ethnic and special groups that make up our pluralistic society. In addition, they should be provided with the opportunity to come in social contact with members of other groups to enhance this understanding.
Patterns of Psychological Characteristics

The third, and last, of the three categories studied by this investigator concerned the identification of patterns of needs that are classified here as psychological in nature. A comprehensive review of research related to this area revealed some significant findings. However, with the exception of mental growth, there were not sufficient amounts of data to permit generalizations that would encompass the entire group of eighteen to twenty-two-year-olds. The data presented here have been selected as the best available.

The authorities, writing on the subject of human development, tended to emphasize mental growth and intelligence in their discussions. The first question developed here is "What are the patterns of mental development and changes in intelligence for the eighteen to twenty-two-year-old?" To obtain reliable data concerning this area it was necessary to review and use research completed before 1950, the time limit set for this problem. Bayley (1949) reviewed the Berkeley Growth Study, begun in 1928, in relation to work by Terman with gifted children and with Owen's Iowa Study. The Berkeley study, a longitudinal piece of research, attempted to discover the constancy of the I. Q. of individuals. The study started in 1928 with an initial group of sixty-one babies. The first attempts were made to see if an instrument could be constructed to use to predict later intellectual performance of these infants by measurement at birth.

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Bayley found, pertinent to this investigator's question, that continued longitudinal studies of the subjects as they aged showed that scores of growth in intelligence continued to increase through twenty-one years. These gains occurred at all levels of ability within the group and the data agreed with investigations by Freeman, Flory and by Thorndike. Further research with each individual subject demonstrated that each child appeared to develop at a rate that was unique for him but each child did develop. Further extension of the curve of intelligence indicated that growth of intelligence might well increase beyond the age of twenty-five. Bayley concluded that more longitudinal studies are needed to determine the curve of the growth of intelligence.

Bradway, Thompson, and Cravens (1956) attempted a study, over a period of twenty-five years, to determine the amount of I.Q. change, if any, for a group of students. In the San Francisco area 212 children were given a revised version of the Stanford-Benet in 1931. Ten years later, in 1941, Form L of the Stanford-Benet was given to 138 of these same subjects. Thirteen of the original groups were omitted on the basis of unreliable first test and sixty-one could not be located. Fifteen years later, in 1956, it was possible to locate 111 and these were given Form L of the Stanford-Benet and the Wechsler Intelligence Scale. The retest group in 1956 consisted of

fifty-two men and fifty-nine women. The age range in 1931 was from 2.0 to 5.5 and the range in 1956 was from 26.5 to 32.2.

The authors found, pertinent to the current question, that all but nineteen of the 111 subjects showed a higher I.Q. on the 1956 test. This finding was not limited to any one segment of the test. The correlation between the 1941 and the 1956 testing was .85. Results of the three tests indicate that I.Q. growth makes its greatest spurt between early adolescence and adulthood. The authors interpreted the results of their work as invalidating the assumption that intelligence ceases increasing at age sixteen.

Vincent (1952)\textsuperscript{157} undertook to determine the relationship of age to scores on an intelligence test with the proposition that at, or about, the age twenty the line representing a graph of relationships would remain straight or decline. He hypothesized that the age-score curve of intelligence tests would be, for all practical purposes, a straight declining line between age twenty to age sixty. The author selected about 7,000 temporary civil servants, ages twenty to sixty, from all educational levels. The only thing the individuals had in common was their displacement from normal life by war. He used a test developed by the National Institute of Industrial Psychology, known as the Group Test 90A.

Vincent's data indicated that it seemed likely that from the

\textsuperscript{157}D. F. Vincent, "The Linear Relationship Between Age and Score of Adults on Intelligence Tests," \textit{Occupational Psychology}, XXVI (1952), 243–249.
twenties to the sixties the form of the age-score curve of intelligence tests was, for all practical purposes, a straight line. It seemed that with all intelligence tests, reviewed by Vincent, the rate of decline of scores with age was fairly constant. The author concluded that much more work is needed.

Jones (1955) compared performance on the Terman Group Test of Mental Ability given in the Eleventh Grade and again at approximately age thirty-three. Retest correlation of .84 for men and .90 for women was reported. Nearly all cases showed a gain in mental age. The average gain amounted to seven-tenths of a standard deviation of the Eleventh Grade deviation. A large part of this gain could be attributed to general mental growth in the years immediately following the Eleventh Grade testing and to growth in vocabulary ability.

Zubek and Solberg reported three pieces of research:
(1) Jones and Conrad (1933) who used the Army Alpha Group Test, (2) Miles (1932) who used the Otis group test, (3) Wechsler (1944) working with an individual test. All three researchers attempted studies of the increase and decrease of mental growth. In all three studies data indicated that intellectual performance increased during childhood and adolescence to reach maximum around the age of twenty, after which it began to decline fairly rapidly. The rate of decline

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differed on each of the three tests. The Otis scores dropped most rapidly and the Army Alphs most slowly.

Heglin (1955) attempted to determine age factor differences in susceptibility to problem solving set, ability to surmount set, and training ability in avoiding set. The author selected 100 subjects in each of three age groups. The oldest group had a median age of 66.02; the middle group 31.75; and the youngest group 16.05. There were fifty males and fifty females. The subjects were given two tests. One test was a variation of the water jar test and the other was an adaptation of Cowen's Alphabet Maze Test. One-half of the subjects in each group were given one test and one-half were given the second.

Heglin's work indicated that age differences were found to be consistently significant on both scores for both tests. On the first test given, the oldest group showed generally more set on all measures. The middle age group showed less and the youngest group least set. The middle age group obtained relatively better scores after training so that they showed least set of any group on the second test. The oldest group showed most set on the second test while all groups demonstrated improvement after training. Training was relatively more effective in improving ability to surmount set than overcoming susceptibility to set. The author concluded that age

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difference does exist in these variables, and should be considered in studies of problem solving set.

Morgan (1956)\(^{161}\) attempted to determine whether there was a decline in ability to reason logically with increase in age and whether a significant decline in performance occurred with age in superior adults, those with advanced education. The Morgan Test of Logical Reasoning was given to 133 men in the twenty to twenty-nine bracket with B. S. or B. A. degrees and to 72 men with Masters Degrees. Thirty-seven men in the thirty to thirty-nine bracket with B. S. or B. A. degrees and thirty-five men with Masters Degrees were given the test. None had had any formal training in logic and all were applicants for employment with the federal government.

Morgan's data indicated that, as measured by the Morgan Test of Logical Reasoning, male college graduates in the twenty to twenty-nine bracket, who were applicants for government employment tended to obtain higher scores in logical reasoning than did the thirty to thirty-nine year old applicants. The difference was statistically significant for those with Bachelor Degrees but not for those with Masters. There were indications in this research that logical reasoning declines with age but it was not verified and needs more investigation.

\(^{161}\)Antonia B. Morgan, "Differences in Logical Reasoning Associated with Age and Higher Education," *Psychological Reports*, II (1956), 235-240.
Bilash and Zubek (1960)\textsuperscript{162} investigated the relationship between age and performance on eight independent mental abilities using a large sample of 634 subjects and covering an age range of sixteen to eighty-nine. Special emphasis was placed on the degree to which these abilities held up or did not hold up with age. Tests were administered individually or in small groups to volunteers coming from many sources. All subjects over fifty were paid for their services. Twenty per cent were professionals, 60 per cent were semi-professionals, 12 per cent were skilled, and 8 per cent were unskilled. The King Factored Aptitude Test, normed on the basis of 16,000 subjects ranging in age from the teens to seventies and designed for the adult population working in various jobs in business and industry, was administered. The test measures eight basic factors of intelligence. Fourteen tests were employed but only thirteen were used in the investigation. The test of motor skills was omitted and those of comprehensional reasoning, numerical ability, perceptual ability, verbal fluency, memory, space relations, and dexterity were used.

The authors found that general intellectual ability declined progressively from the teens to the seventies. Decline between teens and the forties is gradual and from forty on it is very steep. The differences between teens and the twenties, the twenties and thirties, and the thirties and forties were significant at the .01 level of

confidence. Comprehension, verbal fluency, numerical, and spatial abilities all held up with age to the mid-forties but declined thereafter. There was no significant rise in these abilities from the teens to the early twenties. Reasoning, memory, perception, and dexterity did not hold up with age but declined gradually from the teens to the seventies. The decline from the teens to the early twenties and from the twenties to the thirties was significant. Males showed a significantly better performance on comprehension, numerical ability, spatial ability while females were significantly better in memory. No significant difference in sexes was found for reasoning, verbal fluency, perception, and dexterity.

Thurstone (1955) demonstrated that earliest maturing of a primary ability occurs with perceptual speed which reaches 80 percent of the adult level at age twelve. The space and reasoning factors attained the same relative efficiency at age fourteen; number and memory factors at about age sixteen; verbal comprehension and word fluency mature relatively later. This is in accord with studies of adults which showed continued gains in vocabulary tests at ages during which other functions were declining.

Zubek and Solberg reported an investigation by Moore (1929) in which 200 children aged six to twelve were compared with college students for ability to solve problems in logic. The problems were of

164Zubek and Solberg, op. cit., pp. 255-256.
three types: (1) verbal reasoning, (2) autistic fallacies, (3) logical fallacies. There was a gradual improvement in reasoning ability measured by the three types of tests right through college level. Zubek and Solberg also reported work by Watson and Glaser (1943) and by Burton and Joel (1945) in which tests were given that were designed to measure a number of abilities believed to be involved in critical thinking, among them the ability to generalize, to make inferences, to discriminate arguments, and to recognize assumptions. The joint findings of these investigations suggest that the ability to think critically improves with age until the middle thirties and subsequently declines.

Zubek and Solberg reported one of the most extensive investigations of thinking. That of Foulds and Raven (1949) in England. About 8,000 subjects of varied background, ranging in age from six to sixty, were given the Progressive Matrices Test. This test consists of sixty problems whose solutions demand comparisons, reasoning by analogy, and logical deductions. The investigators considered it a test of a person's capacity to understand and to apply a fresh method of thinking. The age changes in this capacity increased during childhood to reach a maximum around the age of fifteen. It remained stable into the middle twenties and then declined. The rate of decline depended on the subjects' ability. For the brightest five per cent

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165Zubek and Solberg, op. cit., p. 269.

166Zubek and Solberg, op. cit., p. 271.
of the group the decline was slight. For the lowest twenty-five percent considerable decline was evident beginning around the mid-twenties.

Birren, Fox, and Botwinick (1950), Hesterly (1960), Blewett (1950), and Jones and Conrad (1933), all contribute work directed toward the determination of the mental patterns of humans but the data provided do not pertain directly to the identification of such patterns. Morely (1950), Barbe (1952), Perry (1946), Norton (1958), Mueller and Mueller (1953), Curran (1960), Zahn (1960), and Farnum and Hackett (1960), all contribute research which attempts to identify factors affecting learning at the college level but the data do not provide for the identification of patterns of mental growth or intelligence.

The data provided here to support any generalizations about the identification of patterns of mental growth and intelligence are, to some extent, contradictory. Much of the data have been collected through research where the age range includes that which is of interest in this paper but some of the most significant work was completed before 1950. It is not possible to make any generalization that would be significantly supported by all data because of contradictions. However, tentative generalizations are possible.

