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I hereby recommend that the thesis prepared under my supervision by William Hallis Burton entitled The Social Sense of Junior and Senior High School Students

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Approved by:

C. G. Gregory advisor
Wm. A. Cook
Gordon Hendrickson

THE MEASUREMENT OF THE SOCIAL-CIVIC INTELLIGENCE
OF HIGH SCHOOL STUDENTS

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WILLIAM HOLLIS BURTON
by

William Hollis Burton
B.Sc. University of Alabama 1924
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TABLE OF CONTENTS

		Page
LIST OF TABLES		iv
Chapter		
	INTRODUCTION	1
I.	STATEMENT AND DELIMITATION OF THE PROBLEM . .	6
	Value of the Study	
	Fundamental Assumptions made in the Study	
II.	STATEMENT OF THE FUNDAMENTAL PHILOSOPHY TO	
	BE USED IN CONNECTION WITH THE STUDY	11
	Trend of the Times	
	Summary and Conclusions	
	Statement of Philosophical Principles	
	which Might Apply to the Study	
	Bibliography	
III.	ANALYSIS OF AIMS AND OBJECTIVES OF THE	
	SOCIAL SCIENCES	32
	Methods of Determining Objectives	
	Aims given by Contributors to the	
	Historical Outlook	
	Aims given by Experts as Found by	
	Research	
	Analysis of Standard Tests in the	
	Social Studies	
	An Attempt to Combine the Aims from	
	Various Sources	
	Objectives of the Horace Mann Junior	
	High School Social Studies	
	Objectives of the St. Louis Junior	
	High School Social Studies	
	Summary and Conclusions	
	Bibliography	
IV.	PSYCHOLOGY OF THINKING	77
	Psychology of the Social Subjects	
	Statement of the Psychological Principles	
	which Might Apply to the Study	
	The Essential Elements of Purposive	
	Thinking	
	Summary and Conclusions	
	Bibliography	

Chapter	Page
V.	SELECTION OF CONTENT MATERIAL FOR THE TESTS . . . 98
	Bassett's Study
	Billings' Study
	Bixler's Study
	Bobbitt's Study
	Bowman's Study
	Cocking's Study
	Hockett's Study
	Lee's Study
	Meltzer's Study
	Rugg's Study
	Well's Study
	What do Teachers and Courses of Study
	Demand of Students in the Social
	Studies?
	Nature of Subject Matter Courses in the
	Social Sciences in Teachers Colleges
	Summary and Conclusions
	Bibliography
VI.	COLLECTION AND TREATMENT OF DATA 139
	Preliminary Steps
	The Development of the Test
	Administration of the Tests
	The Representativeness of the Data
	Treatment of the Data
	Distribution of the Scores According
	to Ages and Grades
	The Measures of Variability
	Correlations between Forms and Parts I
	and II of the Experimental Test
	Correlations of Test Scores with Grades
	Made in the Social Studies
	Correlations between Teachers' Estimates
	of Students' Intellectual Ability and
	Test Scores
	The Reliability of the Data
	An Attempt to Improve the Reliability
	Coefficients
	The Variability of Student Responses
	from Grade to Grade
	The Reasoning Ability of High School
	Students as Indicated by their
	Ability to Render Correct Judgments
	with Regard to Social Situations
	Evaluation of the Responses
	Summary
	Bibliography

Chapter		Page
VII.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	242

LIST OF TABLES

Table	Page	
I.	The Aims of Civics for Grades I to VIII as Given in Brown's Study	38
II.	The Rank of the Aims of the Social Studies as Indicated by the Frequency of Mention and the Number of State Courses of Study Giving these Aims .	39
III.	The Frequency of Mention of the Aims of the Social Sciences from 1919-1929 as Given in the Historical Outlook	48
IV.	The Relative Emphasis to Various Theoretical aims of the Social Studies as Stated by Instructors in the Social Studies in Twenty-six Teachers Colleges Visited by Dearborn	53
V.	The Relative Emphasis to Aims as Shown by Best Questions in Various History Courses	54
VI.	The Aims of Standard Tests in Civics, Geography and History	57
VII.	Aims as Given by (1) Teachers, (2) Teachers Colleges, (3) Social Science Writers, (4), State Courses of Study, and (5) Other Studies	59
VIII.	The Rank of the Major Problems Mentioned by All Parties	97
IX.	Rank of National Problems as Indicated by President Hoover's Address to Congress, December 3, 1929.	98
X.	The Most Important Concepts Used in the Generalizations by Billings, Arranged in Order of Frequency of Occurrence	100
XI.	Space Devoted to Problems of Labor in Ten Widely Used Books and Seven Periodicals (Bixler). .	108
XII.	The Combined Ranks of the Major Categories of Man's Activities, in Terms of Space Each in Three Sources (Bobbitt)	110
XIII.	The Rank of Economic Problems as Indicated by the Amount of Space Given to them in Current Periodical Literature	113
XIV.	The Rank of Crucial Problems as Given by Hockett. .	117
XV.	Social Concepts in Order of Importance as Given by Meltzer	122
XVI.	Rank in Space Allotment Given to Problems, and Also to Similar Problems in Current Civics (Rugg) .	126

Table	Page	
XVII.	Rank of Activities According to the Per Cent of Frequencies Found in the New York Times Index and the Readers' Guide, Compared with the Rank of the Activities According to the Per Cent of Space Found in 105 Newspapers (Mills)	130
XVIII.	Topics Selected for Information, Test to be Used in the Study	143
XIX.	Topics Selected for Judgment, Test to be Used in the Study	144
XX.	The Distribution of Scores According to Ages of High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form A	156
XXI.	The Distribution of Scores According to Ages of High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form A, Part I	157
XXII.	The Distribution of Scores According to Ages of High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form A, Part II	157
XXIII.	The Distribution of Scores According to Ages of High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form B.	158
XXIV.	The Distribution of Scores According to Ages of High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form B, Part I	159
XXV.	The Distribution of Scores According to Ages of High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form B, Part II	159
XXVI.	The Distribution of Scores made by High School Pupils Taking the Burton Experimental Social Science-Civics Test, Form A	160
XXVII.	The Distribution of Scores made by High School Pupils on the Burton Experimental Social-Science-Civics Test, Form A, Part I	161
XXVIII.	The Distribution of Scores made by High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form A, Part II	161
XXIX.	The Distribution of Scores made by High School Pupils Taking the Burton Experimental Social-Science Civics Test, Form B	162
XXX.	The Distribution of Scores made by High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form B, Part I	163

Table	Page	
XXXI.	The Distribution of Scores made by High School Pupils Taking the Burton Experimental Social-Science-Civics Test, Form B, Part II	163
XXXII.	Comparison of the Tests in Terms of their Measures of Central Tendency and Variability . . .	164
XXXIII.	Comparison of the Parts of the Tests in Terms of their Measures of Central Tendency and Variability	165
XXXIV.	Comparison of the Tests in Terms of their Measures of Central Tendency and Variability . . .	165
XXXV.	Correlations Between the Two Forms of the Experimental Test	166
XXXVI.	Correlations Between Information and Information, Parts I and II of the Experimental Test	167
XXXVII.	Correlations Between Judgment and Judgment, Parts I and II of the Experimental Tests	168
XXXVIII.	Correlations Between Information and Judgment, Parts I and II of the Experimental Tests	169
XXXIX.	Correlations Between the Scores Made on the Experimental Test, and Grades Made in the Social Studies	171
XL.	Correlations Between the Scores Made on Part I of the Experimental Tests and Grades Made in the Social Studies	172
XLI.	Correlations Between the Scores Made on Part II of the Experimental Tests and Grades Made in the Social Studies	173
XLII.	Correlations Between Teachers' Estimates of Students' Intellectual Ability and Test Scores . .	174
XLIII.	The Standard and Probable Errors of the Measures as Determined by the Coefficients of Correlation, Forms A and B	179
XLIV.	The Standard and Probable Errors of the Measures as Determined by the Coefficients of Correlation Between Forms A and B of Part I of the Tests - Information	180
XLV.	The Standard and Probable Errors of the Measures as Determined by the Coefficients of Correlation Between Forms A and B of Part II of the Tests - Judgment	181
XLVI.	The Standard and Probable Errors of the Measures as Determined by the Coefficients of Correlation Between Parts I and II of Forms A and B	182
XLVII.	The Reliability of the Medians as Shown by the Probable Error for Forms A and B	183

Table	Page	
XLVIII.	Percentage of Correct, Incorrect, and Omitted Responses of High School Students Taking the Burton Experimental Social-Science-Civics Test, Part I, Form A	187
XLIX.	Percentage of Correct, Incorrect, and Omitted Responses of High School Students Taking the Burton Experimental Social-Science-Civics Test, Part II, Form A	194
L.	Percentage of Correct, Incorrect, and Omitted Responses of High School Students Taking the Burton Experimental Social-Science-Civics Test, Part I, Form B	202
LI.	Percentage of Correct, Incorrect, and Omitted Responses of High School Students Taking the Burton Experimental Social-Science-Civics Test, Part II, Form B	210

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INTRODUCTION

Man is born into a world of problems, and these problems test and tax his abilities from the cradle to the grave. He is always seeking to become fit, but is never successful in reaching his goal for the goal is expanded in the form of new problems and new life situations. To cope with these problems and situations, man has devised many forms of science, such as mathematics, astronomy, physics, chemistry, biology, psychology, and sociology. Most of these sciences have been called natural sciences, since they deal very largely with natural phenomena, but out of biology, psychology, and sociology have emerged a number of complex sciences which deal with the problems of man in his attempts to apply these great natural sciences which he thought would be the solution to all of his great problems. As natural science arises from man's contact with the problems of his physical environment, so social science comes from his contacts with the problems arising from his institutional environment.

In order to cope with the problems of institutional environment, man has created more institutions, thereby creating more

problems. Thus through necessity, man has become a problem-solver dealing not only with those problems which are imposed by physical nature, but also with those barriers of precept and prejudice, custom and convention, habit and law, which are laid down by human nature in its associative aspects. As a result of this association, man's actions, at every turn, are restrained, modified, and directed because each individual organism in a social group is dependent upon others. This criterion of interdependence is met by lower organisms than man. Even the amoeba does not live to itself alone.

Civilization has moved and had its being in proportion to the degree to which it has overcome the problems with which it has been confronted by nature and man. The institutional organization has become very complex because, by nature and training, man is a social creature and possesses the intelligence and capacity to organize in the face of difficulty. When man is confronted with problems of business, politics, social relationship, morals, and a score of others, he organizes for their solution. He does this because he is endowed with rational intelligence which tells him that organization will enable him to clinch the victory over nature as well as over his fellow men.

Modern man is not concerned primarily with overcoming the secrets of nature, for his recorded sciences will tell him many of them; but his concern is with laws which are the basis for the

intelligent prediction and control of the action of men in social, political, and economic institutions. These institutions have become complex in their nature in proportion to the intelligence of the leaders and people who have produced and modified them. Only those institutions which have proved their fitness have been retained by the most intelligent races and individuals. Those that have been retained are usually in a state of flux, for, what man does not change for better, time usually makes obsolete and useless. In order for man to intelligently prevent time from turning backward the hands of progress, he must cultivate his mental actions in such a way as to cope with the immediate and remote problems. An immediate immigrant problem may become a remote racial problem which increases in its complexity as our civilization becomes more complex. The solution of such a problem cannot be final regardless of how it is settled in Congress. Whatever solution is provided for most social institutions can only be temporary, because society is an evolving thing. Laws, principles, theories, and hypotheses become almost obsolete during one generation.

Each generation then must reorganize its thinking and devise new laws of social relationship. The modern youth is confronted with this problem today. At home he is taught many fundamental beliefs and attitudes, but when he comes into the social world, he finds that many of these are inadequate to meet his needs and interests. He finds many different interests to which he must make some adaptation.

These interests he cannot always oppose for they belong to his group; he is merely confronted with them. The confronting of interests may result in either one of four things: (1) Voluntary submission on the part of the individual confronted; (2) struggle and the victory of one side over the other; (3) compromise; or (4) integration. The first would mean the development of a nation of weaklings if continually adhered to; the second would not make for social efficiency in our complex civilization; the third would be workable only in the most debatable or controversial questions which involved the interests of many persons; the fourth is not applicable to all differences. Many of man's activities are irreconcilable, but it is certain that there are fewer of these than we at present think, although it often takes ingenuity, a "creative intelligence," to find the integration.

Integration might be considered a qualitative adjustment; compromise a quantitative one. In the former there is a change of ideas and their action tendencies; in the latter there is a mere barter of opposed "rights of way." The maladjusted activities (action tendencies involved) in the situation continue their conflict. It would be very beneficial to know just how the action tendencies of modern youth would coincide when dealing with problematic situations involving crucial social problems, or, in other words, to know to what extent the American free school system is providing for integrated

attitudes, beliefs, knowledges, and opinions. The degree to which this is being done ought to indicate in part the degree to which our aims and objectives of education are being realized. It is with this aim in view that the present study will be carried out.

We know that school tests should be in harmony with and reinforce curricular principles, and should encourage, supplement, and reinforce proper methods of teaching. These principles are best determined by psychological study. Inasmuch as this is true, the thesis does not purport to be a psychological study in the technical sense of the word, since it proposes merely to measure the results of the application of these methods and principles in the teaching procedure.