Indications are that general intelligence can show an increase, as measured by our standard I. Q. tests, through the age group involved in this study. This increase, however, will depend on the individual and his learning environment. The bulk of the research supports this statement but researchers Bilash and Zubek obtained results that are
opposed to this generalization. In relation to patterns of growth or change for individual primary abilities, data suggest that abilities of reasoning, work comprehension, and word fluency tend to improve well past the age of twenty-two but the data do not support any generalization concerning the other primary abilities.

Much more research is needed in this area. It has been long assumed that the intelligence of an individual became arrested in the middle or late teens. There now seems to be sufficient data to indicate that this assumption should be questioned. Not only does general intelligence tend to improve but improvement may well occur in several of the primary abilities.

If these generalizations are tenable then it would seem that the curriculum of the community junior college will need to provide for constant opportunity for the students to develop in both the areas of general intelligence and in certain primary abilities. These opportunities will need to be developed on an individual basis since data indicate that the growth patterns presented are individual in nature. It would also seem advisable to provide for a program of testing and guidance to secure information on which curricula can be based and to increase the data available to identify patterns of growth and need in the area of mental development.

In the psychological category, the authorities gave strong emphasis to the emotional needs of youth. "What are the patterns of emotional needs and problems of the eighteen to twenty-two-year-old?"
Monks and Heath (1952) attempted, over a period of four years, to identify all problems which seemed to have a significant bearing or interference with either the student's satisfactory academic performance, his reasonable adjustment to college, or maintenance of a fair degree of interpersonal harmony. Between 1948 and 1952 the authors systematically collected and tabulated the problems elicited from each of the 1,343 new members admitted to the freshmen year in the fall semester. All these men remained on the list for four years but no new subjects were added. Health records were checked, interviews held, and questionnaires filled out.

The authors found that 62 per cent either received problem diagnosis or special attention during the four years. Seventeen per cent had problems while in college which the psychiatric or medical members considered "urgent or acute." Of those who eventually withdrew without finishing their work 67.4 per cent indicated that inadequate academic performance was the major reason but 34.9 per cent listed intrapersonal problems as the reason for withdrawal. Of those who remained and did outstanding work 10.3 per cent listed intrapersonal problems as their major source of difficulty.

Goldsen (1952) reported pertinent information for this question from the Cornell Value Study. Eighty-four per cent of their


subjects stated that it was fairly important that they be liked by different kinds of people. Forty-seven per cent felt that being well liked was very important. When asked to choose between being independent, successful, or well liked the students overwhelmingly chose success and being well liked. The subjects indicated their success orientation when 93 per cent of the group stated that they felt it was important to get ahead in life.

Powell (1955) tested six hypotheses concerning age and sex differences as related to degree of conflict within certain areas of psychological adjustment: (1) It was hypothesized that there were age differences in the degree of conflict which individuals experienced in certain areas of psychological adjustment. (2) It was proposed that conflicts in certain areas of psychological adjustment would appear at an earlier age for females than for males. (3) It was hypothesized that the "intensity" of conflict in the area of vocational outlook would be found to be greater, and appear at an earlier age, in males than in females. (4) It was hypothesized that no sex differences in intensity, and age of onset, of conflict in the area of religion would be found. (5) It was hypothesized that intensity of psychological conflict would be at a maximum during adolescent years. (6) Finally, it was postulated that vocational outlook would become an area of conflict during early maturity.

The author selected a sample of 224 men and 224 women, ranging

in age from ten to thirty. These subjects were then confronted with a list of stimulus words having emotional association with each adjustment area. The subjects gave a verbal response. Powell found that, in general, the results did not yield significant differences related to the hypotheses. The results from reaction time indicated that conflicts appeared at an earlier age for females than for males in areas of parent-child relationships, emotional tendencies, heterosexual relations, physical appearance, and social acceptability. Contrary to the hypothesis, conflict also appeared earlier for females than for males in areas of religion and vocational outlook. Results from the different scores demonstrated that intensity of conflict in psychological adjustment was at a maximum during adolescent years in the areas of parent-child relationships, emotional tendencies, heterosexual relations, physical appearance, religion, and social acceptability. In general, it appears that married individuals experience much less conflict in the areas of parent-child relationships, emotional tendencies, heterosexual relations, physical appearance, and religion than do the unmarried. They experience somewhat greater conflict in areas of social acceptability.

Elshiekh (1960) attempted to identify the similarities and differences in problems as indicated by Egyptian and American undergraduate students. The author used the Mooney Problem Check List and

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administered it to 284 Egyptians and 235 Americans during the second semester of 1959-60 school year. The Egyptian sample included 142 freshmen and 142 seniors and the American sample included 122 freshmen and 113 seniors.

The findings, relevant to this question, were as follows. Fifty per cent of the American students indicated they would like to have the opportunity to talk over their problems with someone on the college staff. The problems of major concern to the American students fell in the area of adjustment to college work. Of least significance to both groups of students were the problems involving home and family relationships.

Olsen (1956)\textsuperscript{171} designed a survey to determine some of the common study problems reported by junior college students. The writer surveyed 292 first quarter freshmen during the fall semester 1956 to determine the study problems utmost in their minds. Each student was asked to describe fully his main study problem. These were then categorized and ordered. Olsen found that 52 per cent of the total group listed inability to concentrate on the task at hand as their major problem. Thirty-two per cent stated that inability to follow a study schedule was their major problem while eight per cent listed lack of interest and seven per cent indicated that inadequate general preparation and skills as their major problems, respectively.

Moser (1955)\(^{172}\) did a survey to determine some of the outstanding problems and transitory fears of entering freshmen. The author prepared a check-list and administered it to 1350 freshmen students in three Texas institutions. There was no room for free statements. Moser found that the greatest concern was with what may be called organizational-academic problems. Seventy-five per cent were anxious about their ability to pass college work. Fifty per cent were worried about course selection. Forty-seven and a half per cent were concerned with whether the teachers would be understanding and friendly.

Social problems were second highest in incident. Thirty-seven and one-third per cent of the subjects were worried about their ability to make friends. Twenty-nine and one-half per cent were concerned about getting a desirable room mate and 20.9 per cent were concerned about their treatment from upper classmen.

Wright (1953)\(^{173}\) attempted a study to gain a better understanding of the nature of the problems encountered by freshmen college students during their first semester in college. The author searched for answers to the following questions: (1) Which problems were most frequently encountered? (2) Which problems presented the highest degree of seriousness? (3) Which problems were most often solved during first two weeks of college? (4) Which problems were most often


encountered during the first two weeks of college? (5) What people most frequently helped these subjects with the problems they encountered? The author administered a questionnaire to 327 men and 476 women asking them to indicate what problems had been the most serious to them. IBM and hand tabulation were used to compile data.

Wright found that the problem of "mastery of course content" occurred most frequently. The problem of lack of "lecture and classroom experience" presented the highest degree of seriousness. The problem of "finance, health, and housing" occurred most frequently during the first two weeks. The problem of "religion, ethics, and morals" was least frequently solved during the first two weeks. Of statistical significance was the following. The students were most concerned with the problem of mastering the material in the courses they were taking. They felt that the most serious problem they had was that of finding a comfortable, convenient place to live that would provide them with a place to study free from distraction. Use of the library created the most serious problem during the first two weeks and problems of love, marriage, and courtship relations were least frequently solved during the first two weeks.

The author concluded from further data that boys who commute daily and those who graduate from high schools of more than 500 are shown to be less well adjusted while girls who live in boarding houses, girls from high schools of 200 to 500, girls who graduated in 1949, and girls who graduate from high schools with guidance departments were least well adjusted.
Slinger (1955) designed his study to ascertain the problems of freshmen at the University of Florida, and to determine, if any, the relationship between these problems and academic achievement of freshmen. The author selected 251 freshmen at random from the entering freshmen class of September 1954 and who were still registered February 1955. These subjects were given the Mooney Problem Check List. Other data was procured from the raw score of their ACE Psychological Examination and grade point average.

Slinger found that female students identified more problems than male students according to their respective proportionate representation in the study. Students, in general, were more frequently concerned over problems of adjustment to college than other problems in other areas. There was a lack of intimate teacher-student relationships at the freshmen level and the counseling programs were inadequate. Many students apparently were entering with inadequate preparation for college work and were not receiving the necessary assistance in the development of study habits and skills to meet the demands of college academic work.

The author recommended that there should be re-emphasis of more intimate teacher-pupil relationships, particularly at the freshmen level. He felt that every freshman should have a specific faculty adviser with whom he should meet and become personally

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acquainted through regularly scheduled sessions. An organized program or course is needed to help freshmen adjust.

Wake (1950)\textsuperscript{175} compared a group of early adolescents, aged eleven to sixteen, with a group of university students between eighteen and twenty-four years of age, subjecting them to extensive interviews followed by presentation of a comprehensive list on which they checked their own fears. Analyses were made according to both age and sex. When Wake compared the fears of early adolescent boys with those of college men, he found that social fears not only persisted but increased to account for 26.4 per cent of all reported fears in subjects eighteen to twenty-four. On the other hand, fears of animals and of accidents dropped out to be replaced by sexual fears and fears of authority. Sexual fears revolved around consequences of intercourse such as pregnancy, venereal disease, and discovery. Fears of authority included dread of parental criticisms and of disappointing parents by failure in school or work. In the adult females, social fears came strongly to the fore, animal fears persisted but with less frequency and sexual fears emerged into third position. When the findings were considered as a whole it would seem that during the transition from childhood to adolescence concrete fears are replaced by social fears, and from adolescence to adulthood these social fears become intensified, while sexual fears also emerge. In addition, it was found that feelings of inadequacies were almost

\textsuperscript{175}Zubek and Solberg, \textit{op. cit.}, pp. 321-323.
totally absent prior to the age of twelve. During adolescence there
was a sudden and large increase in this type of fear, followed by a
further increase in adulthood, especially in males.

Zubek and Solberg\textsuperscript{176} reported recent work by Pressey (1952) in
which he attempted to determine the changing worries of 5,000 students
from grade six through college. Grade school students worried about
improbable events such as fire, hold-ups, and death. These worries
declined rapidly, to be replaced by worries of socioeconomic character.
As high school merged into college, concern over examinations, ability,
work, money, appearance, and morals increased. Certain sex differences
appeared. Worries of a social nature emerged earlier and were more
frequent in females than in males. On the other hand, worries of an
economic character emerged earlier and showed higher incidence in
males.

Boys in college tended to worry about specific problems such as
money, appearance, ability, and work. These worries were constant or
on the increase. Boys also worried about examinations, self-con­
sciousness, and morals but these were on the decrease. Girls tended
to worry about self-consciousness, money, work problems, and ability.
These worries were constant or on the increase. Girls also worried
about examinations, appearance, and morals but these were on the
decline.

Zubek and Solberg\textsuperscript{177} also reported work by Meltzer (1933) in

\textsuperscript{176}Zubek and Solberg, \textit{op. cit.}, pp. 324-325.

\textsuperscript{177}Zubek and Solberg, \textit{op. cit.}, p. 325.
which he summed up the cause of anger among college students under the broad heading of thwarting. This was broken down in several ways. Anger was more readily aroused by people than by things, although a sex difference appeared. Women were more easily provoked by people and men by things. Thwarting of self-assertion aroused anger in 86 per cent of the cases as compared with 14 per cent for thwarting of activities. Thus, by late adolescence, prestige has become more important to the college student than physical activities. Typical responses of college women were, "That girl made a slighting remark about a friend of mine" or "The professor's daughter acted like she owned the place."

The majority of this data, concerning the emotional needs and problems of youth, has been obtained from select individuals and pertains to the reaction of these subjects to the college environment. Much of the research was done with groups whose age range extended beyond that set for this paper. In addition, there was little of statistical significance available to present in the area. These three factors prevent any generalizations involving the total group of eighteen to twenty-two-year-olds. However, with Pressey's and Wake's findings as support, it does seem possible to draw some tentative generalizations concerning youth.

The emotional needs and problems of youth tend to fall into two major groups. Youth, in general, find themselves facing problems of social adaptability and prestige. Those who move on to higher education tend to have problems involving adjustment to college work. The remaining research tends to verify these two points and indicate that
youth's emotional problems and needs are varied and complex. There is need for a great deal more research to help identify the emotional needs of youth.

If the above generalizations are tenable then it would seem that youth should be provided with an opportunity to study and understand himself in relation to the social environment into which he is entering. He should be provided with resources to aid him in developing a positive attitude concerning his social adaptability. In addition, he should be provided with resources to aid him in understanding and becoming adjusted to the area of work in which he is to become involved, whether it be college or the field of employment. The institution of higher learning needs to establish services which will provide youth with this help as well as provide the institution with information concerning youth's emotional needs and problems so that necessary changes can be made in the curricula to provide for students as individuals.

The last question to receive emphasis by the authorities, reviewed by this investigator, is "What are the patterns of personality development in the eighteen to twenty-two-year-old?" Washburn (1961) developed a study to find patterns of self-concept useful in describing adolescents and young adults and to integrate the various theories that formulate self-concepts in terms of child development. An instrument was developed and standardized by the author.

The final instrument, after much work and rating by graduate students, consisted of six self-patterns rated as the one least to the one most mature: (1) Somatic-primitive self, (2) Submissive-dependent self, (3) Detached-independent self, (4) Outer-controlling self, (5) Inner-controlled self, (6) Integrative-actualizing self. The final test was given to 115 college students, to 85 non-college preparatory high school students and to 235 college preparatory high school students.

The author found significant differences in means on test measuring various self-levels for contrasting groups of males and females. College preparatory and non-college preparatory high school students, and college and high school students differed significantly. However, only the outer-controlling self was significant at the .01 level of confidence. College preparatory students seemed to have a more mature self-concept than did the non-preparatory group. There was a large and significant difference of .01 here on the outer-controlling self indicating that college preparatory students showed greater drive to obtain status long before attending college.

Sanford (1955) discussed the personality development during college years and reviewed some of the results of the Vassar Study as they related to major growth trends. The four growth trends presented as needs of the eighteen to twenty-two-year-old were (1) the stabilizing of ego identity, (2) the deepening of interests, (3) the freeing of personal relationships, (4) the humanizing of

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values. The findings related to these trends were obtained through the administration of a test battery of 1,100 true and false items, forming a personality scale, to 730 subjects at Vassar. Four hundred and thirty freshmen and 300 seniors were involved.

The findings, pertinent to this question, follow. Seniors showed more disturbance with respect to identity than did freshmen. They were more often dissatisfied with themselves, shifted more often between different patterns, and had more conscious conflict. Young college women seemed to have difficulty getting a clear conception of what roles an educated woman may take in our society and how these may be related to a basic feminine identity. Seniors were clearly more flexible and incompulsive, more tolerant and impunitive, more rebellious and critical of authority, more rejecting of traditional feminine roles, more unconventional and non-conforming, more liberal in their views on interpersonal relationships. The area of humanizing values was marked by the greatest difference between freshmen and seniors. Test results showed that seniors were well ahead of freshmen in capacity to suspend judgment, in tolerance of the uncertain, the indefinite, the merely possible. They were also ahead in capacity in skepticism, criticalness, and realism. Seniors were less cynical than freshmen in their conception of people, far more cynical with respect to institutions and organizations. They showed more self-insight, more inner-life, and less repressive mechanism of defense which is often labeled "neuroticism."

Medsker, in his paper to the annual meeting of the American
Educational Research Association (1963), discussed personality characteristics as studied by the Center for the Study of Higher Education in 1959. The five scales of the Omnibus Personality Inventory was administered to 10,000 June graduates. The scales measure complexity of outlook, lack of anxiety, non-authoritarianism, social maturity, and thinking introversion. It was found that both men and women graduates who proceeded to college work were, as compared to their counterparts who did not go to college, higher in liking for reflective thought as measured by the thinking introversion scale. They were also less compulsive, and more independent and unconventional as measured by the social maturity scale and, in the case of men, somewhat less given to chronic anxiety and neuroticism as measured by the "lack of anxiety" scale. In the complexity of outlook scale which measures the tendency to perceive and to react to the complexity of the environment and to show tolerance for stimuli which are novel or ambiguous, the men who went to college were more like those who did not. The college women, however, scored considerably higher on this scale than their non-college counterpart. The differences in scores, for both men and women, on each of the five scales were significant well beyond the .01 level of confidence. In general, the group that went to college was more socially mature, more curious, more tolerant, more interested in abstract ideas, and may be said to have had a higher theoretical orientation or scheme.

180Medsker, op. cit., p. 6.
of values than those in the group who did not continue their education.

Goldsen (1952)\textsuperscript{181} reported from the Cornell Value Study that 88 per cent of the students viewed themselves as making friends easier or as easily as most people. They see themselves as friendly or more friendly than the average person. Ireland (1950)\textsuperscript{182} developed a pilot study to obtain knowledge concerning an acquaintanceship with the problem of "what it means to be a Negro." Twenty-eight males and forty-four females, average age eighteen and modal age eighteen, representing twelve religious denominations, twenty-two states, from lower-middle or upper-lower class homes, were asked to write a short paper on the subject. This paper was then analyzed and the author found that students were most concerned about discrimination and segregation. Students had a great deal of race pride and pride for physical characteristics. Some were very sensitive and defensive about their present position. Males were more aggressive than females. There was no evidence of constructive thinking about this area nor were there practical suggestions for solving the problem.

Gaier and Warnback (1960)\textsuperscript{183} initiated a study to assess the differences in the self-evaluation of personality assets and liabilities of southern white and negro students. Specifically, they were

\textsuperscript{181}Goldsen \textit{et al.}, \textit{op. cit.}, p. 19.


concerned with examining the behavioral and personality facets considered most positive and most negative by racially different college students which might reflect differing social determinants. Two hundred and twenty three white and 221 negro male and female undergraduates in two southern state universities, ranging in age from eighteen to twenty-four, were asked to list three each of what they considered to be their greatest personality assets and greatest personality liabilities. White instructors administered the questionnaire to white students and negro instructors to negro students.

The researchers found that white males showed significantly fewer socially oriented responses than both white females and negro male and female students. Socially oriented responses were listed significantly more often than character or achievement oriented responses for all groups, though significantly less frequently for white males. No significant differences in responses to liabilities listed were found among the four groups. Socially oriented responses for all groups were listed significantly more often as assets than as liabilities. Southern negro males resemble their own female group more than white males resemble their female group in categories examined. Negro males showed significantly fewer achievement responses than his white counterpart, but the general profile of categories shows great similarity to both white and negro women.

Goldstein (1954) developed a research problem to further
test the notion that local or regional norms were necessary for interpreting MMPI profiles of college students by examining the data available on college males. Brown, Cottle, Gilliland, and Colgin all had indicated that local norms were needed while Black had researched some 5,014 females at fifteen different institutions and concluded that the profile for women does not differ from institution to institution. The author selected 408 subjects, at random, from the Iowa State University and gave them the MMPI Booklet Form. From published and unpublished literature seven other groups were selected for comparison.

Goldstein found that when the scores were subjected to an analysis of variance, the results indicated that there were no significant regional differences. An analysis of variance for the standard deviation also showed no significant regional differences. The author concluded from his data that while there is a characteristic profile for the college male that differs little from college to college, it is markedly different from the characteristics profile of the non-college male and of the college female.

Hancock and Carter (1954) did research to determine what difference might exist in personality between students selecting the various types of curriculum. A total of 350 subjects were given the MMPI as they came to the Student Personnel Bureau for counseling and who in turn volunteered to take it. Ninety three subjects were in

Engineering; 203 were in Arts and Science; and 54 in Commerce. The authors found the following pertinent to identification of personality patterns.

Commerce and Liberal Arts students were more abnormally concerned about bodily functions and were more like patients who have developed conversion type symptoms than were Engineering students. Commerce and Liberal Arts students were also more similar to persons whose main difficulty lies in their absence of deep emotional response and inability to profit from experience and their disregard for social mores than were English students. Commerce students were found to have masculine-feminine patterns more like the opposite sex than did Engineering students. Liberal Arts students were found to be more similar to clinic patients who were characterized by suspiciousness, oversensitivity, and delusions of persecution than Commerce or English students. Students enrolled in English appear to be much more free from emotional tendencies which were likely to interfere with successful adjustment.

Davidson and Krieglow (1952), Meresko, Rubin, and Shontz (1954), Wright (1953), Brown and Lowe (1948), Kohn and Fiedler (1961), Graves (1958), Bushnell (1959), and Wolf (1961), all have undertaken research pertaining to the personality of college bound students but the data presented in these works are not appropriate for identifying patterns of personality development for the eighteen to twenty-two-year-old.

There is a paucity of research pertaining to personality patterns of youth just as there is a scarcity of research in the other areas relating to the post-adolescent group. The data presented here
do not permit an all-encompassing generalization for youth but there is support for a tentative generalization.

Data indicate that there is a difference in personality patterns between those youth who go to college and those who do not. College youth tend to have a more mature self-concept. There seems to be little variation in regional patterns but indications are that differences exist, in patterns of personalities, between students in different curricula. Negro patterns tend to differ from the patterns of white students but the patterns of both groups seem to change as they progress through college. The student's personality becomes more flexible, liberal, questioning, critical of authority, and more able to withstand ambiguity. In general, youth's personality tends to be socially oriented.

If the community junior college is to fulfill its democratic goals, these generalizations would seem to indicate the necessity for the institution to prepare for the presence of many and varied personalities. The institution should provide for a program of guidance and testing so as to ascertain the varied patterns present in the student body. Preparations should be made to provide the various types of students with opportunities to understand themselves in relation to the world around them. Provisions should be made to help those who experience problems of personality development regain a positive approach to life.

In summary, the following tentative generalizations have been drawn as a result of the research presented on the preceding pages. The generalizations pertain to the identification of patterns of
psychological characteristics of the eighteen to twenty-two-year-old youth.

1. Indications are that general intelligence can be increased, as measured by our standard I. Q. tests, through the age group involved in this study. This increase, however, will depend on the individual and his learning environment. Data suggest that abilities of reasoning, word comprehension, and word fluency tend to improve well past the age of twenty-two but the data do not support any generalizations concerning the other primary abilities.

2. The emotional needs and problems of youth tend to fall into two major groups. Youth, in general, find themselves facing problems of social adaptability and prestige. Those who move on to higher education tend to have problems involving adjustment to college work. The remaining research tends to verify these two points and indicate that youth's emotional problems and needs are varied and complex.

3. Data indicate that there is a difference in personality patterns between those youth who go on to college and those who do not. College youth tend to have a more mature self-concept. There seems to be little variation in regional patterns but indications are that differences exist, in patterns of personalities, between students in different curricula. Negro patterns tend to differ from the patterns of white students but the patterns of both groups seem to change as they progress through college. The student's personality becomes more flexible, liberal, questioning, critical of authority, and more able to withstand ambiguity. In general, youth's personality tends to be socially oriented.
These generalizations, in turn, suggest the following standards to be used as guides for providing for this age group as they meet the various psychological needs and problems of their age group.