CHAPTER I

STATEMENT AND DELIMITATION OF THE PROBLEM

The aim of this study is an attempt to determine the social sense of junior and senior high school students. By social sense we mean the ability to perceive and interpret social situations as they appear in a complex society, such as the student now finds confronting him in modern civilization. Obviously, a study of this kind would not only take cognizance of the pupils' ability to interpret social situations as they appear, but it must also determine the range of social facts which the pupil has as working tools to aid him in making these interpretations.

These facts and situations are to be taken, whenever possible, from textbooks in civics, economics, sociology, and social psychology. However, the writer has reserved the right to draw on any source which might be available in the development of social situations or problems. In general, the facts and problems will be taken from sources which have had their validity established by research workers in the social sciences.

More specifically, the study undertakes to

1. Indicate the most outstanding social problems and

issues as found by the research workers in the social sciences;

2. Determine the outstanding aims of the social sciences as found in state courses of study and as set forth by experts in the field;

3. Analyze the aims of various tests used in the social sciences;

4. Select a series of facts from the various social sciences to test the range of high school students' knowledge;

5. Devise a series of situations dealing with social situations or problems to test the knowledge, reasoning ability, mind set, and attitudes of high school students;

6. Show the relationship between the facts which one has available and the ability to make good judgments when confronted with a problematic situation;

7. Show how the relationship mentioned in item #6 improves under the present system of public instruction;

8. Point out those problems or facts about which high school students have developed mind sets or attitudes.

Value of the Study. - If the results of the study are of reasonable accuracy, the study ought to be of value in showing teachers where the most emphasis should be placed on problems dealing with current social, economic, and political affairs. In speaking of the development of social science tests, Kelly says:

We need measures of tolerance, of attitude toward law enforcement, toward typical individuals, toward malfeasance in public office, toward property rights, toward social obligations, toward racial differences, toward crimes of violence, toward public responsibility, et cetera. We need these things for an understanding of what is taking place and how it can be changed. For, unless we can in some sense measure a change, we do not know that it occurred. The value of anyone of these instruments is scarcely altered whether the socially approved objective of instruction is to increase or to decrease the attitude in question. We need these measures in order that we may know if adopted objectives are possible, for, if not the objective has no value but to give philosophical satisfaction to some recluse. Such value is negligible in comparison with the harm such an intangible aim has in deterring effort along more fruitful lines.

A second quite as interesting a problem is the measurement of the extent to which principles or laws are mastered by pupils. In fact, this has much in common with the measurement of attitudes. A principle is an abstraction earlier arrived at and elicited in any particular situation by some prepotent element. As a thing earlier incorporated into mental life, it is like attitude and also as a thing brought into play by a selected element from a total situation it is like attitude, and only as a thing brought into play by a selected element from a total situation is it like attitude, and only as a thing finding expression in further intellectual activity instead of emotion or immediate conduct does it differ. ¹

The study ought to make some contribution along the lines mentioned by Kelley in the above paragraphs. Since there has been some demand in recent times for a reorganization of the social studies, the study ought to give a fairly composite view of the social education which has been gathered from the social science curriculum by the student. If education implies that "instruction is conveyed and ability is increased," then the study ought to measure in part the educational objectives. No claim is made that this will be done

¹ T. L. Kelley, "The Objective Measurement of the Outcomes of the Social Studies," The Historical Outlook, XXI (February, 1930), 66-71.

in detail. It ought to measure the outcomes of education as defined by Dewey. Doctor Dewey defines education as:

That reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience. ²

Fundamental Assumptions Made in the Study. - The fundamental assumptions made in the study are:

1. That American civilization is composed of various racial, religious, political, social, and economic groups which will show many types of variation.

2. That the effect of heredity and environment of the groups mentioned in item #1 will be show in the measurement of any trait or characteristic which might be involved in such a program as will be attempted.

3. That heredity is largely indicated or evidenced by the capacity for development and modification. (The capacity factor.)

4. That experience acting on capacity results in the development and modification of the inherited mechanism within reasonable limits of the ability.

5. That there are various types of factors involved in any ability, as:

- (a) The control factors
- (b) The emotional factors
- (c) The mental factors
- (d) The motor factors

² John Dewey, Democracy and Education. New York: The Macmillan Company, 1926. Pp. 89-90.

Our primary concern will be with the emotional and mental factors.

6. That the action of the individual mechanisms is affected by the conditions under which they are acting. These are:

- (a) External physical conditions
- (b) Internal states
- (c) Internal adjustments and coordinations

7. That there are a number of factors which act jointly to produce intelligent behavior in any situation, and these include capacity, ability, maturity, directed training, bodily and mental conditions, and specific achievements.

8. That the environmental factors indicated in item #7 will be evidenced in any attempt to measure any emotional or mental behavior.

9. That in general those endowed with the greatest degree of native capacity will show the highest degree of internal adjustment and coordinations when subjected to situations that call for intelligent thought and reactions within a limited time.

10. That those who have been subjected to the best type of directed training in the specific social studies will show superior ability, in general, in reacting to unfamiliar social-civic situations.

11. That evidences of the best type of training will be indicated by general averages of achievement in the social sciences, or on standard tests.

CHAPTER II

STATEMENT OF THE FUNDAMENTAL PHILOSOPHY TO BE USED IN CONNECTION WITH THE STUDY

Before a statement of the philosophy of a study should be given, one should review the trends of the times and survey the ideals of the educational system now in operation. (By educational system, the writer means the public school system since the study is to be confined to tax supported schools.)

The Trend of the Times. - A detailed history of the development of the modern school system is foreign to the plan of this study, but an understanding of the leading trends in its development is necessary to make an interpretation of its present institutional aims and functions. The leading trends are set forth by Dr. Walter R. Smith as follows:

1. Broadening of the clientele of the schools.
2. Changing the nature of its objectives.
3. Enriching and varying its curricular content.
4. Transferring educational control from the family and the Church to the State.
5. Increasing the amount of education offered, and making education compulsory with an increasing age limit. ¹

¹ Walter R. Smith, Principles of Educational Sociology.
Boston: Houghton Mifflin Company, 1928. P. 106.

An examination of the above trends will show that the system is an evolving organization with shifting aims and objectives as well as a changing personnel and curricular content. These changes have never been so noticeable as in the last two decades. The curriculum revisions of the last twenty years exceed all of those made during the history of our public school system. Modern scientific methods are probably responsible in part for this change; or, in other words, the change from empiricism to the scientific study of social needs and educational values may be producing it. This method of evaluating social objectives has several noticeable features which in turn affect the philosophy of the present system. The most outstanding features are:

1. Repeatability.
2. The suppression of the personal equation of the investigator.
3. Critical analysis of data by experts.
4. Data largely quantitative in nature.
5. Generalizations made on the basis of representative cases.
6. Scientific method forbids generalizations on too few cases.

The public school system sets the stage on which the above drama is enacted. It means conformity, within limits, for the perpetuation of the state and its allied institutions. The state is the organized instrument of collective action, and the educational system is the most thorough-going example of collective action in a

modern democracy. Individuals accept this action, since they accept in most cases the burden of taxation which it imposes, along with the compulsory attendance laws and other duties and obligations. The perpetuity of the state, the stability of institutions, the growth of youth, and the conduct of modern life are dependent upon the success of the application of modern theories of education, and it is to philosophy that we turn for guidance into the great uncharted sea of the future.

If the state is to be the agent of most organized forces in modern society, we must state very dogmatically that change is inevitable in a dynamic democratic society which goes to make up the state. It has already been pointed out that many curriculum changes have taken place and whatever philosophical principles we set up must be principles which will provide for change. Finney points out the need when he says:

It cannot be too often nor too emphatically repeated that society is passing through the greatest transition of recorded history, by all odds far away! The magnitude of the re-adjustment is almost impossible to realize, and so are its problematic aspects. The welfare of mankind is at stake for a thousand years to come. If we can solve the problems of this transition without conflict or delay, those who come after us will soon possess the promised land. But if we fail to solve them, there may be dark ages ahead; posterity may wander in the wilderness of conflict and misery, not forty years, but forty generations."²

Lippman, in discussing the tendency toward change, says:

2

Ross L. Finney, A Sociological Philosophy of Education.
New York: The Macmillan Company, 1928. P. 279.

Never before have we had to rely so completely on ourselves. No guardian to think for us, no precedent to follow without question, no lawmaker above, only ordinary men set to deal with heart breaking perplexity. All weakness comes to the surface. We are homeless in a jungle of machines and untamed powers that haunt and lure the imagination. Of course our culture is confused, our thinking spasmodic, and our emotion out of kilter. No mariner ever enters upon a more uncharted sea than does the average human being born in the twentieth century. Our ancestors thought they knew their way from birth through all eternity; we are puzzled about day after tomorrow. . . .

It is with emancipation that real tasks begin and liberty is a searching challenge, for it takes away the guardianship of the master and the comfort of the priest. The iconoclasts did not free us. They threw us in the water, and now we have to swim.

Ross depicts the situation even more vividly in the followings:

We moderns are like mariners on a ship sailing an uncharted sea, we cannot lay our course in the light of experience of our ancestors. None of them ever plowed these waters. . . .

Science and invention have borne us away from routes followed by any previous society. They have brought us into strange latitudes where we have nothing to go by. And they do not allow us to feel our way deliberately, put out scout boats, take soundings. They hurry us on. So the best we can do is to set watchers to scan the horizon. The sociologist is just a man in a crow's nest who knows no more of this sea than his fellows. But from this position he will catch sight of coming danger - shoals, sunken rocks, derelicts, cross-currents - before they are seen by those on deck. ⁴

The late G. Stanley Hall carries the idea of change to

3

Walter Lippman, Drift and Mastery. New York: The Henry Holt Company, 1914. Pp. 196-197.

4

Edward A. Ross, The Social Trend. New York: The Century Company, 1922. P. I, Introduction.

its zenith in the Zeitgeist which is quoted in part below.

Now, when all human institutions so slowly and laboriously evolved are impugned, every consensus challenged, every creed flouted, as much as and perhaps even more than by ancient Sophists, the call comes to us - to explore, test, and if necessary, reconstruct the very basis of conviction, for open questions are new opportunities. Old Beacon lights have shifted or gone out. Some of the issues we lately thought to be minor have taken on cosmic dimensions. We are all "up against" questions too big for us, so that there is everywhere a sense of insufficiency which is too deep to be fully deployed in the narrow field of consciousness. Hence, there is a new discontent with old leaders, standards, criteria, methods, and values, and a demand everywhere for new ones, a realization that mankind must now reorient itself and take its bearings from the eternal stars and sail no longer into the unknown future by the dead reckonings of the past. ⁵

Beard gives a challenge to modern society in his recent book, "Toward Civilization", where he points out that

The battle over the meaning and course of machine civilization grows with resounding blows along the whole front. . . . None is so humble that he can escape it; none so great that he can wholly ignore it. A synthesis of modern aspirations, the very concept of this civilization as destiny and opportunity arrests even the witless; especially invites all who possess the power of brains or money to stop short and consider what work, under the shadow of this challenge, is most worthwhile. ⁶

The change is so evident that outstanding writers in the field of the social sciences revise their books constantly in order to keep them up to date.

⁵ G. Stanley Hall, "The Message of the Zeitgeist", Scientific Monthly (August), 1921.

⁶ C. A. Beard, Toward Civilization. London: Longmans Green and Company, 1930. P. 1.

Many titles of new books, such as Kilpatrick's "Education for a Changing Civilization", Ogburn's "Social Changes," Henslowe's "Things Have to Change," Davis' "Contemporary Social Movements," Thayer's "The Passing of the Recitation," Rugg and Shumaker's "The Child Centered School," give evidences of these changes. A score of others could be mentioned.

In discussing the outcome of these changes and the effects upon educational method Kilpatrick says:

We have seemed to conclude then, so far, that the essential factor which makes and explains the modern world and gives to it its differentiating characteristics is the presence of tested thought and its application to the affairs of men. This changes not only our ways of living but changes if possible even more our mental outlook. We think and feel and act differently because of the different conditions under which life goes on. But this is not all. The body of tested thought grows and promises to grow still more rapidly, even in geometrical ratio. If this be so, and the argument for it is very strong, then such changes as we now have thus far seen are small in comparison with what be ahead. This fact of permanent, rapid, and increasingly rapid change introduces a new and extremely difficult problem. The material advance in civilization threatens to outrun our social and moral ability to grapple with the problems so introduced. Already one significant result appears. Our youth no longer accept authoritarian morals. We must develop then a point of view and devise a correlative educational system which shall take adequate account of this fact of ever increasing change otherwise civilization itself seems threatened. ⁷

Dewey says that change is not indicative of destruction, but should imbue men with courage and make them aggressive. His position and attitude are clearly seen in this statement taken from

⁷ William H. Kilpatrick, Education for a Changing Civilization, pp. 49-50. New York: The Macmillan Company, 1927.

his "Reconstruction in Philosophy."