1. The curricula of the community junior college should provide for constant opportunity for the students to develop in both the areas of general intelligence and in certain primary abilities. These opportunities should be developed on an individual basis since data indicate that the growth patterns presented are individual in nature. It would seem advisable to provide for a program of testing and guidance to secure information on which curricula can be based and to increase the data available to identify patterns of growth and need as they arise in the area of mental development.

2. Youth should be provided with an opportunity to study and understand himself in relation to the social environment into which he is entering. He should be provided with resources to aid him in developing a positive attitude concerning his social adaptability. In addition, the community junior college should provide the youth with resources to aid him in understanding and becoming adjusted to the area of work in which he is to become involved, whether it be college or the field employment. The institution of higher learning needs to establish services which will provide youth with this help as well as provide the institution with information concerning youth's emotional needs and problems so that necessary changes can be made in the curricula to provide for students as individuals.

3. The institutions should provide for a program of guidance and testing so as to ascertain the varied patterns present in the
student body. Preparations should be made to accommodate the varied types of students with opportunities to understand himself in relation to the world around him. Provisions should be made to help those who experience problems of personality development to regain a positive approach to life.

Chapter three will present the various standards suggested in this chapter as criteria. The results of an evaluation of this criteria by authorities in the community junior college will be presented and a set of conclusions will be drawn from the data.
CHAPTER III

PRESENTATION OF DATA

The purpose of this chapter is to present data gathered from evaluation sheets sent to a select group of persons who are directly involved with the community junior college movement. The data are to serve to arrive at conclusions concerning two propositions set forth in chapter one: (1) to determine to what extent authorities in the field believe each criterion to be of importance; (2) to determine, if possible, the extent to which present curricula of the community junior college meet the criteria.

Following is a summarization of (1) authorities selected to be contacted and the means used to select them, (2) the method by which the evaluation sheets were developed, (3) the data gathered from the evaluation sheets returned, (4) the conclusions concerning the data tabulated.

Selection of Authorities

This investigator attempted to gather data from as wide a geographical representation of community junior college personnel as could be obtained. To assure the desired breadth of evaluative representation every effort was made to select institutions, which matched the definition of the community junior college used in this paper, in such a way that all geographical areas of the United States
would be represented. Descriptive and comparative information con-
cerning the institutions finally selected were obtained from two
sources. First, the investigator reviewed Barron's Guide to the
Two-Year College. Second, to supplement this source, a review
was made of all current 1961-63 two-year college bulletins available
from the libraries of The Ohio State University.

The institutions were selected on the basis of the following
guides: (1) the institution is tax supported and public controlled,
(2) the institution provides for a transfer program, (3) the insti-
tution provides for terminal education, (4) the institution offers
vocational educational opportunities, (5) the institution provides
for course work of varied length, (6) the institution provides for
adult education, (7) the institution has provisions to permit those
who have not completed high school to enroll in phases of the
program suited to their individual needs. It should be noted here
that there is a certain element of risk involved in attempting to
match institutions to the above guides on the basis of written
descriptions. Time and money, however, were limiting factors in
attempting any other method of selection.

This research resulted in the selection of fifty institutions
on the basis of the guides listed above. After the selection of the
institutions this investigator then obtained, from various sources,
the name of the Director (or Dean) of Curriculum for each institution.

Seymour Eskow and Lawrence L. Jarvie, Barron's Guide to the
Two-Year College (Great Neck, New York: Barron's Educational Series,
In those cases where this position was not listed the President of the institution was assumed to be the person in charge of curriculum and his name was used. This list (Appendix A) consists of fifty names representing institutions geographically distributed as follows: (1) eleven from Northwestern United States, (2) fourteen from Southwestern United States, (3) twelve from Midwestern United States, (4) fifteen from Southeastern United States, (5) four from Northeastern United States. The geographical representation desired was obtained with the exception of the northeastern portion of the country where the junior college movement tends to be confined heavily to privately supported institutions.

To this list of fifty names was arbitrarily added the names of five men prominent in the community junior college movement but not connected directly to any institution. These additional five persons indicated an interest in the movement through recent writings and research involving curriculum construction. The names of these five men, and their positions, are found in Appendix A.

Development of Evaluation Sheets

The first step in the development of the evaluation sheets was to review each of the standards developed and presented in chapter two. The purpose of this review was to (1) bring together any standards similar in nature so as to prevent overlapping, (2) determine whether any of the standards were of sufficient breadth to necessitate separation into two or more criteria to assure clarity. The seventeen original standards were listed and previewed. From
these seventeen this investigator created twenty-nine separate
criteria. This list was then submitted to the members of this in-
vestigator's reading committee for review and comment. The result
of this procedure was a final list of twenty criteria to be evaluated
by the authorities selected.

As indicated in chapter one of this thesis, two types of
evaluation was desired. First, the authorities contacted were asked
to rate the importance of each criterion. Second, the authorities
contacted were asked to indicate to what degree they felt each cri-
teron is being utilized in the development of community junior
college curriculum today. To permit this dual evaluation two separate
evaluation sheets were designed.

Evaluation sheet number one was developed to gather data on
the importance accorded each criterion by the authorities. A five
point rating scale was used, with appropriate headings for each
column, so as to give the evaluator an opportunity to rate each cri-
teron from a position of "of no importance" to a position of "very
important." Three intermediate positions were provided. A sample
copy of this evaluation sheet may be found in Appendix B.

Evaluation sheet number two was developed to gather data
concerning the utilization factor. Again, a five point rating scale
was used, with appropriate headings for each column, so as to give
the evaluator an opportunity to rate each criterion from a position
of "no use made" to a position of "extensively used." Three inter-
mediate positions were provided. A sample of this evaluation sheet
may be found in Appendix C.
Results of Evaluation

After completion, the evaluation sheets were sent to the fifty-five persons selected to preview and rate the criteria. Enclosed with each mailing was (1) one copy of evaluation sheet number one and one copy of evaluation sheet number two, (2) a self-addressed, stamped envelope, (3) a letter of explanation and information requesting the authorities assistance in completing this evaluation. Following a waiting period of three weeks, a letter of follow-up was sent to twenty-seven persons who had not yet returned their evaluation sheets.

As a result of the original contact and the single follow-up letter forty-three sets of evaluation sheets were completed and returned. This represents a return of 78.2 per cent from the group contacted. Of the twelve authorities who failed to respond seven are unaccounted for and five indicated by various means that they could not participate.

The data gathered from the two evaluation sheets was summarized in the following manner. Tabulation sheets were constructed so that ratings of importance and utilization could be tabulated separately. Each of the ratings given the separate criterion by individual authorities were recorded in the appropriate column on the proper tabulation sheet. The tabulations were re-checked for errors and the marks opposite each criterion were totaled to ascertain that forty-three ratings were accounted for. The total number of authorities rating a criterion in each position was then converted to a percentage number by dividing the number in each column by forty-three. The results of this tabulation are represented in the form of line graphs.
so that a visual comparison of importance to utilization can be made easily.

A line graph has been constructed for each criterion. The vertical leg of the graph presents divisions for the percentage of authorities rating the criterion at a given position on the five point scale. The base line of the graph presents the five positions for rating importance or utilization. Thus, as the graph is read, a person can see the percentage of respondents rating the criterion at a given position and compare it to other ratings of the same criterion. Each graph presents two lines: (1) a solid black line to represent the ratings accorded the importance of each criterion; (2) a broken line to represent the ratings given each criterion according to utilization. Each graph is accompanied by the appropriate criterion and followed by a brief interpretation of its meaning. In discussing the relationship of importance to the utilization factor this investigator has made the assumption that the rating positions on both sheets can be equated. That is, that there is a close relationship between a rating of "very important" and one of "extensively used" and that the same relationship exists for all five positions on the scales.
GRAPH 1.—Opportunity is provided for students to study, understand, and develop their patterns of physical growth.

As represented by the curve of the black line in graph one the respondents rate criterion one from a position of "of little importance" to a position of "very important" with the concentration of evaluators (47.6%) rating it at a position of "moderately important."

As represented by the curve of the broken line in graph one the respondents rate utilization of criterion one from a position of "no use made" to a position of "extensively used" with the concentration of evaluators (42.9%) rating it at a position of "some use made."

Comparing the curve of the two lines, it appears that the importance accorded this criterion by the respondents is closely equated with the utilization rating. It can be concluded that the authorities responding feel that this criterion is of moderate importance and is being utilized adequately.
GRAPH 2.—Opportunity is provided for students to understand and further improve their proficiency in motor skill development.

As represented by the curve of the black line in graph two the respondents rate criterion two from a position of "of little importance" to a position of "very important" with the concentration of rating existing in position three (42.9%) and position four (35.5%).

As represented by the curve of the broken line in graph two the respondents rate utilization of criterion two from a position of "no use made" to a position of "considerable use" with the concentration of evaluation (42.9%) at a position of "some use made."

Comparing the curve of the two lines, it appears that the importance accorded this criterion by the respondents is closely related with the utilization rating. It can be concluded that the authorities responding feel this criterion is of moderate importance and is being utilized adequately at the present time.
GRAPH 3.—Opportunity is provided for students to study, evaluate, and understand their role in safety practices, e.g., motoring and home safety.

As represented by the curve of the black line in graph three the respondents rate criterion three from a position of "of no importance" to a position of "very important" with the concentration of rating being the same (30.9%) at positions of "of little importance" and "moderately important."

As represented by the curve of the broken line in graph three the respondents rate utilization of criterion three from a position of "no use made" to a position of "considerable use." The concentration of rating for utilization (57.1%) exists at position "little use made."

Comparing the curve of the two lines, it appears that the authorities responding feel that this criterion is of little importance and that this lack of importance is reflected in the utilization rating.
GRAPH 4.—Sources are provided for students to receive help with problems of mental adjustment.

As represented by the curve of the black line in graph four the respondents rate criterion four from a position of "of little importance" to a position of "very important" with the concentration of rating (52.4%) existing at the position of "very important."

As represented by the curve of the broken line in graph four the respondents rate the utilization of criterion four from a position of "little use made" to a position of "extensively used." The concentration of rating is spread over three positions: (1) little use made (26.2%); (2) some use made (38.1%); (3) considerable use (30.9%).

Comparing the curves of the two lines, it appears that there is considerable difference between the importance accorded this criterion and its rating for utilization. It can be concluded that the authorities responding feel that this criterion is very important and that more emphasis is needed in the community junior college curricula.
GRAPH 5.—Opportunity is provided for students to study, discuss, and understand their growing desire for independence.

As represented by the curve of the black line in graph five the respondents rate criterion five from a position of "of little importance" to a position of "very important." The concentration of rating (50%) exists at the position of "important."

As represented by the curve of the broken line in graph five the respondents rate the utilization of criterion five from a position of "no use made" to a position of "extensively used." The concentration of rating is distributed over three positions: (1) little use made (28.6%); (2) some use made (33.3%); (3) considerable use (30.9%).

Comparing the curves of the two lines, it appears that there is moderate to considerable difference between the importance accorded this criterion and its rating for utilization. It can be concluded that the authorities responding feel that this criterion is important and that it needs to be emphasized more in community junior college curriculum.
GRAPH 6.—Opportunities exist for students to become involved in a social life which will permit them to expand continually their social contacts with the world about them.

As represented by the curve of the black line in graph six the respondents rate criterion six from a position of "moderately important" to a position of "very important." The concentration of ratings (45.2%) occurs at the position "very important."

As represented by the curve of the broken line in graph six the respondents rate the utilization of criterion six from a position of "little use made" to a position of "extremely used." The concentration of ratings (52.4%) occurs at position "considerable use."

Comparing the curves of the two lines, it appears that there is a close relationship between the importance accorded this criterion and the utilization made of it in curriculum development. However, there is a sharp decline in the utilization line at the upper most position while the line representing the rating given importance continues to ascend. One might conclude that the authorities responding feel that there need to be continued and increased emphasis given this
criterion and that the criterion is of importance in guiding the
construction of community junior college curricula.

GRAPH 7.—Opportunity is provided for students to work with and understand the great complexity of the society of which they are members.

As represented by the curve of the black line in graph seven
the respondents rated criterion seven from a position of "moderately important" to a position of "very important." The concentration of ratings (78.6%) occurs at the position "very important."

As represented by the curve of the broken line in graph seven
the respondents rate the utilization of criterion seven from a position of "little use made" to a position of "extremely used." The concentration of rating (47.6%) occurs at position "considerable use."

Comparing the curves of the two lines in graph seven, it
appears that there is a moderate difference between the importance accorded this criterion and its rating for utilization. It can be concluded that the authorities responding feel that this criterion is of significant importance and needs to receive more emphasis in the development of the community junior college curricula.
GRAPH 8.—Opportunity is provided for students to study and analyze their needs involving peer-group relationships.

As represented by the curve of the black line in graph eight the respondents rate criterion eight from a position of "of little importance" to a position of "very important." The concentration of rating (45.2%) occurs at the position "important."

As represented by the curve of the broken line in graph eight the respondents rate the utilization of criterion eight from a position of "no use made" to a position of "extensively used." The concentration of ratings (40.5%) occurs at position "some use made."

Comparing the curves of the two lines, it appears that there exists some difference between the importance accorded this criterion and its rating for utilization. It can be concluded that the authorities responding tend to view this criterion as important and that there is a need to place additional emphasis on it as a factor in community junior college curricula development.
GRAPH 9.---Opportunity is provided for students to study, discuss, and acquire an understanding of the various factors involved in dating, courtship, and marriage.

As represented by the curve of the black line in graph nine the respondents rate criterion nine from a position of "of no importance" to a position of "very important." The concentration of rating (47.6%) occurs at the position "important."

As represented by the curve of the broken line in graph nine the respondents rate the utilization of criterion nine from a position of "no use made" to a position of "considerable use." The concentration of rating (50%) occurs at the position "some use made."

Comparing the curves of the two lines, it appears that the importance accorded this criterion is relatively high and somewhat greater than the rating given it for utilization. It can be concluded that the authorities responding tend to view this criterion as important and feel that more emphasis need be given it in the development of community junior college curricula.
GRAPH 10.—Opportunities exist for students to study, discuss, and understand their interests, aptitudes, and abilities in relation to appropriate job opportunities.

As represented by the curve of the black line in graph ten the respondents rate criterion ten from a position of "of little importance" to a position of "very important." The concentration of rating is distributed between the positions (1) important (42.9%), (2) very important (50%).

As represented by the curve of the broken line in graph ten the respondents rate the utilization of criterion ten from a position of "little use made" to a position of "extensively used." The concentration of rating is distributed between the positions (1) some use made (47.6%), (2) considerable use (38.1%).

Comparing the curves of the two lines, it appears that the importance accorded this criterion is significantly high and that utilization tends not to be keeping pace with the importance. It can be concluded that the majority of the authorities responding feel that this criterion is significantly important and that more emphasis is
needed as a factor in the development of the community junior college
curricula.

GRAPH 11.—Opportunities are provided for students to develop, test,
and understand the meanings of those values they accept as guides
for their individual lives.

As represented by the curve of the black line in graph eleven
the respondents rate criterion from a position of "moderately impor-
tant" to a position of "very important." The concentration of rating
is evenly distributed over the positions of "important" (42.9%) and
"very important" (42.9%).

As represented by the curve of the broken line in graph eleven
the respondents rate the utilization of criterion eleven from a
position of "no use made" to a position of "extensively used." The
concentration of rating (38.1%) occurs at the position "some use
made;" however, two other positions, that of "little use made"
(26.2%) and of "considerable use," (28.6%) receive a significant
amount of the ratings to flatten the curve between positions two and
four.
Comparing the curves of the two lines, it appears that the importance accorded this criterion is considerably greater than the rating given it for utilization. It can be concluded that the majority of responding authorities feel that this criterion is of significant importance and that considerable additional emphasis need be given it in the development of the community junior college curriculum.

GRAPH 12.—Opportunity is provided for students to study, discuss, and understand their own religious beliefs, attitudes, and values as well as those of other members of society.

As presented by the curve of the black line in graph twelve the respondents rate criterion twelve from a position of "of no importance" to a position of "very important." The concentration of rating is evenly distributed over two positions: (1) moderately important (38.1%); (2) important (38.1%).

As represented by the curve of the broken line in graph twelve the respondents rate the utilization of criterion twelve from a position of "no use made" to a position of "extensively used." The
concentration of rating is distributed between the second position "little use made" (33.3%) and the third position "some use made" (40.5%).

Comparing the curves of the two lines, it appears that the rating of importance accorded this criterion is somewhat greater than the rating for utilization. It can be concluded that the authorities responding feel that criterion twelve is moderately important and that little additional emphasis is needed in the development of the community junior college curricula.

GRAPH 13.—Opportunity is provided for students to study and discuss political, social, and economic issues and problems.

As represented by the curve of the black line in graph thirteen the respondents rate criterion thirteen from a position of "important" to a position of "very important." The concentration of rating (69.1%) exists at the position of "very important" with no respondents rating this criterion below a position of "important."
As represented by the curve of the broken line in graph thirteen the respondents rate the utilization of criterion thirteen from a position of "some use made" to a position of "extensively used." The concentration of rating (50%) occurs at the position "considerable use."

Comparing the curves of the two lines, it appears that criterion thirteen is accorded a somewhat greater rating of importance than its rating for utilization. It can be concluded that a large majority of authorities responding regard this criterion as significantly important and that utilization tends to need more emphasis in the curricula of the community junior college.

GRAPH 14.--Opportunity is provided for students to study, understand, and develop meaningful use of leisure time.

As represented by the curve of the black line in graph fourteen the respondents rate criterion fourteen from a position of "of little importance" to a position of "very important." The concentration of rating (54.8%) occurs at position of "important."
As represented by the curve of the broken line in graph fourteen the respondents rate the utilization of criterion fourteen from a position of "no use made" to a position of "considerable use." The concentration of rating is distributed between the position "little use made" (35.5%) and the position of "some use made" (40.5%).

Comparing the curves of the two lines, it appears that there is considerable difference between the importance accorded this criterion and its rating for utilization. It can be concluded that the authorities responding tend to place considerable importance on criterion fourteen and feel that it needs to receive additional emphasis as a factor in the development of community junior college curricula.

GRAPH 15.—Opportunities are provided for students to participate in individual, dual, and group activities which will contribute to their physical and mental health.

As represented by the curve of the black line in graph fifteen the respondents rate criterion fifteen from a position of "of little importance" to a position of "very important." The concentration of
rating is distributed over two positions: (1) moderately important (33.3%); (2) important (35.5%).

As represented by the curve of the broken line in graph fifteen the respondents rate the utilization of criterion fifteen from a position of "little use made" to a position of "extensively used." The concentration of rating is distributed between the position "some use made" (45.2%) and the position "considerable use" (38.1%).

Comparing the curves of the two lines, it appears that there is little difference between the importance accorded this criterion and its rating for utilization. It is interesting to note that, in the case of this criterion, utilization is rated above importance. It can be concluded that the majority of authorities responding feel that criterion fifteen is only moderately important and that it tends to be over-emphasized in the development of curricula for the community junior college.
GRAPH 16.—The educational opportunities provided for students are based on the expressed needs of the groups of students served by each community junior college.

As represented by the curve of the black line in graph sixteen the respondents rate criterion sixteen from a position of "of no importance" to a position of "very important." It is interesting to note here that a break in the curve occurs at the position "of little importance" with no respondents rating this criterion in position two. Although there is a wide division of rating given this criterion, the concentration of rating is distributed between the position of "important" (35.5%) and the position of "very important" (38.1%).

As represented by the curve of the broken line in graph sixteen the respondents rate utilization of criterion sixteen from a position of "little use made" to a position of "extensively used." The concentration of rating is distributed between two positions: (1) some use made (35.5%); (2) considerable use (30.9%).

Comparing the curves of the two lines in graph sixteen, it appears that (1) there is considerable disagreement as to the importance
of this criterion, (2) there is considerable disagreement as to the use it receives, (3) a difference exists between the importance accorded this criterion and its utilization. It can be concluded that the majority of authorities responding tend to rate this criterion at the high side of the scale and that a need for more emphasis is felt.

GRAPH 17.—Opportunity is provided for students to study, discuss, and understand the cultural background and contemporary thought of the various groups which make up our pluralistic society.

As represented by the curve of the black line in graph seventeen the respondents rate criterion seventeen from a position of "moderately important" to a position of "very important." The concentration of rating is almost evenly distributed between a position of "important" (45.2%) and a position of "very important" (47.6%).

As represented by the curve of the broken line in graph seventeen the respondents rate utilization of criterion seventeen from a position of "some use made" to a position of "extensively used." The
concentration of rating (45.2%) occurs at the position of "considerable use."

Comparing the curves of the two lines, it appears that there is but a small difference between the importance accorded this criterion and its rating for utilization. It can be concluded that the majority of authorities responding tend to consider this criterion significantly important and feel a need for its continued use with some additional emphasis as a factor in the development of curricula for the community junior college.

GRAPH 18.—Opportunity exists for students to develop a realistic concept of their abilities and to align these concepts with personal educational objectives.

As represented by the curve of the black line in graph eighteen the respondents rate criterion eighteen from a position of "moderately important" to a position of "very important." The concentration of rating (59.5%) occurs at the position "very important."

As represented by the curve of the broken line in graph eighteen the respondents rate the utilization of criterion eighteen
from a position of "little use made" to a position of "some use made."
The concentration of rating (60%) occurs at the position "some use
made."

Comparing the curves of the two lines, it appears that there
is considerable difference between the importance accorded this
criterion and its rating of utilization. It can be concluded that a
large majority of authorities responding rate this criterion as
significantly important and that it needs to receive additional
emphasis as a factor in the development of community junior college
curriculum.

GRAPH 19.—Opportunities are provided for students to study and under­
stand their personalities in relation to the college environment and
to potential fields of employment.

As represented by the curve of the black line in graph nine­
teen the respondents rate criterion nineteen from a position of "of
no importance" to a position of "very important." The concentration
of rating is distributed between a position of "important" (38.1%) and a position of "very important" (45.2%).
As represented by the curve of the broken line in graph nineteen the respondents rate the utilization of criterion nineteen from a position of "little use made" to a position of "extensively used." The concentration of rating (40.5%) occurs at a position of "some use made" with an additional 26.2 per cent giving utilization of this criterion a rating of four.

Comparing the curves of the two lines, it appears that considerable difference exists between the importance accorded this criterion and its rating for utilization. It can be concluded that a large majority of the authorities responding rate this criterion as significantly important and that they feel it needs additional emphasis as a factor in the development of the curricula of the community junior college.