Change becomes significant of new possibilities and ends to be attained; it becomes prophetic of a better future. Change is associated with progress rather than lapse and fall. Since changes are going on anyway, the great thing is to learn enough about them so that we be able to lay hold of them and turn them in the direction of our desires. Conditions and events are neither to be fled from nor passively acquiesced in; they are to be utilized and directed. They are either obstacles to our ends or else means for their accomplishment. ⁸

The question arises, what is change? This leads to another important question, "What changes should children undergo in order to become the most efficient citizens?" Change comes as a result of experiences, according to Hart. He classifies them as follows:

1. Experiences of hunger, thirst, fears, and pains, which are simply natural, and which may or may not rise into conscious knowings.

2. Experiences which have been cogitated, and excogitated, until they have risen to the status of reflected knowings, conscious presentations; which have been more or less, organized into systems of interpretation and understanding, which have become part of that inclusive realization of the world which can truly be called experience.

3. Experiences which are vague intimations - gaps in our experiences, and in our experience, of something beyond experience which we do not know - which are not real experiencings, as yet, but rather feelings of the lack of experience, and of the possibilities of further experiencing to come. ⁹

⁸ John Dewey, Reconstruction in Philosophy. New York: Henry Holt and Company, 1920. P. 116.

⁹ Joseph K. Hart, Inside Experience. New York: Longmans, Green and Company, 1927. Pp. 43-45.

Here seems to be the focal point of modern philosophy. The above quotation shows us first, natural urges; second, a thinking animal; and third, an animal which seeks to create over and beyond what is brought into his conscious field to be cogitated and ex-cogitated. The first phase of experiencing initiates a learning process; the second organizes, delimits, and accepts; while the third continues the process.

If change is so evident and if education is life, as well as preparation for life, then we might raise the question, "What education should we have in order to live and prepare for living when living is so changeable?" In part answer to this question, Dewey says:

Philosophy has to search out and disclose the obstructions; to criticize the habits of mind which stand in the way; to focus reflection upon the needs congruous to present life; to interpret the conclusions of science with respect to their consequences for our beliefs about purposes and values in all phases of life. The development of a system of thought capable of giving this service is a difficult undertaking; it can proceed only slowly and through cooperative effort. ¹⁰

Dewey implies that in order to meet change our educational system must produce thinkers both in numbers and quality. America has been accused of producing a race of material producers, and if this be true, our thinking, most likely, will continue for a long while along material lines for productive purposes. Pound states our

¹⁰ John Dewey, The Quest for Certainty. London: George Allen and Unwin, 1929. P. 297.

position very clearly in the following statements:

What must give us most concern, therefore, is not the warping of institutions and constitutional provisions and statutes as the social order and its political and legal institutions adjust to modern life. In a long view what is likely to prove hardest and to retard and make ineffective our efforts at adjustment will not be stubborn facts but stubborn theories. Nor will it be the theories of impractical men - of teachers, writers and thinkers. Much more it will be the dogmas of the practical man, who assumes that his picture of what ought to be, made on a background of the idealized life of his formative years, out of the limited experience of his narrow life, is an accurate picture of what is and a measure of what must be. 11

Thus we are confronted with the idea of experiencing during the early years of life. The future is built out of the past. The old cycle of life is in action. Youth lives and builds in dreams and pictures the future; and man lives in fancies and reveries of the past. The problem of education is to take them both and make them real. Let youth taste of the problems of life in life situations, if possible, so that when age comes on there will be realities instead of fancies. Literally this means a continuous process of learning or a new way of behaving. Youth plans how he will behave when he grows up, and father explains how he behaved when he was a youth of his son's age.

From this we see that learning at any stage is involved with observations, reflections, mental sets, and volitions. The individual not only observes and generalizes, but he experiences

11

Roscoe Pound, The Social Order and Modern Life,
p. 101. Boulder: University of Colorado, 1928.

feeling of pleasure or pain; he instinctively or habitually approves or disapproves a given thing or action without consciousness or intellectual reasoning. Individuals are constantly experiencing feelings which they express in appropriate symbols, and are making decisions of worth that are gradually combined into social standards. These criteria in turn react upon individuals, and largely determine their emotions and estimates of value. To solve the problems within a democracy there must be collective action, not directed alone by feeling, custom, habit, belief, or prejudice, but by integrated actions of intelligent people. If this is true, then we can look for the method of providing this action. The social sciences provide only a small part of the integral whole which goes to make up intelligence, although they are of fundamental importance in the underlying principles of modern behavior since they deal in a way with man's behavior in the past, present and future. These sciences have very generally stated their objective as being to fit the individual for effective, creative, and satisfactory membership in the society in which he is destined. Thus the individual must be trained in those attitudes and methods of thought that will make him progressively adjustable to any and all changes that may occur. Dr. Dewey set the stage for this act of adjustment several years ago when he said:

The fundamental factors in the educative process are an immature and undeveloped being; and certain social aims, meanings, values incarnate in the nature experience of the adult. The educative

process is the due interaction of these forces. Such a conception of each in relation to the other as facilitates completest and freest interaction is the essence of educational theory. ¹²

With this idea in mind, we might state the underlying philosophical principles involved in the study, but first let us understand the term "philosophy" in the sense in which the writer intends to make use of the principles. The definition that will be used is the one given by Finney, which reads:

Philosophy is the careful, critical, systematic work of intellect in the formulation of beliefs, with the aim of making them represent the highest degree of probability, in the face of the fact that adequate data are not obtainable for strictly demonstrable conclusions. It will be observed that this is a statement of method and technique rather than a delimitation of problem phenomena. ¹³

If philosophy is a method and technique, then what assumptions can we make that will have the highest degree of probability in the face of the mass of facts which have already accumulated in educational research? Kilpatrick makes five hypotheses as follows:

1. Criticized experience is the final test of all things - experience criticized in its bearing on other experience. From this point of view knowledge and "principles" are hypotheses for guiding experience.

2. The universe is fundamentally precarious. But effort produces effect. Thinking is past experience guiding present effort. Through thought man is self-directive and effective in a sense and degree true of no other organism.

12

John Dewey, The Child and the Curriculum. Chicago: University of Chicago Press, 1902. Pp. 7-8.

13

Ross L. Finney, A Sociological Philosophy of Education. New York: The Macmillan Company, 1928. P. 4.

3. No principle is absolute but each such principle is to be applied in the light of other principles involved in the situation under consideration.

4. The self is an organization affected in the social situation, the beginning being biologic heredity, communication playing an essential role or part. The individual is thus inherently social in origin and nature.

5. The good life is one of activity of the varied capacities of the person so managed as to continue and increase such activity both individual and shared, in the self and in others. We seek the maximum development of each in relation to all, each as an end in himself and never a means merely. 14

The above hypotheses, if pragmatically executed, will involve two types of intellectual labor. One is to uncover new facts, the other is to reorganize our prevailing knowledge in such a way as to incorporate those new facts. The one is research whether done by the child or adult; the other is resynthesis. This means the elimination of beliefs and the substitution of criticized and analyzed thought as a basis of action, or a means of controlling man's behavior. This change and its probable objectionable features were pointed out by Russell as follows:

But if thought is to become the possession of many, not the privilege of the few, we must have done with fear. It is fear that holds men back; fear lest their cherished beliefs should prove delusions, fear lest institutions by which they live should prove harmful, fear lest they themselves should prove less worthy of respect than they supposed themselves to be. Should the workingman think freely about property? Then what will become of us, the rich? Should young men and young women think freely about sex? Then what will become of morality? Should soldiers think freely about war? Then what will become of military

14

William H. Kilpatrick, "The Philosophy of American Education", Teachers College Record (October, 1928), 15-16.

discipline? Away with thought! Back to the shades of prejudice, lest property, morals, and war should be endangered! Better that men should be stupid, slothful, and oppressive than that thoughts should be free. For if their thoughts were free, they might not think as we do. And at all costs this disaster must be averted. So the opponents of thought argue in the unconscious depths of their souls. And so they act in their churches, their schools, and their universities. 15

We hear a great deal of talk about teaching children to think independently; and just as much talk at the same time about the considerable percentage of children who are hopelessly incapable of thinking. Are we using a system of public instruction which encourages thinking or imitation and memorization?

One wonders if this lack of thinking is the result of the method of presentation, the purpose, or is caused from the multiplicity of facts which accumulate as the result of varied courses. If change is inevitable and the best method is to be adopted to cope with changing times and problems, one wonders if the human mind should be burdened with a mass of facts without some attempt to synthesize them. Dewey strikes a warning note in the following statement:

If the war has revealed that our existing social situation is in effect the result of the convergence of a large number of independently generated historic incidents, it has shown that our ordinary reationalizing and justifying ideas constitute an essential mythology in their attributions of phenomena to basic principles and intelligently directed forces. When it is seen that intelligence has for the most part been confined to working within sphere of these various incidental happenings to glean from each some local usufruct, it becomes apparent that the net result is something irrational, something unplanned and unintended, in short a historic accident. And in turn it appears that

15

B. A. W. Russell, "Education as a Political Institution", Atlantic Monthly, Vol. 117 (June, 1916), 754.

any science which pretends to be more than a description of the particular forces which are at work and a descriptive tracing of the particular consequences which they produce, which pretends to discover basic principles to which social things conform, and inherent laws which "explain" them, is, I repeat, sheer mythology. This is the negative side of education enforced by the war. The need of radical modification of aims and methods in the face of a serious social crisis, which makes clear the extent to which the present order rests upon habit, intrigue, private deflections of social forces to personal uses, love of barbaric luxury and display, secret business and secret diplomacy, reveals how little affairs have been effects of intelligent desire and direction. In so doing, they give a blow in the end certain to be fatal to the "sciences" which assume intelligence and rational law in their explanations and systematizations. One may doubt whether William James foresaw how soon events would confirm his presentiment that a substitution of pragmatic experimentation for the reign of rationalistic sciences involves an "alteration" of the rest of the seat of authority.

The exigencies have shown that intelligence exists as an operative power. It has revealed the capacity of organized intelligence to take hold of affairs and direct the movement of mass details. The response of affairs has proved them amenable to such management. A centralized intellectual policy has been demonstrated to be feasible as well as imperatively needed. Empirical description of forces is not, then, the whole of social science which should replace our reactionistic mythology. What is required is a large working hypothesis concerning the uses to which these forces are to be put. Legislation, administration and education must be regarded as having the role of experimentation which tests and perfects ideas rather than a program which merely executes them. 16

Dewey's idea seems to be well illustrated in Thompson's definition of philosophy which is given below:

Philosophy means looking at the whole question, without restrictions or simplifications; looking at ends and purposes, not merely at methods and means, and scrutinizing the latter in the light of the former. It implies a scepticism of much that the popular mind accepts as unquestioned, and a delay of judgment until the whole matter has been thought out. It demands an effort after self-consistency, and

16

John Dewey, Character and Events. New York: Henry Holt and Company, 1929. Pp. 733-738.

will have nothing to do with compromise. ¹⁷

This philosophy means that we must make a very definite change in our present method of fixed content, method, and theory of education. In short, it means self-determination in the literal sense. It means that the individual will be guided in part by his personal motives in determining what the educative process will be. It means self-criticism as to method and means of experiencing. It means, as Dewey indicated, the testing of individual ideas and the method of continuing them or the reasons for discontinuing them. It means the development of a realistic method in dealing with facts of experience. It means the finding of freedom for individual thought, not sheer repetition and imitation - not verbal memory of many facts; but freedom in the method of dealing with the world of experienced thought which is the result of all phases of experience, immediate, mediate, and intimated. It means reconstruction of thought through reflection, recreation, and creation.

If our philosophy is to be a philosophy of change, for changing times, changing individuals, changing aims and objectives, changing ideals and changing institutions, then it must give an inclusive theory that will incorporate a broad theory of education. Bode says, "Our first task is to determine social significance and purpose that we are to attach to education." ¹⁸ In terms of the democratic ideal this

¹⁷ G. H. Thompson, A Modern Philosophy of Education, p. 11. New York: Longmans, Green and Company, 1929.

¹⁸ B. H. Bode, "Objectives in Education", School and Society, Vol. XVIII, No. 463, 546.

significance is to promote understanding and sympathy and cooperation among men, by training each person for conscious membership in the social structure, in accordance with his native capacity, interests, and temperament. But, according to Bode's idea, we are not training along these lines at all; rather we are training in the cultivation of habits and skills which make no provision for adaptive intelligence. ¹⁹

Bode further points out that the chief defect in American education is the lack of a program, or sense of direction. It has no adequate mission or social gospel. ²⁰ He places the chief emphasis on two main ideas, viz., (1) the aims to be realized, and (2) the nature of the mind which is to receive the education. ²¹ And elsewhere, he mentions another on which he places much emphasis, that is, the formulation of an ideal. ²² It has been stated that the ideal of education in a democracy is freedom or self determination insofar as the abilities of the learner will permit. According to Dewey, freedom is achieved through the exercise of intelligence, whereas the less discriminating of his disciples understood him to mean that intelligence is achieved through the exercise of freedom. In discussing Dewey's

19

B. H. Bode, "The New Education Ten Years After", The New Republic, Vol. 63, pp. 61-64.

20

Ibid., pp. 61-64.

21

B. H. Bode, Fundamentals of Education, p. 224. New York: The Macmillan Company, 1922.

22

B. H. Bode, Modern Educational Theories, p. 341. New York: The Macmillan Company, 1927.

viewpoint, Bode says:

The (Dewey) meaning of freedom centers precisely in the ability to go through with an undertaking by discovering of appropriate means, by the surmounting of obstacles and by modification of the original plan or conception in the light of the new facts. This calls for both sustained effort in the presence of distractions, and for the exercise of discrimination and constructive imagination - in short for real thinking. It may be added that if we may trust the example of scientific thinking, the possession of a body of scientifically organized matter is of inestimable value, not only as a resource in later life, but as a basis for present thinking. Where subject matter is absent, we rely less on thinking than on guessing and more or less random experimenting. ²³

This ideal and its method is considered as the ideal of democracy by Kandel. If Dewey's meaning of freedom is applied in reality, it means equality of opportunity, tolerance in religion, politics, and social affairs, and opposition to the restraint of law and custom, since each person is seeking to discover appropriate action and using his imagination to determine the outcome giving noticeable effort in order to surmount the obstacle, whether it be custom, law, or prejudice.

The second ideal mentioned by Kandel is that of individualism ²⁴, which is at once the result of equal opportunity and its guarantee. But equality of opportunity at the same time makes it the duty of the individual to make the best of himself and both demands and calls out qualities of individual energy, initiative, self-reliance and enterprise. It is this conception of individualism and this attitude

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B. H. Bode, op. cit., pp. 61-64 (1).

²⁴

I. L. Kandel, "American Spirit in Education", Teachers College Record, (October, 1928), 23-27.

toward the equality of opportunity that have caused good citizens to look with scorn and contempt upon the useless citizen, whether rich or poor. The third ideal is the ideal of social and community service which calls for readiness to cooperate.

This phase of the study has attempted to show:

1. The trends of the modern democratic educational procedures.
2. The causes for these trends.
3. That the modern times are indicative of change.
4. The outcome or effects upon the educational system which are the result of change.
5. The attitude of the leading educational philosophers toward change.
6. The method which modern philosophy would use to cope with changing times and conditions.
7. The outstanding difficulty in putting this method into operation.
8. What is meant by modern educational philosophy.
9. What hypotheses might be made in the light of modern educational philosophy.
10. The ways by which educational philosophy attempts to promote intellectual development.
11. The ideals growing out of educational theory and philosophy.

Statement of Philosophical Principles which Might Apply
to the Study. -

1. Any test should be so devised as to measure the greatest possible number of the outcomes of the aims of education which includes:

- a. The development and organization of desirable habits by way of response to the stimuli which are fairly certain to be encountered by the child who received training.
- b. The development of problem solving ability or insight, based on a working store of knowledge plus right habits of mental manipulation.
- c. Something by way of inculcation of proper ideals, ethical attitudes, and institutional loyalties to such institutions as the home, the church, and the state.
- d. The coordination of purpose, habits, and impulses in such a way as to prevent emotional conflict and to assist the fullest degree of self determination in keeping with the social well-being. 25

2. Any test should be so devised as to measure the extent of development of vision, self-direction, self-appraisal, and self-control as indicated by the ability to utilize the purposes of others and incorporate these purposes into his thinking.

3. Any test should be so devised as to give an opportunity for the use of native capacity which may be exemplified at any age level.

4. Any test should be so devised as to have social significance for the pupil, the teacher, and for society.

25

V. T. Smith, "An Educational Philosophy," Educational Administration and Supervision, Vol. XVI, No. 2 (1930), 88-98.

5. Most tests should be so devised that they will measure the abilities of students from grade to grade, and from age to age, thus providing for change, or a wide range of experience.

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CHAPTER III

ANALYSIS OF AIMS AND OBJECTIVES OF THE SOCIAL SCIENCES

Methods of Determining Objectives. - Objectives may be determined from two viewpoints, namely, social and individual. The social viewpoint takes into consideration what society expects the child to achieve which will benefit society. This objective might be classified as the extrinsic objective. The individual viewpoint takes into consideration individual needs and desires, and may be thought of as the intrinsic objective.

Some objectives are organized under the headings of knowledges, skills, attitudes, and ideals. These are all aims or objectives perhaps, remote to the mind of the child. They are outcomes of the teaching procedure. Kilpatrick's idea of aim seems to be the most plausible one in dealing with change. He speaks of the aims growing out of need for a given ability and also the disposition to respond.¹ He states it in another way, as content and control of human behavior. Of course that is what all education aims to achieve in the end, but the intelligent control of behavior does not come through content which is acquired by a process of coercion.

¹
William H. Kilpatrick, Foundations of Method, pp. 191-192. New York: The Macmillan Company, 1926.

It is to be understood that the aims found in this study are of the extrinsic type. However, the writer feels that the intrinsic aims should be most considered in the process of reaching the objectives.

In this age of material values, utility might be taken as the chief criterion in determining the aims and objectives of education. Utility might have a number of meanings that would be of almost equal significance. Mere absolute usefulness is not an adequate criterion of utility, for a case of usefulness can be made out of most anything. Our test must be, not mere utility, but relative utility. What will be the relative frequency of the use made of the material acquired in the learning process or the thinking process? The test of relative utility is, first, frequency of recurrence; second, cruciality; third, many-sidedness; and fourth, personal appeal. This method of determination of objectives was given by Peters in his "Foundations of Educational Sociology."²

The chief methods of determining objectives, as given by Harap, are:

1. Direct analysis of the natural activities of children.
2. Direct analysis of the social needs of the learner.
3. Secondary analysis of the needs of the learner.

²
C. C. Peters, Foundations of Educational Sociology, pp. 54-77. New York: The Macmillan Company, 1930.

4. Analysis of the needs of the learner in the opinion of competent persons.
5. Analysis of existing objectives as found in, or inferred from, curriculum studies, courses of study, and textbooks. ³

A critical analysis of the methods given by Harap and Peters shows them to be in accord with one another. Harap starts with the child in his determination of objectives, and Peters ends with the child. Bobbitt and Charters were both proponents of the idea of activity analysis.

It is not the purpose of this study to analyze the whole range of children's activities, but rather to test the thinking capacity of individuals which might be the result of these activities. The chief reason for ascertaining these aims is to determine what knowledges are most likely to be found as a result of the aims of instruction. Several of the sources mentioned by Harap were used to determine the aims of the social sciences. These aims are given in terms of generalizations and not for specific subjects. The following procedure was used in determining the aims:

1. An analysis of the state courses of study.
2. An analysis of the aims as given by writers in the Historical Outlook for a period of ten years.
3. An examination of the aims as indicated by teacher training institutions.

3

H. Harap, The Technique of Curriculum Making, p. 38.
New York: The Macmillan Company, 1928.

4. A review of the aims as indicated by experts in the field of secondary education.
5. An analysis of the aims as indicated by the test builders in various social subjects.

In the analysis of the first two items mentioned in the foregoing, the frequency of occurrence method was used. The aims as indicated by subjects were written on cards and assembled according to like title, and the frequency of mention by course of study was determined. The data, as given in Table II, do not show any item mentioned with as great a total as there are states in the union. Several states did not have bulletins setting forth these aims. Alabama, Ohio, and Florida have limited bulletins which give a very meager outline of the courses, and make little or no mention of the aims of the various courses.

Brown analyzed the state courses of studies, and found the aims given in Table I for civics in the elementary school.⁴ Several other studies with reference to aims in the elementary school might be quoted, but one only appears to be of sufficient importance or directly related to this particular study to treat the aims given in this discussion. Dr. W. L. Collins surveyed sixty-six courses of study and summarized the aims of teaching of civics as follows:

1. Those that emphasize the cultivation of civic virtues, such as honesty, kindness, dependability, respect for law, thrift, cooperation, courtesy, promptness, and care of property.

4

M. W. Brown, "An Analysis of State Courses of Study for the Social Studies". Unpublished Master's Thesis, Department of Education, University of Chicago, 1926. P. 28.

2. Those that emphasize the development of a keen sense of civic responsibility.

3. Those that emphasize the realization of the interdependence of people and communities.

4. Those that tend toward an enlarging patriotism.

5. Those that emphasize a knowledge and appreciation of the civil organization of the community, state, and nation. ⁵

These aims appear to be in harmony with those given by Brown and quoted in Table I, although they include the aims given in a number of city courses of study.

The writer analyzed 36 state courses of study, four city courses, and one territory course to determine whether aims or objectives were common to more than one subject in the social sciences. The results of this analysis are given in Table II.

(For Table I, see following page)

(For Table II, see page 39)

⁵ Walter L. Collins, "Teaching of Citizenship in the Elementary Schools." Unpublished Doctor's Dissertation, Teachers College, University of Cincinnati, 1928. P. 158.

TABLE I
THE AIMS OF CIVICS FOR GRADES I TO VIII AS GIVEN
IN BROWN'S STUDY *

Aims	No. of Times Mentioned
1. Good Citizenship	18
2. The development of civic ideals and virtues	15
3. The acquisition of helpful civic knowledge	12
4. A sense of civic responsibility	11
5. The development of good social and civic habits	10
6. Patriotism	8
7. A desire for active participation in civic affairs	7
8. The development of right civic attitudes	6
9. An interest in social civic affairs	6
10. An appreciation of how we live together	4
11. An intelligent understanding of our social organization	3
12. A realization of the interdependence of man	3
13. An understanding and appreciation of the principles that underlie community and national welfare	3
14. The development of character	2
15. Inspiration	2

* Milton W. Brown, "An Analysis of State Courses of Study for the Social Studies." Unpublished Master's Thesis, Department of Education, University of Chicago, 1926. P. 28.

The foregoing Table shows where the most emphasis might be placed in the early training of students in our elementary schools. The foundations for attitudes, skills, and habits are laid in the public school, and any attempt to measure the abilities of high school students will in a large measure be the result of earlier development.

TABLE II
THE RANK OF THE AIMS OF THE SOCIAL STUDIES
AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
1. Good Citizenship	4	24	1
2. The Development of civic virtues and attitudes	3	22	2
3. Intelligent loyalty and patriotism	3	21	3
4. Worthy civic and social ideals	3	20	4
5. A sense of social and civic responsibility	4	17	5
6. An understanding of civic and social problems	2	16	6
7. Social efficiency	2	13	7
8. Development of qualities and habits of good citizenship	1	10	9

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
9. A desire for and a willingness to render service on the part of the pupil	2	10	9
10. Development of social and civic habits	1	10	9
11. A knowledge of the social forces and elements of community welfare	2	9	11
12. Worthy standards of action in civic affairs	2	8	13.5
13. Development of habits of social thinking	2	8	13.5
14. Intelligent cooperation in group life	1	7	16.5
15. A sense of community consciousness	1	7	16.5
16. A thorough knowledge of pupil's own community	1	7	16.5
17. More efficient citizenship	1	7	16.5
18. An understanding of how people live together	2	6	20.5
19. Familiarity with the development and character of American institutions	1	6	20.5

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
20. A knowledge of the forces, functions and activities of government	1	6	20.5
21. An understanding of the orderly development of the world	1	6	20.5
22. The ability to make social judgments	1	5	24
23. Ability to think clearly	1	5	24
24. To give inspiration through example	2	5	24
25. A vivid conception of American nationality	1	5	24
26. A lasting interest in history and current human problems	2	5	24
27. A knowledge of our social and political institutions	2	4	30.5
28. A familiarity with various social agencies	1	4	30.5
29. Develop a spirit of cooperation	2	4	30.5
30. Broadening of pupils' sympathies	1	4	30.5

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
31. An interest in social and economic problems	1	4	30.5
32. Maintenance and improving of American ideals and standards	1	4	30.5
33. Development of open-mindedness	1	3	38
34. An increased interest in public questions	1	3	38
35. A knowledge of the forces that make for our national well-being	1	3	38
36. A realization of the assets of our democracy	1	3	38
37. Development of ideals of service	1	3	38
38. Loyalty to principles and institutions	1	3	38
39. An understanding of fundamental economic laws	1	3	38
40. An understanding of present day social, economic and political problems	1	3	38

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
41. Knowledge of methods of investigation	1	3	38
42. Stimulation of imagination	1	3	38
43. Ability to systematize and arrange facts logically	1	3	38
44. An appreciation of responsibility to state and community	1	2	51
45. A rational conception of national and international questions	1	2	51
46. A sympathetic understanding of all nations	1	2	51
47. Intelligent citizenship	1	2	51
48. The development of vocational interest	1	2	51
49. Ability to sense moral value	1	2	51
50. Increased ability in the observation of social phenomena	1	2	51
51. Habits of organizing and testing knowledge	1	2	51

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
52. Development of power of logical and abstract thinking	1	2	51
53. A consciousness of the word "community"	1	2	51
54. An understanding of the functions of government and business	1	2	51
55. The dissolution of prejudices	1	2	51
56. An interest in the social life about the pupil	1	1	70
57. Ability to study and speak intelligently	1	1	70
58. Ability to find information and judge values	1	1	70
59. Ability to form sound social opinions or judgments	1	1	70
60. Strengthening the pupil's power of comprehension	1	1	70
61. Development of a critical attitude toward material presented	1	1	70
62. Ability to make independent judgments	1	1	70

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
63. Development of power of judgment	1	1	70
64. Development of scientific habits of thought and mind	1	1	70
65. The acquisition of procedure for solving material	1	1	70
66. Independence in the use of source material	1	1	70
67. Development of scientific attitude	1	1	70
68. Broadening of pupil's horizon	1	1	70
69. An understanding of present-day conditions in society	1	1	70
70. An understanding of the weaknesses in our economic system	1	1	70
71. An understanding of fundamental social institutions	1	1	70
72. Moral worth	1	1	70
73. Civic consciousness	1	1	70
74. The making of wise voters	1	1	70

(Table continued)

TABLE II (Cont.)
 THE RANK OF THE AIMS OF THE SOCIAL STUDIES
 AS INDICATED BY THE FREQUENCY OF MENTION BY SUBJECTS
 AND THE NUMBER OF STATE COURSES OF STUDY GIVING THESE AIMS

Aims	No. of Subjects Giving it	No. of Courses of Study Using it	Rank
75. High national ideals	1	1	70
76. An appreciation of community cooperation	1	1	70
77. A lasting interest in present-day problems	1	1	70
78. An intelligent understanding of society	1	1	70
79. An understanding of the societies of the world today	1	1	70
80. To build an interest for study of history	1	1	70
81. A discriminating taste for the best periodicals	1	1	70
82. An understanding of the human race	1	1	70
83. Development of character	2	1	70

The fact that the aims for the various courses are included in the foregoing Table probably accounts for the large number of aims given. If the aims are to be meaningful, there must be a small number; and to include only those indicated by more than one subject would decrease the

number given in the foregoing Table materially.