GRAPH 20.—Educational opportunities are provided for the students that take into consideration continued growth of mental abilities and general intelligence.
As represented by the curve of the black line in graph twenty the respondents rate criterion twenty from a position of "of no importance" to a position of "very important." The concentration of rating is distributed over the positions of "important" (42.9%) and the position of "very important" (38.1%).

As represented by the curve of the broken line in graph twenty the respondents rate the utilization of criterion twenty from a position of "no use made" to a position of "extensively used." The concentration of rating (50%) occurs as a position of "some use made."

Comparing the curves of the two lines in graph twenty, it appears that considerable difference exists between the importance accorded criterion twenty and its rating for utilization. It can be concluded that a large majority of authorities responding rate this criterion as significantly important and that more emphasis is needed in the present curricula of the community junior college.

Summary

The purpose of chapter three was to present data gathered from a select group of authorities, active in the community junior college field, who were asked to give their evaluation of the importance and utilization of each of twenty criterion developed from research presented in chapter two. The data have been presented by a series of twenty line graphs. Each graph was accompanied by a word description and by a tentative conclusion drawn from the information available.
To summarize the results of authoritative evaluation this investigator has grouped the criteria together according to the commonality that existed between their rating for importance and their rating for utilization.

1. The respondents rated criteria pertaining to mental adjustment and to educational objectives as very important (rating of five) and indicated, by their rating for utilization, that extensive additional emphasis needs to be given these two criterions.

2. The respondents rated the criterion pertaining to the complexity of society as very important (rating of five) and indicated, by their rating for utilization, that considerable additional emphasis needs to be given this criterion.

3. The respondents rated the criterion pertaining to political, social, and economic issues as very important (rating of five) and indicated, by their rating for utilization, that some additional emphasis need be given this criterion.

4. The respondents rated criteria pertaining to values, to educational opportunities, to personalities and to general intelligence as significantly important (a rating distributed between positions four and five) and indicated, by their rating for utilization, that these criterions all need considerable additional emphasis.

5. The respondents rated the criterion pertaining to job opportunities as significantly important (a rating distributed between positions four and five) and indicated, by their rating for utilization, that this criterion needs some additional emphasis.
6. The respondents rated criteria pertaining to social life and to ethnic groups as significantly important (a rating distributed between positions four and five) and indicated, by their rating for utilization, that both criteria need but little additional emphasis.

7. The respondents rated the criterion pertaining to leisure time as important (a rating of four) and indicated, by their rating for utilization, that this criterion needs considerable more emphasis.

8. The respondents rated criteria pertaining to independence, to peer-group relationships, and to dating and courtship as important (rating position four) and indicated, by their rating for utilization, that these criteria need some additional emphasis.

9. The respondents rated the criterion pertaining to religious beliefs and values of considerable importance (a rating distributed between positions three and four) and indicated, by their rating for utilization, that it needs some additional emphasis.

10. The respondents rated the criterion pertaining to individual and group activities of considerable importance (a rating distributed between positions three and four) and indicated, by their rating for utilization, that it needs little additional emphasis.

11. The respondents rated criteria pertaining to physical growth and to motor skills of moderate importance (rating position three) and indicated, by their rating for utilization, that no additional emphasis is needed.
12. The respondents rated the criterion pertaining to safety practices of some importance (a rating distributed between positions two and three) and indicated, by their rating for utilization, that little additional emphasis is needed.

Chapter four will present a summary of the conclusions developed by this investigator, resulting from the information and data presented in chapters two and three of this thesis.
CHAPTER IV

CONCLUSIONS

The following conclusions are presented in answer to the two propositions purposed for study in the first chapter of this thesis.

1. That sufficient research exists in the various areas of bio-socio-psychological growth of the eighteen to twenty-two-year-old to establish reliable characteristics for this age group from which generalizations can be drawn for the development of criteria to guide curriculum construction in the community junior college.

2. That, once these characteristics are identified and criteria developed, it will be found that needs arising from such characteristics are not being met satisfactorily in the present community junior college curricula.

The results of this investigator's review of research and the evaluation, by selected authorities, of the criteria developed indicate the following conclusions. The conclusions are presented as they relate to each of the questions used, in chapter two, to focus research on specific areas.

1. It can be concluded that sufficient data are available, if one utilizes data gathered prior to 1950, to identify characteristics of physical growth which are prevalent during the age eighteen to twenty-two. The characteristics identified lead to the conclusion that those persons in the eighteen to twenty-two age group are still in a period of physical growth or at a point of equilibrium between youth and adulthood. This investigator further concludes, from this
information, that the needs arising from these characteristics demand
the creation of a criterion that will guide developers of community
junior college curricula to provide youth with the opportunity to
study, understand, and develop these patterns of physical growth. A
final conclusion may be stated on the basis of the evaluation given
the criterion developed above. The authorities responding feel that
it is only moderately important that these needs be met in the community
junior college curricula and that they are being adequately met at the
present time.

2. It can be concluded that there are not sufficient data
available to identify specific patterns of development relating to
the senses of the eighteen to twenty-two-year-old. Some research has
been undertaken with the developmental stages of sight for this age
group but there is a paucity of data involving the developmental
patterns of the sense of sound, taste, touch, and smell. It is im-
possible to identify needs arising in this area, therefore, no cri-
terion can be developed to guide curriculum development in the commun-
ity junior college. It can only be concluded that much more research
is needed to identify any needs that might arise for this age group
from this area of development.

3. It can be concluded that there are not sufficient data
available to identify patterns of motor skill development that would
include the entire age group eighteen to twenty-two. However, on the
basis of the limited data this investigator found, it can be tenta-
tively concluded that those of this age group who attend college or
participate in professional sports are capable of increased
proficiency in motor skills. Since needs arise from these characteristics, it is concluded that a criterion needs to be developed that will guide persons developing community junior college curricula to present this age group with the opportunity to understand and further improve their proficiency in motor skill development. A final conclusion may be reached, on the basis of the evaluation of authorities, that it is of only moderate importance that these needs be met in the community junior college and that these needs are being adequately met at the present time.

4. It can be concluded that there are no data available, at the present time, to provide for the identification of the role of physical appearance in the eighteen to twenty-two year age group. This investigator's review of research failed to disclose any research, within the past decade, which could be used to substantiate any generalizations involving this area. On the basis of this, no criterion could be developed as a guide to the development of curriculum in the community junior college. It can only be concluded that considerable research is needed to ascertain if physical appearance does play a significant role with this age group.

5. There are no data available on which to draw conclusions involving the identification of patterns of physiological tensions and discomforts of the eighteen to twenty-two-year-old. This investigator's review of research failed to disclose any data on which to base generalizations concerning this area. Because of the paucity of data no criterion could be developed to guide developers of curriculum at the community junior college level. It can only be concluded that
this area needs to be investigated through significant research to ascertain to what extent physiological tensions and discomforts effect this age group.

6. There are not sufficient data available to identify patterns of health problems that would permit conclusions that would include the entire population of eighteen to twenty-two-year-olds. However, there are limited data to permit the conclusions that (1) accidents are a major health problem of this age group, (2) mental health problems are of major concern for those of this age group who attend college. From the identification of these two patterns, it is concluded that two criteria need be developed to guide the development of community junior college curricula toward meeting these needs.

First, the curriculum should provide the opportunity for the students to study, evaluate, and understand their role in safety practices, e.g., motoring and home safety. It is concluded, on the basis of the evaluation by authorities, that it is of little importance that these needs be met in the curricula of the community junior college and that any needs to be met, in this area, are already adequately provided for.

Second, the curricula should provide students with sources through which they may receive help with problems of mental adjustment. It is concluded, from the authorities' response to the request for evaluation, that it is very important that the needs arising from existing problems of mental health be met in the curricula of the community junior college. Furthermore, it can be concluded, on the
basis of this evaluation, that these needs are not being adequately met and that more emphasis is needed to provide such opportunities.

7. There are not sufficient data available to permit the identification of patterns of youth-parent relationships that would include the entire eighteen to twenty-two-year-old population. However, it can be concluded, on the basis of the limited data available, that (1) those who attend college tend to experience a continuing strong tie with their parents, (2) that those who attend college tend to experience considerable conflict with their parents involving the standards which govern the student's social life. From the identification of two such patterns, it is concluded that two criteria need to be developed to serve as guides to the development of community junior college curricula.

First, the curricula should provide the students with the opportunity to study, discuss, and understand their growing desire for independence. This investigator has concluded, on the basis of authoritative evaluation, that it is important that the needs arising from the continued ties of pupils with their parents be met in the curricula. It may be concluded, also, that these needs are not adequately met at the present time and that more emphasis is needed.

Second, the curriculum should provide the students with opportunities to become involved in a social life which will permit them to expand continually their social contacts with the world about them. It can be concluded, from the evaluation of the authorities, that it is of significant importance that these needs be met in the curricula.
and that present curricula are adequately fulfilling this goal with little additional emphasis needed.

8. Sufficient data are lacking to permit the identification of patterns of peer-group relationships experienced by the total group of eighteen to twenty-two-year-olds. It is possible to conclude, from the available data, that peer-group relationships seem to be of major importance for and an influence on this age group. Furthermore, there are indications that a tendency exists for youth, who attend college, to become more narrow in their social contacts. They tend to base their selection of friends on such factors as nationality, intelligence, self-perception, and socio-economic status. As a result of these characteristics it is concluded that two separate criteria need to be developed to be used as guides to the development of community junior college curricula.

First, the curricula should provide opportunities for students to work with and understand the great complexity of the society of which they are members. The conclusion is drawn, based on authoritative evaluation, that it is very important that these needs be met in the curricula of the community junior college. It can be further concluded that, at present, these needs are not being met and that more emphasis is needed.

Second, the curricula should provide opportunities for students to study and analyze their needs involving peer-group relationships. Based on the evaluation of authorities, it is concluded that it is important that these needs be met in the curricula of the community junior college. Furthermore, authoritative evaluation indicates that
these needs are being met to some degree in the present curricula but it is concluded that additional emphasis is needed.

9. With the exception of the data provided by the census reports of the government, there are insufficient data available to permit drawing generalization concerning the identification of patterns of heterosexual relationships and marriage that would include the entire group of eighteen to twenty-two-year-olds. It can be concluded, however, from the data available, that this age group is involved in heterosexual relationships with marriage as the ultimate goal. In addition, it can be concluded that this age group is not consistent in their views of the important factors involved in boy-girl relationships or marriage. As a result of the identification of these characteristics this investigator concludes that a criterion is needed to guide the development of community junior college curricula. It is suggested that the curricula should provide students with the opportunity to study, discuss, and acquire an understanding of the various factors involved in dating, courtship, and marriage.

This investigator has concluded, based on the evaluation of authorities, that it is important that these needs be met in the curricula and that additional emphasis is needed in the present curricula.

10. The available data do not permit conclusions concerning the identification of the general patterns of vocational interests of the entire group of eighteen to twenty-two-year-olds. However, on the basis of the data compiled, it may be concluded that vocational choice is of maximum importance at this age level and that the choice of
vocations can be as varied as the number of persons making the choice. It can be concluded, also, that job security is of prime importance and that this age group is unrealistic in their vocational choices as well as their estimation of their own strengths and weaknesses. They tend to follow those occupations with which they are best acquainted. The characteristics identified suggest the conclusion that there is need for the development of a criterion to be used as a guide to the construction of community junior college curricula.