Aims Given by Contributors to the Historical Outlook. - The articles found in the Historical Outlook from 1919-1929 were analyzed if they seemed to contribute to the aims of the social studies. Thirty articles were found which contained general or specific aims dealing with the social science subjects. These aims were given by some of the leading thinkers in that field. The period selected is a very important one from the point of view of the social scientist. The war had shown many deficiencies in our educational procedure, and focal attention had been turned upon the social studies which were, perhaps, one of the outstanding deficiencies.

The aims were listed on cards as given by each writer, and, whenever a similar wording or meaning was found, these cards were placed together for tabulation purposes. Every effort was made to keep the number from appearing as large as that found in the state courses of study.

It is interesting to note that there is a shift from training for citizenship, as given by the state courses of study, to training for scientific thinking as the most important aim of the contributors to the Historical Outlook, while the aims given in the second place are identical in nature.

The aims given by the contributors to the Historical Outlook are found in Table III.

TABLE III
 THE FREQUENCY OF MENTION OF THE AIMS OF THE SOCIAL SCIENCES
 FROM 1919 - 1929 AS GIVEN IN THE HISTORICAL OUTLOOK

Aims	Frequency
1. To develop scientific habits of thinking	20
2. To develop social concepts, ideals, and attitudes.	18
3. To train for practical citizenship	17
4. To impart knowledge of a practical nature on where, how, and when to use materials	16
5. To train for intelligent patriotism	10
6. To develop a knowledge and appreciation of the organization of society and its problems	9
7. To develop character as implied by honesty, morality, and sense of obligation to society	6
8. To give an understanding of the social institutions and their problems	5
9. To develop civic habits such as courtesy, thrift, cooperation, etc.	4
10. To develop a practical knowledge of governmental agencies that promote public welfare.	4
11. To develop keen observation of persons, facts, and materials	3
12. To create a desire to study the social subjects	3
13. To cultivate a catholicity of spirit	2
14. To develop a realization that the present is the result of the past	2
15. To develop the capacity for wholesome use of leisure time.	2

(Table continued)

TABLE III (Cont.)
 THE FREQUENCY OF MENTION OF THE AIMS OF THE SOCIAL SCIENCES
 FROM 1919 - 1929 AS GIVEN IN THE HISTORICAL OUTLOOK

Aims	Frequency
16. To develop sound mental, moral, physical, and spiritual health	2
17. To give an idea of the evolving process in man's experiences in adjusting human institutions	2
18. To develop historical minded persons	1
19. To train powers of memory, judgment, and imagination .	1
20. To develop interest in modern problems	1
21. To develop cultural and aesthetic interests	1
22. To develop sympathetic attitude and spirit toward workers	1
23. To teach ends and values of living	1
24. To develop realization of interdependence of people and communities	1
25. To teach the opportunities for good citizenship in the vocation	1
26. To learn to tolerate economic depressions	1
27. To care for a family	1
28. To develop a pride in and a loyalty to America	1
29. To give a knowledge of economic and political problems	1
30. To produce a realization that our institutions have been produced through struggle and sacrifice	1
31. To show that progress is made in time of peace through cooperative labor	1

(Table continued)

TABLE III (Cont.)
 THE FREQUENCY OF MENTION OF THE AIMS OF THE SOCIAL SCIENCES
 FROM 1919 - 1929 AS GIVEN IN THE HISTORICAL OUTLOOK

Aims	Frequency
32. To realize value of vocational ethics	1
33. To show the relationships existing in modern life	1
34. To develop respect for private property	1
35. To show the dependence of human beings on economic production	1
36. To develop a sense of continuity	1
37. To understand international industrial organization	1
38. To develop willingness to leave technical questions to experts	1
39. To create a desire to change things for the better.	1
40. To acquire knowledge of sound economic and industrial principles	1
41. To evaluate history in the light of world development	1
42. To learn to make wise use of wealth	1
43. To realize that governmental forces are not permanent, and must be modified	1
44. To teach orderly development of change	1
45. To reveal the necessity for social control of economic organization	1
46. To train in individual independence and liberty	1
47. To develop a respect for and interest in achievement.	1
48. To develop a progressive spirit in boys and girls	1

(Table continued)

TABLE III (Cont.)
 THE FREQUENCY OF MENTION OF THE AIMS OF THE SOCIAL SCIENCES
 FROM 1919 - 1929 AS GIVEN IN THE HISTORICAL OUTLOOK

Aims	Frequency
49. To develop the ideal that public office is a sacred trust	1
50. To give a sense of human motives.	1
51. To help choose the right vocation	1
52. To develop an appreciation of the value of work	1
53. To develop an appreciation of the great forces and movements of civilization	1

Dearborn's Analysis of the Aims of the Social Studies as Stated by Instructors in Teachers Colleges. - Dearborn interviewed the instructors of twenty-six state teachers colleges, and asked them to state what they regarded as the chief outcomes - the objectives - of the social studies in their professional courses. ⁶

These aims were classified as to knowledge, technics or methods, and attitudes, appreciations, and ideals. An examination of Table IV, which is a condensed form of Dearborn's table, will show a preponderant emphasis upon the acquiring of knowledge. History instructors, in particular, stressed the need of students acquiring facts from the textbook and the class work. The general idea appears

6

E. U. Rugg, and N. H. Dearborn, The Social Studies in Teachers Colleges and Normal Schools. Colorado Teachers College Education Series, No. 4, Greeley: Colorado State Teachers College, 1928. P. 43.

to have been that attitudes, appreciations, and ideals should be incidental outcomes from the knowledge acquiring process. The method of acquiring technic and method was also to be an indirect process which is to be doubted as to the sureness of outcome. The aims of the teachers colleges may be summed up in (1) the acquisition of knowledge, (2) the application of knowledge and the development of technics in the use of subject materials, and (3) the development of attitudes and ideals through the process of acquiring and applying this knowledge.

(For Table IV, see the following page)

TABLE IV
 THE RELATIVE EMPHASIS TO VARIOUS THEORETICAL AIMS OF THE SOCIAL STUDIES
 AS STATED BY INSTRUCTORS IN THE SOCIAL STUDIES IN TWENTY-SIX
 TEACHERS COLLEGES VISITED BY DEARBORN*

Aims	Frequency of Mention
Class A - Acquisition of Facts	
1. To have student acquire facts from texts and class work	252
2. To give pupils a knowledge of the principle of the subject	98
3. To supply students the subject matter necessary for teaching	134
4. To make the present-day intelligible	57
Class B - Technics of Subjects	
1. To train in right methods of study	14
2. To teach the use of materials of the subject other than the book	9
3. To acquaint the students with the literature of the field	23
4. To train in the scientific method of treating the subject	18
Class C - Attitudes, Ideals, etc.	
1. Open-mindedness	33
2. To help students build worthy attitudes and ideals . .	45
3. To stimulate activity toward the promotion of progress	1
4. To train in community leadership	2

* E. U. Rugg, and Dearborn, N.H., op. cit., p. 147.

The aims given in Table V by teachers of history show evidences of the type of training according to the aims given by Dearborn.

TABLE V
THE RELATIVE EMPHASIS TO AIMS AS SHOWN BY TEST QUESTIONS
IN VARIOUS HISTORY COURSES *

Aims	Number of Questions
1. To discipline memory	35,775
2. To discipline imagination.	30
3. To train the judgment	3,928
4. To teach the nature of historical evidence and the habit of weighing it	64
5. To furnish entertainment	0
6. To afford practical knowledge for use in daily life	0
7. As a background for literature and science	125
8. To inculcate a taste for historical reading	0
9. To bring about sympathy and understanding among peoples and nations	4
10. To inculcate the love for the truth	0
11. To fit boys and girls for citizenship	44
12. To teach the power to organize facts	13,676
13. To promote scientific thinking	0
14. To teach an appreciation of the past	502
15. To correct superficial and prejudicial thinking. .	0
16. To emphasize cause and effect	2,232
17. To show that the Americans are the bravest men and the most successful of inventors, explorers and scientists	0
18. To interpret the present and judge the future in terms of the past	11
19. To afford moral training	2

The above Table was compiled from approximately 56,000 tests given by teachers in various parts of the country. The tests were taken from American, Ancient, Modern and Medieval history.

* W. J. Osburn, Op. Cit., p. 63.

Aims Given by Experts as Found by Research. - The research work of Gold, Koos, Osburn, and Earle Rugg is probably the most outstanding with regard to the determination of the aims of the social studies. Table V gives the condensed findings of Osburn. Koos' study was completed several years ago, while the work of Gold and Rugg is more recent. It was not thought necessary to include these various studies in detail.

A summary of the aims, as indicated by Gold ⁸, Koos ⁹, Osburn ¹⁰, and Earle Rugg ¹¹, gives: (1) To teach the nature of evidence and the habit of weighing it; (2) to afford practical knowledge for use in daily life; (3) to inculcate a taste for reading the social studies; (4) to bring about sympathy and understanding among peoples and nations; (5) to inculcate the love of truth; (6) to fit boys and girls for citizenship; (7) to promote scientific thinking; (8) to teach an appreciation of the past; (9) to interpret the present and judge the future in terms of the past; and (1) to afford moral training.

8

H. H. Gold, "Methods and Content of Courses in History in the High Schools of the United States," School Review, Vol. 25, pp. 80-100, 187-195, 274-282.

9

L. V. Koos, Administration of Secondary School Units. Supplementary Educational Monographs, Vol. 3. Chicago: The University of Chicago Press, 1917.

10

W. J. Osburn, Are We Making Good at Teaching History?. Bloomington: Public School Publishing Company, 1926.

11

Earle Rugg, "Evaluating the Aims and Outcomes of History", The Historical Outlook, Vol. 14, 325.

Analysis of the Aims of Standard Tests in the Social

Studies. - Two general bulletins were used in making the analysis of the current tests in the social studies. ¹² The aims of the tests had in most cases been condensed by the authors of the tests or by the authors of the bulletins. These aims were tabulated for eight civics tests, ten geography tests, sixteen history tests, and two social science tests. A complete list of these tests may be found in the bibliography at the end of this chapter.

The aims of each test were recorded on cards. If there were a number of aims, each aim was recorded on a separate card and then the cards bearing similar aims were placed together for each subject. A total of forty-five distinct aims were found. The highest number recorded was for fact questions with a total of twenty-three for three subjects. History tests demanded more fact questions than civics or geography which tied in number required. The geography tests were more uniform in stating their aims, while those in history were the most variable.

The aims given by the two social science tests were included with those of civics.

¹² Chas. W. Odell, Educational Tests for Use in High Schools, Third Revision. University of Illinois Bulletin, Vol. XXVII, No. 3, 1929. Urbana: University of Illinois.

H. L. Smith and W. W. Wright, Second Revision of the Bibliography of Educational Measurements. Bulletin of the School of Education, Indiana University, Vol. IV, No. 2. Bloomington: Bureau of Cooperative Research, Indiana University, 1927. Pp. 103-124.

TABLE VI
 THE AIMS OF STANDARD TESTS IN
 CIVICS*, GEOGRAPHY, AND HISTORY

Aim	History	Geography	Civics	Total Frequency
1. Association	1			1
2. Attitudes and habits			2	2
3. Civic conduct	1			1
4. Civic vocabulary			1	1
5. Character	1			1
6. Chronological judgment	2			2
7. Civic principles, application of			2	2
8. Causal relations	4	2	1	7
9. Classification	1			1
10. Comparison and comprehension	3			3
11. Criticism	1		1	2
12. Discussion	1		1	2
13. Description		1		1
14. Drill			1	1
15. Enumeration	1			1
16. Evidence, historical	1			1
17. Explanation	1		1	2
18. Events and dates	5		1	6
19. Fact	9	7	7	23
20. Evaluation of facts	1			1
21. Geographical location	1			1
22. Health & accident, prevention habits			2	2
23. Information	3	3		6
24. Information and attitudes			2	2
25. Informal knowledge			1	1
26. Institutions and establishments			1	1
27. Judgment	4			4
28. Knowledge	2			2
29. Neatness			1	1
30. Names of places		6		6
31. Organization			1	1
32. Physical map study		6		6
33. Place location		7		7
34. Political knowledge	3			3

* Special tests included under Civics

(Table continued)

TABLE VI (Cont.)
 THE AIMS OF STANDARD TESTS IN
 CIVICS, GEOGRAPHY, AND HISTORY

Aim	History	Geography	Civics	Total Frequency
35. Problems		1		1
36. Reasoning	1	2		3
37. Recreation facilities			1	1
38. Reorganization	1			1
39. Relationship			1	1
40. Thought	3	3	1	7
41. Sanitation improvement			1	1
42. Sequence of events	1			1
43. Social life	1		1	2
44. Social status of residents			1	1
45. Summary	1			1
46. Vocabulary	1			1
47. Average quality of homes			1	1

An Attempt to Combine the Aims from Various Sources. -

After examining the various sources for the determination of aims, it was deemed wise to take the ten aims ranking highest in each list and combine them into a composite list. But, it was found that the aims were so unlike in nature that it was impossible to make a logical combination. The results of the attempt to group them may be found in Table VII.

It seems that most sources agree on citizenship as a basic aim. The term is general in its nature, and the qualities which go to make up good citizenship are so varied that a person might carry on most any type of activity and call it citizenship training.

TABLE VII
 AIMS AS GIVEN BY (1) TEACHERS, (2) TEACHERS COLLEGES,
 (3) SOCIAL SCIENCE WRITERS, (4) STATE COURSES OF STUDY,
 AND (5) OTHER STUDIES

Aim	Rank				
	1	2	3	4	5
1. Good citizenship	8		3	1	6
2. To train for scientific thinking	7	8	1		7
3. To develop worth attitudes and ideals		5	2	2	
4. To impart knowledge of a practical nature, how to get and use materials	2	10	4		
5. To develop intelligent loyalty and patriotism			3	4	
6. To interpret the present and judge the future in terms of the past	9				10
7. To develop social and civic habits			9	10	
8. To teach an appreciation of the past	5	8			
9. To give an understanding of civic and social problems			8	6	
10. To acquire facts		1			
11. To discipline memory	1				
12. To teach the nature of evidence and the habit of weighing it					1
13. To give practical knowledge for use in daily life					2
14. To supply subject matter for future use		2			
15. To inculcate a taste for reading the social studies					3
16. To provide a knowledge of the principles of the subject			3		
17. To train the judgment	3				
18. To make the present day intelligible		4			
19. To develop worthy civic and social ideals				4	
20. To emphasize cause and effect	4				
21. To bring about sympathy and understanding among peoples and nations				4	
22. To inculcate the love of truth				5	
23. To develop a knowledge of appreciation of the organization of society and its problems				6	
24. To develop open-mindedness		6			
25. To give a background for literature and science	6				
26. A sense of social and civic responsibility				5	

(Table continued)

TABLE VII (Cont.)

AIMS AS GIVEN BY (1) TEACHERS, (2) TEACHERS COLLEGES,
(3) SOCIAL SCIENCE WRITERS, (4) STATE COURSES OF STUDY,
AND (5) OTHER STUDIES

Aim	Rank				
	1	2	3	4	5
27. To develop social efficiency					7
28. To develop character as implied by honesty, morality and sense of obligation to society			7		
29. To develop qualities and habits of good citizenship					8
30. To train in right methods of study		9			
31. To develop a desire and a willingness to render service					9
32. To discipline imagination		9			
33. To develop a practical knowledge of governmental agencies that promote public welfare				10	
34. To provide moral training					10

The second outstanding aim found was the development of scientific thinking. This aim is much more definite and the activities can be more readily selected than those of citizenship. The development of scientific thinking in our schools would mean much to the development of our social life. It would make for intelligent attitudes, appreciations, habits, ideals, loyalty, and patriotism; because the citizen would evaluate the ends as well as following the means.

A reorganization of the aims might be made, thereby eliminating such a conglomeration of ideas as the present study shows. No teacher or expert could ever carry all of the list in his or her mind.

It seems plausible that a small number of fundamental aims could be stated and that the basic subject matter content could be organized accordingly. It has been pointed out that, "the problem of validating objectives would seem to be a very real one."¹³

The present aims show indications of having been derived from sources not all of which originated in the organizations within the walls of educational administration. They take an idealistic atmosphere, and seem to avoid concreteness, or practicality.

The method used in determining the present aims is by no means an adequate one, as was stated in the outset, because the learner has had no part in the treatment. Utility frequency, cruciality, and many-sidedness have no meaning for the adolescent unless they approach an immediate interest or need. What ninth grade youngsters wanted taught them in civics will illustrate the point. Their wishes were as follows:¹⁴

1. To know how to take care of the yard and home that I live in.
2. How to be thrifty.
3. How to find a good job.
4. How to be able to think clearly, so that we can meet every-day problems.
5. How to be courteous.
6. How we can keep our city or town attractive.
7. Dependability.
8. To give everyone a square deal.

¹³ John J. Mahoney, "Objectives and Other Fundamentals," p. 218. Fifth Yearbook, Department of Superintendence, Washington, D.C., 1927.

¹⁴ J. L. Pingrey, "Civics a la Carte," Historical Outlook, Vol. XXI, No. 3 (1930), 122-125.

9. To teach us not to destroy other people's property.
10. To have a neat personal appearance.
11. To know the health regulations.
12. How to speak good English.
13. How to be polite.
14. Duties of public officials.
15. Why we want to be thrifty.
16. How to be friendly.
17. Public speaking - the ability to say something.
18. To be punctual.
19. Honesty.
20. Sportsmanship.
21. To know something about laws.
22. True patriotism.
23. Reasons for political parties and how they work.

The above quotation is far different from the aims given for civics in the state courses of study; but, nevertheless, there is little or nothing in the list which could be classed as very impractical.

The recent state and city courses of study show that an enormous amount of energy and thought have been used in their construction; however, it seems that there should be some unified attempt to validate the objectives of the social sciences which are to be used to teach children to deal with the problems of modern civilization.

There is a noticeable difference between the aims which have been reviewed and those given by the public school system of St. Louis and the Horace Mann School. The St. Louis system places the child first in the basic objectives, while the Horace Mann School seeks to teach subject matter in its natural relations. This might provide for the development of interest and effort as is implied in the St. Louis objectives. Both place emphasis upon the child rather than the objectives. These objectives may be found on the following pages.

Objectives of the Horace Mann Junior High School Social

Studies: 15

1. To teach groups of subjects together in their natural relations.
2. To create a sympathetic understanding and appreciation of the peoples of the earth as they are confronted with problems, internal and external, which have grown out of historical, geographical, and political factors.
3. To give children that geographical and historical background which will assist in the understanding and solution of many problems of the past and of the present.
4. To give a better understanding of and respect for the peoples from various nations who have come within our national boundary lines.
5. To give the adolescent child an understanding of the interdependence of nations in this day of almost instant communication and rapid transportation.
6. To try to find out why people in different parts of the world have developed different types of civilization.
7. To compare other nations with the United States whenever possible, and thus to get better understandings.
8. To give ability to use tools of various kinds, such as maps, graphs, encyclopedias, the Reader's Guide, and other books of reference.
9. To make the child familiar with the great amount of social studies material to be found in current magazines and newspapers.
10. To show the great need for the conservation of the world's human and material resources.
11. To learn how to work together in contributing to the solution of a common problem.
12. To train and develop the citizenship qualities of tolerance and open-mindedness.
13. To evaluate propaganda wherever it may be found: text, reference book, current materials, persons.

¹⁵ R. W. Hatch and DeForest Stull, The Social Studies in the Horace Mann Junior High School, pp. 4-5. New York: Bureau of Publications, Teachers College, Columbia University, 1926.

Objectives of the St. Louis Junior High School Social

Studies. - The public schools of St. Louis list the following objectives for junior high school courses in the Social Studies ¹⁶;

1. To develop an appreciation of individual and group effort in achieving a social end.
2. To develop ability to react constructively to recognized forms of social activity.
3. To participate in the duties of members of social groups.
4. To obtain useful information from common sources and to sift this information to form accurate bases of judgment.
5. To learn to read statistical tables, graphs, and other forms of graphic representation with accuracy and intelligence and express facts in graphic form.
6. To study social study material that will interpret present-day situations.
7. To measure personal contributions to the improvement of society in terms of service.
8. To develop consciousness of world relationships by reading and discussing material involving broad human interests.
9. To form habits of judgment and discrimination in problems confronting civilization.
10. To discover differences and likenesses between rights, duties, and privileges of members of a social group.
11. To acquire respect for established opinion of mankind which has been crystalized into law.
12. To cooperate with the agencies of the government, and the institutions which society has provided for safety and protection.
13. To develop ability to select and to follow a vocation for economic independence and social betterment.

¹⁶ W. D. Cocking, The St. Louis Course in Social Studies, p. 261. Washington: St. Louis Public Schools, Department of Superintendents, Fifth Year Book, 1927.

14. To challenge, compare, and evaluate the facts under discussion.
15. To give training in mental integrity and suspended judgment.
16. To condemn the superficial and to respect the well-considered.
17. To develop "a reasoned self-confidence."

Summary and Conclusions. - The aims given by the various sources show:

1. That citizenship is the ultimate objective of the social studies.
2. That knowledge, appreciations, attitudes, ideals, patriotism, and civic virtues are subsidiary functions of the social studies.
3. That there should be some method of acquiring open-mindedness, loyalty, and an intelligent understanding of conditions and problems of society, and that this method is, most probably, the method of intelligent reasoning or scientific thinking.
4. That there should be a sense of civic and social responsibility, and an intelligent desire to perform the duties necessary to meet the obligations required by these responsibilities.

In the light of the evidence which has been given, one probably would be justified in saying that the present aims of the social studies are too numerous, abstract, and foreign to the interests of the learner. Also, they are too remote from child life to make for

the development of action, attitudes, habits, interests, emotions, and knowledge which would provide for intelligent participation in present civic and social activities.

The aims, seemingly, should be modified in a way to provide:

1. For the interests of the learner.
2. For the social needs of the learner.
3. The activities which would cause the learner to follow out his interests, and acquire habits and knowledge through active, intelligent participation within the social groups with whom he probably will be associated.

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CHAPTER IV
PSYCHOLOGY OF THINKING

The Psychology of the Social Subjects. - The complex nature of the social studies makes for a complex psychological development in the mind of the student, and causes any study of the psychological reactions to become more involved. Judd sets forth several reasons for these complex psychological reactions. They are as follows:

1. The reasons for the late appearance of the social sciences relating to man are emphatically psychological.
2. The intensely partisan attitude which always appears when human acts are under review is strikingly illustrated in school courses in history.
3. The opportunity for the development of prejudices is very great.
4. Social and economic problems are not always presented in a scientific manner, but rather from a biased viewpoint.
5. The personal attitude of the teacher or author may affect the mind set or attitude of the student. ¹

Knowlton points out that the organization of the subject matter of recent years has been developed around two main ideas, first,

¹ C. H. Judd, Psychology of Secondary Education, pp. 358-359. Boston: Ginn and Company, 1927.

"how children learn;" and secondly, "the concepts involved in the learning process." ² Even if this should always be true, it would be difficult to eliminate the factors, mentioned by Judd, which would affect the measurement of the learning process. Too, the fact that all students have not had the same courses, would affect their general knowledge of the concepts most frequently used in that subject or group of subjects. It is no longer possible for an individual to attain success in the complex industrial and social life in the United States without cultivating in some way a knowledge of economic and social organization. To understand this organization there must be a wide range of geographic, historical, economic, political, civic and social concepts. No two individuals will likely possess exactly the same concepts which have been formed in the same way.

The fundamental laws of association operate to arrange ideas in some kind of relation with whatever else is in the mind. The simplest and most common forms of associative arrangements are those which we know as "space" and "time." Associations are not ends in themselves. They lead to the formation of systems of thought and to the solution of problems. However, the richer the associations are, the more fruitful will be the outcomes. The problem of the social science teacher is to get correct associations which are not colored by attitudes, emotions, and ideas that have been borrowed from one's experience. For example, the pupil is quite certain, unless explicitly

² D. C. Knowlton, "Building a Course in the Social Studies for the Junior High School", p. 357. The Historical Outlook, Vol. XV, No. 8.

trained to do otherwise, to carry over into the interpretation of social events of the past the moral standards of his own time. Not only are moral judgments biased by a failure to understand human actions in their proper settings, but situations of a political and economic order are completely misjudged. For example, many people blame the present economic crisis on the political party now in power, instead of looking at the problem from the larger point of view. Impersonal judgments are essential to the understanding of the social sciences. Very keen judgments are called for in this age of change, and all of the higher forms of judgment are involved in the study of the organization of society from the scientific viewpoint. Much of our teaching and many of our textbooks have not produced this larger viewpoint. Dr. Pierce's recent book on "Civic Attitudes in American School Textbooks" is an excellent account of this condition.³ If teachers and writers of textbooks are guilty of fixing the wrong attitudes in the minds of the pupils, what may we expect of other environments which also play an important part in the formation of these attitudes?