The curricula should provide the students with the opportunities to study, discuss, and understand their interests, aptitudes, and abilities in relation to appropriate job opportunities. It is concluded, on the basis of the evaluation of authorities, that it is significantly important that needs arising from these characteristics be met in the curricula of the community junior college. In addition, it may be concluded that these needs are not being adequately met at present and that more emphasis is needed.

11. The entire data compiled, in an attempt to identify patterns of personal and moral values, have been obtained from research with selected subjects. This prevents the drawing of a conclusion that would include the general population of the eighteen to twenty-two-year-olds. However, on the basis of available data, it can be concluded that those of this age group who attend college demonstrate a definite lack of consistency in values. They tend to accept values that aid them in reaching self-centered and materialistic goals. Furthermore, it can be concluded that this age group tends to demonstrate a faith in values of immediate practical worth, that there has
been a relaxing of moral values over the years, and that they are in conflict with moral standards passed to them through cultural heritage. This investigator concludes that the needs arising from these characteristics suggest the development of a criterion to guide the construction of curricula in the community junior college.

The curricula should provide students with the opportunity to develop, test, and understand the meanings of those values they accept as guides for their individual lives. This investigator concludes, on the basis of authoritative evaluation, that it is significantly important that these needs be met in the curricula of the community junior college. In addition, from the same source, it can be concluded that these needs are not being sufficiently met in the present curricula and that considerable additional emphasis is needed.

12. It is concluded that there are not sufficient data available to permit the identification of patterns of religious beliefs and attitudes that include all eighteen to twenty-two-year-olds. There is, however, sufficient data to support conclusions concerning those of this age group who attend college. This age group tend to find themselves in conflict with the religious attitudes instilled in them at an earlier age. This conflict brings about anxiety and doubt. Also, it may be concluded that those of this age group, who attend college, demonstrate a difference in religious attitudes and beliefs based on geographical location and earlier religious affiliation. The needs arising from the characteristics identified suggest the conclusion that there is need for a criterion to guide the development of the community junior college curricula.
The curricula should provide the students with the opportunity to study, discuss, and understand their own religious beliefs, attitudes, and values as well as those of other members of society. It has been concluded by this investigator, based on the evaluation of the authorities, that it is of considerable importance that these needs be met in the curricula of the community junior college and that more emphasis is needed in the present curricula since these needs are not being adequately met.

13. This investigator concludes that there are not sufficient data available to identify patterns of political-socio-economic attitudes of the entire population of eighteen to twenty-two-year-olds. The data compiled do support a conclusion that those youth who attend college are traditional in their approach to political-socio-economic issues and tend to express an ideology that is closely related to that of their parents and shows little resemblance to their covert actions. In addition, it is concluded that the attitudes and ideologies of this age group tend to shift in relation to the social group to which they belong at any given time. The needs arising from these characteristics are suggestive of the need for a criterion to guide the development of curricula of the community junior college.

The curricula should provide students with opportunities to study and discuss political, social, and economic issues and problems. On the basis of the evaluation of the experts, this investigator has concluded that it is very important that these needs be met in the curricula and that, at present, these needs are being adequately met with little demand for additional emphasis.
14. It is concluded, by this investigator, that there are not sufficient data available to support identification of patterns of leisure time activities for all eighteen to twenty-two-year-olds. However, it is concluded, from the data available, that those youth who attend college tend to combine their leisure time activity patterns into social-sexual interests and that they desire to learn to participate in individual and dual sport activities. Furthermore, they express a desire to develop their ability and their participation in leisure time activities but do not bear this out through their actions. In addition, it is concluded that this age group, in college, lack an interest in reading as a leisure time activity, tend to read materials of only average difficulty, and ignore the professional books and periodicals. Finally, it is concluded that the choice of leisure time activities of this group varies with the individual. The needs that develop as a result of these characteristics suggest that two criteria be constructed to be used as guides for the development of the curricula of the community junior college.

First, the curricula should provide students with the opportunity to study, understand, and develop meaningful use of leisure time. This investigator concludes, on the basis of authoritative evaluation, that it is important that these needs be met and that, at the present time, opportunities are inadequate with more emphasis needed.

Second, the curricula should provide students with the opportunity to participate in individual, dual, and group activities which will contribute to their physical and mental health. On the basis of
authoritative evaluation, this investigator concludes that it is moderately important that these needs be met and that adequate opportunities are now provided. It is interesting to note here, that the students disagree extensively with this evaluation of utilization by the authorities.

15. This investigator concludes that there are insufficient data available, at the present time, to support the identification of patterns of educational interests that would include all eighteen to twenty-two-year-olds. Only research reported by Medsker and by Birdie involved more than those youth who were attending college. However, the following can be concluded on the basis of available data. Those youth who attend college present a varied pattern of educational interests and objectives. Once in college, youth are persistent in search of their goals but hold unrealistic concepts of their scholastic abilities and their ability to achieve chosen objectives. The needs arising from these identified characteristics suggest that two criteria be developed to guide the construction of the community junior college curricula.

First, the curricula should provide students with educational opportunities which are based on the expressed needs of the groups of students served by each institution. It is concluded, on the basis of the evaluation of authorities, that it is significantly important that this criterion be met and that, at present, there is not adequate attention being given this need. Considerable more emphasis is suggested.
Second, the curricula should present the opportunity for the students to develop a realistic concept of their abilities and to align these concepts with personal educational objectives. This investigator concludes, from the evaluation of experts, that it is very important that these needs be met in the curricula. Furthermore, it is concluded that these needs are not adequately met, at present, and that extensive additional emphasis is needed.

16. It is concluded that there are not sufficient data to identify patterns of prejudice and bias that would include the total population of eighteen to twenty-two-year-olds. This investigator has concluded, from the data available, that youth in this age group tend to hold the same patterns of prejudice and bias as the general population from which they come. Further education shows little effect on the patterns held by youth and, rather interestingly, these patterns tend to extend beyond attitudes toward ethnic groups to include exceptional children and the aged. The needs, arising from the characteristics identified, indicate that a criterion need be developed to act as a guide to construction of community junior college curricula.

The curricula should provide the students with the opportunity to study, discuss, and understand the cultural background and contemporary thought of the various groups which make up our pluralistic society. It is concluded from the evaluation of authorities, that it is significantly important that these needs be met in the curricula. Furthermore, it is concluded that these needs are adequately met in the present curricula and that little additional emphasis is needed.
17. Because the data available tend to be contradictory in nature, it is concluded that it is not possible to identify conclusively patterns of mental development and changes in intelligence for the eighteen to twenty-two-year-old. The majority of research supports the conclusion that general intelligence can show an increase through the ages involved in this study. The increase, however, will depend on the individual and on his learning environment. Additional research supports the conclusions that certain primary abilities tend to improve well past the age of twenty-two. The needs arising from these characteristics suggest the need to develop a criterion to guide the construction of community junior college curricula.

The curricula should provide the students with educational opportunities that take into consideration continued growth of mental abilities and general intelligence. It is concluded, on the basis of authoritative evaluation, that it is significantly important that these needs be met in the curricula and that they are not being adequately met at the present time. Considerable more emphasis is needed.

18. It is concluded that insufficient data exists to identify patterns of emotional needs and problems that would take into consideration the total population of eighteen to twenty-two-year-olds. However, on the basis of the limited data compiled, it is concluded that those of this age group who go to institutions of higher learning face problems of social adaptability and prestige and have difficulty adjusting to college work. Furthermore, indications are that youth's emotional problems and needs are varied and complex. These
characteristics suggest the need for the curricula of the community junior college to provide for this area. This investigator has reviewed the criteria established previously from other data and had concluded that criteria four, six, and fifteen provide sufficient guides to insure the inclusion of desirable opportunities to meet these student's needs. It is concluded that no additional criteria need be created as a result of the limited data presented in this area.

19. This investigator concludes that there are insufficient data to identify patterns of personality development for the entire eighteen to twenty-two-year-old group. It is concluded however, on the basis of the available data, that there is a difference in personality patterns between those youth who attend college and those who do not. Those youth who attend college tend to have a more mature self-concept. In general, youth's personality tends to be socially oriented. It is also concluded that a difference in patterns exist between the negro and white students and that both groups change as they progress through college. On the basis of the limited needs identified, it is concluded that a criterion is needed to guide the construction of community junior college curricula.

The curricula should provide opportunities for students to study and understand their personalities in relation to the college environment and to potential fields of employment. This investigator concludes, on the basis of authoritative evaluation, that it is significantly important that these needs be met in the curricula.
From data obtained it is concluded that these needs are not being adequately met at present and that more emphasis is needed.

In summary, proposition one is only partially supported by the research of this investigator.

1. There is not sufficient research existing in the various areas of bio-socio-psychological growth of the eighteen to twenty-two-year-old on which can be established reliable characteristics that will include the entire group. Therefore, it is impossible to draw generalizations that will support conclusive criteria to guide curricula construction in the community junior college. All criteria developed in this thesis are tentative in nature.

2. There is sufficient research existing in the majority of areas of bio-socio-psychological growth to identify tentative characteristics and needs for those eighteen to twenty-two-year-olds who attend college. Therefore, it is possible, from these characteristics, to develop criteria to guide the development of curricula in the community junior college.

Proposition two is supported by the research of this investigator in so far as it applies to the tentative generalizations and criteria developed from the data available.

1. On the basis of the evaluation obtained from a select group of authorities, it is concluded that the needs arising from the characteristics identified are not being met satisfactorily in the present community junior college curricula.
Chapter five will present recommendations based on this investigator's review of research, on the data compiled, on the evaluation by authorities, and on the conclusions presented in chapter four.
CHAPTER V

RECOMMENDATIONS

In light of the research reviewed, the data compiled, and the evaluation of criteria by a select group of authorities the following recommendations are made concerning the need for additional research and for the use of the criteria. So that the recommendations can be related to specific areas, following is a list summarizing the nineteen patterns with which this thesis was concerned.

This investigator attempted to identify, in the following areas, patterns prevalent during the age eighteen to twenty-two.

1. Patterns of physical growth.
2. Patterns of the development of the senses.
3. Patterns of motor skill development.
4. Patterns of specific health problems.
5. Patterns of the role of physical appearance.
6. Patterns of physiological tensions and discomforts.
7. Patterns of youth-parent relationships.
8. Patterns of peer-group relationships.
9. Patterns of heterosexual relationships and marriage.
11. Patterns involving personal and moral values.
12. Patterns of religious beliefs and attitudes.
13. Patterns of political-socio-economic attitudes.
14. Patterns of leisure time activities.
15. Patterns of educational interests and objectives.
16. Patterns of prejudice and bias.
17. Patterns of mental development and changes in intelligence.
18. Patterns of emotional needs.
19. Patterns of personality development.

Recommendations for Additional Research

The following recommendations apply to the need for additional research for all the above areas.
1. Research in all the areas should be continuous so as to identify new needs arising in patterns already identified, so as to identify changes occurring in established patterns, and so as to substantiate further the established patterns. Each institution should attempt to follow this recommendation so that data unique to the students served will be obtained. Efforts should be made to compile all data collected in national summary so that the effects of national, geographical, socio-economic, and other factors can be identified.

2. Research in all areas should be confined to the age group eighteen to twenty-two. This recommendation is made for two reasons. First, considerable research has been completed that has identified many of these patterns for groups up through age seventeen, therefore, using age as a control factor would tend to extend knowledge of the consistencies and changes in patterns as the adolescent passes into the post-adolescent period. Second, the age of the greatest percentage of youth attending college falls with this age range. Using age as a control factor will aid in the identification of patterns appropriate to youth attending college and in the construction of a college curricula most appropriate to the majority who should be encouraged to attend.