The unconscious mind, perhaps, plays an important role in the determination of social attitudes. Finney suggests this possibility in the followings:

The trouble is that the unconscious, or, perhaps more accurately, the unnoticed, contents of the mind have been overlooked in all of our modern theories. These unnoticed contents of the social mind constitute the framework of all the social structures, perhaps a more

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B. L. Pierce, Civic Attitudes in American Textbooks.
Chicago: The University of Chicago Press, 1930.

enlightened figure would be that they constitute the substructure of all our social institutions. ⁴

This theory leads Finney to suggest several fundamental principles of social psychology which seem to apply to this study.

These principles are quoted below:

1. Social entities are mental entities.
2. The social process is a product of the learning process.
3. The learning process is usually a social process.
4. Much learning is normally passive.
5. Personality is a product of the learning process.
6. Self and society are two phases of the same thing.
7. There is a basic sameness of all personalities in the same social environment. ⁵

To substantiate the above principles, we might point out the capitalist and labor group, the protestant and catholic, the professional and non-professional, the white and black in the South, the rural and urban classes, the railway workers and seamen, and a long list of others.

The mental entities of students, who have been subjected to the same school environment, should show most of the social characteristics to which they have been subjected in the learning process. The effects of the passive learning may also be exemplified in some way.

Any attempt to measure these entities will involve a

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R. L. Finney, op. cit., p. 49.

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Ibid.

multitude of experiences. The student's perceptual, personal, and social experiences are then complex structures which must be unified if meaningful. These experiences are unified, coordinated and integrated to make up the total personality of the student.

Statement of the Psychological Principles which Might
Apply to the Study. - Since the study is primarily for the purpose of studying the higher intellectual responses or the social sense of high school students, the primary concern will be with ways of mental behaving. Mental activity, when expressed in terms of a response to a given situation, is an index of the amount, quality, and kind of learning which has taken place within that organism. Typically, to learn is to acquire a new way of behaving. The learning, within most of the organisms with which the study will deal, has been under direction for a number of years. The students will have passed under the direction and control of several teachers, perhaps, in the grade school, and under other teachers in the high school. They will have also acquired many ways of behaving as a result of environment and home training. The type and kind of training will be indicated to a large degree by the type of responses which students give when confronted by new situations. It is not the purpose of this study to determine whether the responses given were learned by the method of

1. Random, or excess activity.
2. Directed activity.
3. Adaptive activity.
4. Repetitive activity.
5. Coordinated activity. ⁶

⁶ L. A. Pechstein, A. Laura McGregor, Psychology of the Junior High School Pupil, pp. 73-74. Boston: Houghton Mifflin Company, 1924.

However, it is realized that all of these stages may have been passed through by many students in forming their social concepts about the various social problems and situations. Gates says: "Learning would not go on without instinctive drives to activity and, furthermore, learning has its origin in native responses. The simplest form of learning consists in strengthening or weakening a native reaction." ⁷ Learning takes place only during activity; it is never a passive process of absorption, but, on the contrary, a very active process of reacting. The early years of life are full of various kinds of activity of all types. The adolescent has already acquired many habits of motor and neural activity by the time he comes to the high school. Pechstein says:

It is clear that, by the time adolescence is reached, the pupil has at his command a gigantic stock of reacting mechanisms - reflexive, instinctive, or learned (habitual); that these latter, whether primarily physical or mental, direct or "escape" mechanisms, understood by the possessor or not, have been slowly forming in service to instincts; and that adolescence will find the individual placed in a wider set of environing situations requiring adjustments differing perhaps in quantity but not in kind. ⁸

Since this is true, it would be well to review some of the mental types of learning activities which the adolescent has probably already acquired. The most outstanding types are as follows:

1. Perceptual experiencing.
2. Vicarious experiencing (occurs in observing, reading, and listening, primarily acts of imagination).
3. Generalizing experience, both perceptual and vicarious (one type of thinking).

⁷ Arthur I. Gates, Psychology for Students of Education, p. 207. New York: The Macmillan Company, 1925.

⁸ L. A. Pechstein, op. cit., p. 79.

4. Comprehending the products of generalization by another person (found mainly in the reading and listening process where association through the thought action is involved).
5. Manufacturing responses to new situations (problem solving ability).
6. Tracing the thinking of another person (occurs in reading and listening).
7. Prolonging, repeating, and intensifying one's experiences (involves thought processes).
8. Expressing one's ideas.
9. Affective experiencing (which according to Thorndike is the concomitant of all experiencing).⁹

The activities of pupils may imply the use of a combination of the above activities in responding to any situation. In fact, if the situation is a complex one, pupils will nearly always use a combination of two or more of them. The above list was given with the idea of showing how the individual may have acquired the power of discrimination and generalization. Fine discriminations are usually essential for adjustment to a complex situation. Inaccurate thinking can often be traced to failure to take note of some distinction, which, on the surface, may appear to be trivial, but which is actually the key to the problem. "Equally important is the ability to discern in succeeding situations general elements, as well as the ability to unite these in the form of general principles by means of which new problems can be solved."¹⁰

⁹ W. S. Monroe, J. C. DeVoss, and C. W. Reagan, Educational Psychology, pp. 200-201. Garden City, New York: Doubleday, Doran and Company, 1930.

¹⁰ A. R. Gilliland, J.J.B. Morgan, and S.N. Stevens, General Psychology for Professional Students, p. 261. New York: D. C. Heath and Company, 1930.

It is to be understood from the foregoing discussion that the experiencing opportunity for the development of thought may have been good, while the development of habits of thinking may have been poor. Any phase of the experiencing may have been poorly developed, and as a result, the thinking may be inadequate to that proportion or degree. The content of experience, which an individual can call into his focal consciousness at any given time, will largely determine his ability to render good judgments or to carry on reflective thinking.

The Columbia Associates in Philosophy have defined the active process of reflective thinking as thought "bent on solving a problem, on finding the meaning of a perplexing situation, or reaching a conclusion which is trustworthy." ¹¹ Judd, in his "Psychology of Social Institutions," has shown us how there arises in the human mind a whole series of the most active and potent facts which enable us to carry on reflective thinking through their use. Thus in the solution of a problem there must be, first, a problem of attack; second, materials with which to make the attack; third, ideas of value of the various materials to be used in making the attack; and fourth, landmarks or a method by which the attack is to be made. If such is not the case, then there will be much trial-and-error learning in dealing with a "problem-situation." Gates says: "Most practical problems are of such nature that the individual is confronted by complex situations which offer a

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Columbia Associates in Philosophy, An Introduction to Reflective Thinking, p. 2. Boston: Houghton Mifflin Company, 1923.

large number of possible reactions; but the question is to find the one satisfactory response, that is, the solution." ¹²

Binet reduces reasoning to a single idea or formula, which follows:

Reasoning is the establishment of an association between two states of consciousness, by means of an intermediate state of consciousness which resembles the first state, which is associated with the second, and which, by fusing itself with the first, associates it with the second. ¹³

This hypothesis is quite applicable to the measurement of individual responses to a given social situation which may have some of the identical elements of previously experienced situations, or of similar ones. The central theory of the foregoing hypothesis is association. Rignano, in treating the dynamic aspects of reasoning, claims that it consists of continuous activity of exclusion, evocation, and selection at the same time. ¹⁴ This idea of identifying the unnecessary elements, calling the needed ones out of the recesses of the mind and selecting the essential ones, seems to be the very crux of social thinking, or of any thinking. This idea makes for coherence which may be maintained for a long period; it also makes room for the capacity factor which would provide for the duration of thought; and

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A. I. Gates, Psychology for Students of Education, p. 394. New York: The Macmillan Company, 1930.

13

Alfred Binet, The Psychology of Reasoning, p. 156. Chicago: The Open Court Publishing Company, 1912.

14

Eugenio Rignano, The Psychology of Reasoning, p. 91. New York: Harcourt Brace and Company, 1923.

maintains a logical process. Hollingworth gives a more elaborate discussion and puts forth the theory that in any situation, which confronts the mind, there are four features of redintegration. These he states briefly as (a) the significant, (b) the signified, (c) the signifying, and (d) the significance.¹⁵ We see from this statement that in any problematic situation a person confronted with the problem must select the significant or important features, must locate and define the problem, must indicate the means of solution, and in pointing out the significance, must validate his thinking or reasoning. The process is essentially the same as the five steps in thinking given by Dewey.

Woodworth summarizes the qualities of the thinker as follows:

1. He should be equipped by past experience for dealing with the kind of material now presented; that he should, in other words, be in possession of the knowledge applicable to the problem in hand.

2. He should have a keenness in observing the features of the situation or problem presented to him and a degree of "sagacity" in selecting or hitting upon features that are significant; this quality distinguishes the effective thinker from one who, perhaps with great learning, labors long and ineffectively over non-essentials.

3. He should have a quality of mind which we call flexibility, an ability to get out of the rut and see what did not at first impress him.

4. He needs the power of control, so that his thinking, instead of wandering hither and yon as interesting suggestions strike him, shall remain fixed on the problem in hand in spite of the flexibility of his attention.¹⁶

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H. L. Hollingworth, The Psychology of Thought, p. 288.
New York: D. Appleton and Company, 1927.

16 R. S. Woodworth, Dynamic Psychology, pp. 146-147.
New York: Columbia University Press, 1918.

The qualities indicated by Woodworth, if organized in a logical sequence, would give a logical method of thinking such as has been pointed out in the above paragraphs.

Dewey sets forth the conditions of reflective thinking where he says, "Reflection occurs only in situations qualified by uncertainty, alternatives, questioning, search, hypotheses, tentative trials or experiments which test the worth of thinking. . . ." ¹⁷

The Essential Elements of Purposive Thinking. - Thought may be restricted to those elements of consciousness which involve only images and non-ideational elements. ¹⁸ Imaginary processes are of vital importance in thinking. The persons, who is weak in powers of imagination, is not apt to be an outstanding thinker.

The reflective process in thinking is not likely to be carried on by the person who has limited powers of language and imagination. To arouse a conscious process, which is continued to the reflective stage of thinking, there must be some uncertainty about the situation. Dewey says:

Unless there is something doubtful, the situation is read off at a glance; it is taken in on sight, i.e., there is merely apprehension, recognition, not judgment. If the matter is wholly doubtful, if it is dark and obscure throughout, there is a blank mystery and again no judgment occurs. But if it suggests, however vaguely, different meanings, rival possible interpretations, there is some point at issue, some matter at stake. ¹⁹

¹⁷ John Dewey, Experience and Nature, pp. 68-69. Chicago: Open Court Publishing Company, 1926.

¹⁸ A. I. Gates, Psychology for Students of Education, p. 97. New York: The Macmillan Company, 1925.

¹⁹ John Dewey, How We Think, p. 102. New York: D. C. Heath and Company, 1910.

Thus we see that man relates concepts to form judgments. Where a series of judgments or inferences are rendered to come to a final decision, the process may be called reflective thinking. This process might also be called problem-solving, or reasoning. Voluntary problem-solving is reflective thinking. In any problematic situation, the aim is to clarify and ascertain usually through a process of generalization. There must be mental activity to clarify the aim, Dewey speaks of the process of reflective thought as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends." 20

He holds that the "demand for the solution of a perplexity is the steadying and guiding factor in the entire process of reflection," 21 in that the "problem fixes the end of thought, and the end controls the process of thinking."

Thorndike discusses reasoning under the title of "selective thinking" and says, "it is only an extreme case of what goes on in associative learning as described under 'piecemeal' activity of situations." He says that "in habit formation, memory, and association by contiguity the situation determines the responses with little interference from the man, the bond leads from some concrete thing or event as it is, and the laws of habit explain the process." He explains, however, that when the situation itself does not provoke the response expected, "new faculties

²⁰ Ibid., p. 6.

²¹ Ibid., pp. 11-12.

or powers of inference or reasoning have to be invoked." ²²

Thorndike seems to place most of our expressed thinking on the habitual level. Thurstone criticizes the S-R formula of common use in the analysis of behavior as one that misinterprets the starting point of behavior, inasmuch as it implies that the dynamic factor of behavior comes from environment. He maintains that the individual constitutes the starting point. He points out in the "Self Expression Formula" ²³ that human wants initiate the process; the stimulus takes the role of the modified; and conduct is the resultant of the action.

Koffka also takes exception to analysis of behavior made in terms of responses determined by stimuli. He claims that it is a quality arising from a neutral background that is effective in determining response, that only as quality arises upon a ground is there provided a basis for the understanding of behavior. ²⁴ Miller, seemingly, takes a similar position, as indicated by his definition of thinking. He states the following principle and then follows it with his definition of thinking:

Thinking is called forth in situations in which there is something consciously problematic in some phase of the process of adjustment of means to ends. . . . Thinking is the process of consciously adjusting means to ends in problematic situations. ²⁵

²² E. L. Thorndike, Educational Psychology, p. 36. New York: Teachers College, Columbia University, 1913.

²³ L. L. Thurstone, The Nature of Intelligence, pp. 18-22. New York: Harcourt, Brace and Company, 1924.