3. Research in all the above areas should be broadened to include large samplings of all eighteen to twenty-two-year-olds. The research now available has been accomplished largely through the use of select groups of youth enrolled in college, confined to penal institutions, attending high school, or taking part in other formal
programs. These groups are not representative of the youth that should be encouraged to take advantage of the curriculum offerings of the community junior college.

4. Research should apply the technique of random sampling to all areas and should involve as large a sampling as time, finances, subjects, and materials will permit. The difficulty of developing control groups and experimental groups is that it inhibits the amount of research that can be accomplished and tends to develop groups that are artificial. These groups are not then representative of the general population of eighteen to twenty-two-year-olds.

5. Research in all areas should attempt to identify the effects of the following factors on patterns identified: (a) socio-economic differences; (b) area of residence—urban, suburban, or rural; (c) color; (d) nationality; (e) sex. The community junior college curricula, as defined for this paper, is to accommodate all who can benefit from its offerings. This means that the curricula must accommodate all variations and/or consistencies in patterns. It would seem that the above factors might well have an effect on one or all of the areas being investigated.

The following recommendations apply to the need for additional research in specific areas.

1. It is recommended that the factor of geographical location should be investigated for its effect upon patterns in the following areas: (1) physical growth; (2) health patterns; (3) physical appearance; (4) physiological tensions and discomforts; (5) youth-parent relationships; (6) peer-group relationships; (7) heterosexual
relationships and marriage; (8) vocational interests; (9) personal and moral values; (10) religious beliefs and attitudes; (11) political-socio-economic attitudes; (12) leisure time activities; (13) educational interests and objectives; (14) prejudice and bias; (15) emotional needs; (16) personality development. It is deemed important that consistencies and variations, due to this factor, should be identified so that the curricula of a community junior college can be aligned to meet the needs of the locale.

2. Research should investigate the influence of the factor of religion on patterns in the following areas: (1) youth-parent relationships; (2) peer-group relationships; (3) heterosexual relationships and marriage; (4) vocational interests; (5) personal and moral values; (6) religious beliefs and attitudes; (7) political-socio-economic attitudes; (8) leisure time activities; (9) educational interests and objectives; (10) prejudice and bias; (11) emotional needs; (12) personality development. This investigator bases this recommendation on his review of research for this thesis. Religion tended to be a factor in only the above areas. If variations exist because of this factor the community junior college curricula will need to reflect the fact.

3. The influence of the factor of political preference should be investigated as it effects patterns in the following areas: (1) peer-group relationships; (2) heterosexual relationships and marriage; (3) vocational interests; (4) personal and moral values; (5) religious beliefs and attitudes; (6) political-socio-economic attitudes; (7) educational interests and objectives; (8) prejudice
and bias; (9) personality development. This investigator has arbitrarily selected these areas as those most apt to reflect the influence of this factor. If variations exist, the curricula must reflect the fact as it attempts to meet the needs of the students served.

4. It is recommended that initial research be undertaken to determine patterns existing in the areas of physical appearance, physiological tensions and discomforts, and development of senses. This investigator discovered little or no research in these areas that would aid in the identification of patterns of needs. Efforts should be made to see if any student needs stem from these areas.

Recommendations Concerning Criteria

The following recommendations are made concerning use to be made of the criteria developed in this research. These recommendations are based on the data available, the patterns identified, and the evaluation of the authorities who responded to this investigator's request for participation.

1. Criteria representing needs arising from the following areas should be used as guides for the construction of community junior college curricula: (1) mental adjustment; (2) desire for independence; (3) complexity of society; (4) peer-group relationships; (5) dating, courtship, and marriage; (6) job opportunities; (7) personal values; (8) political-socio-economic issues and problems; (9) leisure time activities; (10) educational opportunities; (11) educational objectives; (12) personality and employment; (13) mental
abilities and general intelligence. In each case it is recommended that additional emphasis be placed on the criteria in the existing curricula so that student needs are met. These are tentative criteria but sufficient data and authoritative evaluation support their use.

2. The criteria pertaining to social life and to our pluralistic society should be continued as guides for the construction of community junior college curricula though they are being sufficiently emphasized at the present time. Data and authoritative evaluation support these criteria as guides to curricula development.

3. Criteria pertaining to (1) physical growth, (2) motor skills, (3) safety practices, (4) religious beliefs, attitudes, and values, (5) physical and mental health, may be used as guides for construction of community junior college curricula but, on the basis of authoritative evaluation and data available, more research is needed to establish each as important to the area. It is also recommended that persons responsible for curricula construction become more thoroughly acquainted with needs arising from patterns of development supporting these criteria. There is an indication of disregard, or lack of knowledge, of these areas.

In summary, this investigator suggests that sufficient evidence exists to support the conclusion that there are needs arising from characteristics identified for the eighteen to twenty-two-year-old. On the basis of this conclusion, this investigator recommends the use of the criteria developed and suggests continued research in all areas.
APPENDIX A

Southwestern United States

    Robert J. Hannelly, Dean, Phoenix College, 1202 West Thomas Road, Phoenix 13, Arizona.

California: Raymond S. Dondero, Dean of Instruction, Contra Costa College, 2801 Castro Road, San Pablo, California.
    Bill J. Priest, President, American River Junior College, 4700 Oak Avenue, Sacramento 21, California.
    Edward A. Raleigh, Dean of Instruction, Stockton College, 3301 Kensington Way, Stockton, California.

Colorado: E. S. French, President, Northeastern Junior College, Sterling, Colorado.
    Marvin C. Knudson, President, Pueblo College, Pueblo, Colorado.

Oklahoma: Bruce G. Carter, President, Northeastern Oklahoma Agricultural and Mechanical College, Miami, Oklahoma.

Texas: Murry H. Fly, President, Odessa College, Odessa, Texas.
    J. M. Hodges, President, Wharton County Junior College, Wharton, Texas.
    H. M. Stilwell, President, Texarkana College, Texarkana, Texas.

Utah: Aaron E. Jones, President, Carbon College, Price, Utah.

Northwestern United States

Idaho: Eugene B. Chaffee, President, Boise Junior College, Boise, Idaho.
    G. O. Kildow, President, North Idaho Junior College, Coeur d'Alene, Idaho.

Montana: L. O. Brockmann, President, Northern Montana College, Havre, Montana.
Nebraska: Wayne W. Loomis, Dean, McCook College, McCook, Nebraska.
   Lauren L. Schwisow, President, Scottsbluff College, Scottsbluff, Nebraska.
   William E. Steward, Dean of Instruction, Everett Junior College, Everett, Washington.
   Richard E. White, Director, Sheridan College, Sheridan, Wyoming.

Midwestern United States

   Richard E. Whalen, Dean, Black Hawk College, 1001-16th Street, Moline, Illinois.
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Kansas: Ellswerth R. Briggs, Dean, Hutchinson Junior College, Hutchinson, Kansas.
   Kurt R. Galle, Dean, Arkansas City Junior College, Arkansas City, Kansas.
   Karl M. Wilson, Dean, Coffeyville College, Coffeyville, Kansas.
Michigan: Clyde C. Blocker, Dean, Flint Junior College, 1401 East Court Street, Flint 3, Michigan.
   Fred K. Eshleman, Dean, Henry Ford Community College, Dearborn, Michigan.
   Robert O. Hatton, Director, Kellogg Community College, Battle Creek, Michigan.
Minnesota: Charles E. Hill, Dean, Rochester Junior College, Rochester, Minnesota.
   R. I. Meland, Dean, Austin Junior College, Austin, Minnesota.
   John J. Neumaier, Dean, Hibbing Junior College, Hibbing, Minnesota.
Missouri: Leon C. Billingsly, Dean, Joplin Junior College, Joplin, Missouri.
Miles G. Blim, Dean, Junior College of Kansas City, 3845 McGee Street, Kansas City, Missouri.

Southeastern United States

Florida: Paul W. Allison, Dean of Instruction, Palm Beach Junior College, 4200 South Congress Avenue, Lake Worth, Florida.
Joseph W. Fordyce, President, Central Florida Junior College, Ocala, Florida.
Frederick T. Lenfesty, Vice President and Dean, Pensacola Junior College, College Boulevard, Pensacola, Florida.
Raymond Van Dusen, Dean of Instruction, Brevard Junior College, Cocoa, Florida.

Georgia: Thomas Y. Whitley, President, Columbus College, Columbus, Georgia.

Kentucky: R. G. Matheson, President, Paducah Junior College, Paducah, Kentucky.

Maryland: Donald E. Deyo, Dean, Montgomery Junior College, Takoma Park, Maryland.
H. Chester Whitney, Dean of Instruction, Baltimore Junior College, 2901 Liberty Heights Avenue, Baltimore 15, Maryland.

Mississippi: W. H. Hinton, President, Northeast Mississippi Junior College, Booneville, Mississippi.
W. A. Vincent, President, East Central Junior College, Decatur, Mississippi.


North Dakota: G. W. Haverty, President, North Dakota State School of Science, Wahpeton, North Dakota.

Northeastern United States

Ralph R. Fields, Professor of Higher Education, Teachers College, Columbia University, 116th Street and Broadway, New York, 19, New York.
Extra

E. K. Fretwell, Jr., Assistant Commissioner for Higher Education, New York State Education Department, Albany 1, New York.

Edmund J. Gleazer, Jr., Executive Director, American Association of Junior Colleges, 1777 Massachusetts Avenue, N. W., Washington 6, D. C.


Leland L. Medsker, Vice Chairman, Center for the Study of Higher Education, 4606 Tolman Hall, Berkeley 4, California.

James W. Thornton, San Jose State College, San Jose, California.
**EVALUATION SHEET NO. 1**

The Community-Junior College, with which this dissertation is concerned, is referred to as a democratic institution. It is an institution which provides for all, with a need, the opportunity to study and work in an atmosphere of inquiry and reflective thought. This institution encourages its students to use the objective approach in problem solving. If an institution is to be democratic in nature, to what degree do you believe each of the following criteria is important as a basis for curriculum construction?

Please circle the number which you feel represents the position of each individual criterion on a scale of importance.

**CRITERIA**

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>Very Important</th>
<th>Moderately Important</th>
<th>Of Little Importance</th>
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<tbody>
<tr>
<td>1. Opportunity is provided for students to study, understand, and develop their physical patterns of growth</td>
<td>5 4 3 2 1</td>
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<tr>
<td>2. Opportunity is provided for students to understand and further improve their proficiency in motor skill development</td>
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<td>3. Opportunity is provided for students to study, evaluate, and understand their role in safety practices, e.g., motoring and home safety</td>
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<td>4. Sources are provided for students to receive help with problems of mental adjustment</td>
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<td>5. Opportunity is provided for students to study, discuss, and understand their growing desire for independence</td>
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<td>6. Opportunities exist for students to become involved in a social life which will permit them to expand continually their social contacts with the world about them</td>
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<td>7. Opportunity is provided for students to work with and understand the great complexity of the society of which they are members</td>
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<td>10. Opportunities exist for students to study, discuss, and understand their interests, aptitudes, and abilities in relation to appropriate job opportunities</td>
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EVALUATION SHEET NO. II

Using the same list of criteria, indicate to what degree you feel the Community-Junior College movement, in general, is utilizing each of the criteria as a basis for curriculum development.

CRITERIA

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