²⁴ K. Koffka, The Growth of the Mind, pp. 131, 171, 192-194. New York: Harcourt, Brace and Company, 1925.

²⁵ I. E. Miller, The Psychology of Thinking, p. 97. New York: The Macmillan Company, 1917.

Smith, in his formula for integrative behavior, suggests the use of $N - SR - C$.²⁶ The N indicates the needs, wants, or purposes which represent an integration of organism and environment; the SR indicates the interdependent sensori-motor action on the environment essential to meeting the needs of the organism; and C refers to the environmental change produced by this action which is of consequence to the organism.

This formula gives a wide range for diversion of mental operations, and provides for such dynamic activity as may arise in any given situation. It also gives an opportunity for change which is not implied in the simpler formula of Thorndike's.

The idea of integration is also brought out by Ogden in his treatment of reasoning. He points out the various stages through which the thinking process passes before there is a unified or integrated whole in the mind of the thinker. In the development of reasoning Ogden distinguishes three stages:

I. Particularization

The first stage is the dichotomous separation of any given thing or event from everything else. We call this "particularization" since the thing or event under consideration is specified.

II. Gradation

The second stage of reasoning is achieved when a particular has also the figure of a gradient. Whenever a particularized thing or event varies from left to right, or from head to foot, or when a movement is made this way or that, we have the beginnings of differentiation.

III. Articulation

The third, and final, stage of reasoning has to do with

26

Meredith Smith, Education and the Integration of Behavior, p. 47. Bureau of Publications, Teachers College, Columbia University, 1927.

the scale of articulation within a gradient. A mere gradient from left to right is not the same as a figure that possesses a left side and a right side. ²⁷

The particularizing process of Ogden's includes the needs, wants, and purposes which were indicated in Smith's formula, since the mind has produced the dichotomous separation of things to its own satisfaction or non-satisfaction. It also provides for the wants which Thurstone says initiates the thinking process. In other words, the mind is the determining factor in the starting point of behavior. It either orders continuation of the activity, or it refuses to give further attention to the stimuli.

In the second, the gradation takes the place of the sensori-motor action indicated by Smith; the stimulus of Thurstone; the signified of Hollingworth; and the association of Binet.

The third, articulation represents the change indicated by Smith; the quality of Koffka; the conduct of Thurstone; the significance of Hollingworth; and the final state of consciousness of Binet. Ogden further points out that, "articulation makes for concepts of similarity and difference and such categories as equality, or quantitative likeness, and identity, or qualitative likeness Reason operates with these abstractions. At first it builds crude ideas, representations with ill-defined contours and uncertain articulateness, more or less amorphous figures of mind composed of imagery and feeling which initiate and control directions or behavior." ²⁸

²⁷ R. M. Ogden, Psychology and Education, pp. 313-319.
New York: Harcourt, Brace and Company, 1926.

²⁸
Ibid.

From this discussion we can abstract the elements of the thought process. Thinking and reasoning have been used synonymously. Thought or reason may be thought of as an idea, while thinking or reasoning is in reality a continuous process. Judgment has been and will be used as the mental process of discriminating between two or more ideas in rendering a decision. The essential elements of the thought process as found in the above paragraphs, are: (1) the mind must be confronted with an actual problem; (2) the essential meanings fundamental to an effective process must be available within the nervous system; (3) the necessary generalizations or concepts with which to carry on an associational process in the furtherance of thinking must be available; and (4) tentative hypotheses must be available for the development of possible solutions to the problem. When these elements are not available, the mind has no working tools, and cannot begin or continue an organized process. When this is the case, the solution of the problem will be largely trial and error at the animal level. No intelligent thinking can be done during a short period of time without these elements.

This phase of the study has been an attempt to point out:

1. The psychological complexities which are involved in the study of the social sciences.
2. The factors which operate to make these psychological complexities.

3. The intellectual processes which are involved in the attempt to analyze the thinking process.

4. The qualities essential for good thinking.

5. The various ideas and theories for the initiation and development of the thought process.

6. That certain elements of each of these theories were to be found in other theories of the thought process.

7. That the essential elements for intelligent thinking with regard to any situation must be available in the sensori-motor system of the person who is to do the thinking.

Psychological Principles which Might Apply to the Study.

1. The ability to think about particular situations will, in most cases, be determined by the adjustments which the individual has needed and wanted to make in the past. (That is, his learning abilities will, in a large measure, represent the outcome of individual and social wants.)

2. These adjustments which have been made will be of various types, such as adjustments to the physical world, economic life, family life, social situations, and to civic situations.

3. The degree to which successfully integrated adjustments have been made will likely be determined by the personal equipment of the individual.

4. The knowledge of specific subject matter will largely determine the interpretation of the facts in the test.

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CHAPTER V

SELECTION OF THE CONTENT MATERIAL FOR THE TESTS

A number of studies were reviewed with the idea of taking the concepts and problems found in these researches and combining some of the basic ones in a test. These studies will be reviewed briefly in alphabetical order.

Bassett's Study.¹ - Bassett analyzed the national platforms of all political parties since the first national convention in 1832; state platforms in non-presidential years from 1889 insofar as they dealt with national issues; all the platforms for 1910; platforms of major parties in certain selected pivotal states, namely, California, Indiana, and New York, since 1850; all platforms of the parties in Iowa since 1889; and the platforms of parties in one southern state.

Bassett's assumptions, namely, (1) that "platforms" of major political parties reflect the issues of society, and (2) that statements in these platforms are addressed to a potential majority of the citizens, are sound in theory. Democracy in practice, however, (in the formulation of party platforms as in the Democratic party's last convention) does not always permit important issues to be included,

1

B. B. Bassett, Civic Instruction of the American Electorate. Ph. D. Dissertation, State University of Iowa, 1918.

or, if they are included, they are stated in such a way as not to alienate segments of the potential majority of the citizens to whom they are addressed. Hence, they tend to lose their value for the purposes of curriculum construction; however, Bassett did obtain a measure of consistency. By way of comparison of this consistency, we might examine Bassett's list of problems and compare them with those mentioned by President Hoover in his first address to Congress. Table VIII gives Bassett's ranking of problems, and following it will be found the problems mentioned by Mr. Hoover in the order given in his address. The ranking given the problems in the address was merely by position and in no way means that they are according to importance in the President's mind.

TABLE VIII

THE RANK OF THE MAJOR PROBLEMS MENTIONED BY ALL PARTIES (Bassett)

Rank		Rank	
1.	Finance	13.	Territories
2.	Office	14.	Personal Rights
3.	Foreign Relations	15.	Suffrage
4.	Moral Reform	16.	Constitution
5.	Immigration	17.	Pensions
6.	Natural Resources	18.	Parties, Political
7.	Labor	19.	State Rights
8.	Monetary System	20.	Education
9.	Defense	21.	Postal System
10.	Works	22.	Justice
11.	Legislation	23.	Industry
12.	Commerce	24.	Health

Problems discussed by President Hoover will be found in Table IX.

TABLE IX
 RANK OF NATIONAL PROBLEMS AS INDICATED BY
 PRESIDENT HOOVER'S ADDRESS TO CONGRESS, DECEMBER 3, 1929

-
-
1. Foreign Relations
 2. National Defense
 3. Finances
 4. Tax Reduction
 5. Foreign Debts
 6. Alien Enemy Property
 7. Economic Situation
 8. Agriculture
 9. Tariff
 10. Tariff Country Needs
 11. Public Buildings
 12. Waterways
 13. Highways
 14. Post Offices
 15. Commercial Aviation
 16. Railways
 17. Merchant Marine
 18. The Banking System
 19. Power Regulation
 20. Radio Commission
 21. Muscle Shoals
 22. Boulder Dam
 23. Conservation
 24. Social Service
 25. Public Health
 26. Federal Prisons
 27. Immigration
 28. War Veterans
 29. Civil Service
 30. Reorganization
 31. Prohibition
 32. Law Enforcement
 33. The Enemy of Society (law breaker)
-

It is readily seen by a comparison of the two Tables that most of the problems included in Bassett's study were mentioned by President Hoover several years later, thus indicating their importance as curricular materials.

Billings' Study.² - Billings made an analysis of whole series of books which he considered to be edited by the frontier thinkers in various fields. His plan was to obtain a complete list of themes that might be used in developing a composite group of concepts which would aid the student in his thinking process. He analyzed these books as to (a) influences, (b) trends or movements, and (c) problems. From his findings he developed a series of themes involving economic, political, social, cultural, and international relationships. Then he ranked these themes according to the frequency of occurrence, and came out with 3230 generalizations from which he deducted several hundred concepts that he considered to be of importance in the development of social thinking. These basic generalizations were selected because of

1. Correlation with other materials.
2. Objective definition of terms.
3. Relationship to human life.
4. That degree of generality most useful to the curriculum maker.³

The Tables on the following pages give a composite ranking of the various generalizations found by Billings.

²
Neal Billings, A Determination of Generalizations Basic to the Social Studies Curriculum, pp. 76-78. Baltimore: Warwick and York, 1929.

³
Ibid.

TABLE X
THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS BY BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Thought (or men's thoughts, motives, desires, etc.)	349
Trade	114
Price	114
Geographical environment	112
Amount, or stage, of civilization	103
Life (in general) or life activities	97
Location of political power	95
Homogeneity	91
Income (or distribution of wealth).	89
Industry	89
Migration	88
Density of population	88
Education	86
Legislation or law	86
Economic conditions in general (economic life).	84
Democracy	81
Wages	80
Localization in industry	70
Morality	70
Specialization	70
Association with others	69
Occupation	65
Supply	64
Poverty	64
Competition in industry and business	63
Public opinion	61
Government	60
War	58
Social organization	57
Production	55
Climate	54
Heredity (or physical inheritance).	53
Social conflict	52
Custom	49
Leadership	49
Social stratification	48
Unionism	48
Location of social power	47

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS BY BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Demand (economic term)	46
Saving (or the accumulation of capital)	45
Wealth	44
Institution	44
Personality	44
Happiness	43
Use of machinery	43
Transportation	43
Human history	42
Cooperation	42
Freedom	41
Knowledge	41
Labor	41
Racial characteristics	41
Agriculture	40
Ability	39
Place of dwelling or where people live	39
Mind (man's mind)	39
Collective bargaining	38
Crime	38
Philosophy	37
Profits	37
Character	36
Men's spirit (attitude)	36
Political conditions (in general)	36
Monopoly	35
Competition - general or social, not economic	35
Industrial organization	34
Methods of selecting public officials	34
Business	33
Communication	33
Large-scale production	32
Political party	32
Security	32
Sympathy	32
Family life	31
Social reform	31
Standard of living	31
Energy	31
Routes of communication	30

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS BY BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Corruption	29
Fluctuations in industry	29
Religion	29
Geographic relief	29
General social, or sociological, conditions	28
Birth rate	27
Health	27
Interest rate	27
Public official	27
Unemployment	27
Industrial methods	26
The judiciary	26
Science	26
Cost of production	25
Manufacturing	25
Private property	25
Productivity	25
Soil	25
Cities (city life)	24
Working conditions	24
Taxation	24
Natural resources	24
Ambition	23
Intelligence	23
Emotion (men's emotions)	23
Social change	23
Tradition	23
Capital - accumulated wealth	23
Management in industry	22
Standardization	22
Area	22
Will (man's will)	21
Military conquest (or empire)	21
Exploitation	19
Newspapers	19
Rent	19
Use of credit	19
Divorce	18
Social equality	18
Publicity	18

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS OF BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Genius	17
Social position	17
Coal	17
Death rate	16
Elections	16
Recreation	16
Democracy (in the general social sense)	16
Location of commercial cities	16
Location (in geographical sense)	16
Deserts	16
Distance	16
Discussion	16
Food	15
Language	15
Location of cities	15
Mountains	15
Environment (in general)	15
Child-labor	14
Civic (or governmental) administration	14
Culture	14
Corporation	14
Extent of the market	14
Governmental responsibility	14
Marginal productivity	14
Methods of legislation	14
Reasoning	14
Size of cities	14
Speculation (business)	14
Consumption	14
Human needs	14
Boundaries	13
Use of land	13
Use of money	13
"Device of the common rule" in regulating laboring conditions.	13
Art	12
City government	12
Intellectual conditions	12
Inventions	12
Impulse (men's impulses)	12
Geographical accessibility	12
Cost of transportation	11

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS OF BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Demand for labor	11
Ownership	11
Political unity	11
Quality of legislators	11
Skill	11
Social decay	11
Tariff	11
Social adaptation	10
Circulation of money	10
Cooperation between government departments	10
Industrial conflict	10
Irksomeness of labor	10
Literature	10
Location of investments	10
Physiological conditions	10
Political candidacy	10
Production of power	10
Political conflict	10
Public will	10
Public expenditures	10
Temperament (or disposition)	10
Social amalgamation	9
Economic independence (or economic interdependence).	9
Inflation	9
Kind of houses people live in	9
Location of economic power.	9
Opportunity	9
Size of industrial unit (company, corporation)	9
Understanding	9
Use of capital	9
Isolation (geographic)	9
Cost of land	9
Advertising	9
Law of supply and demand	9
Intemperance	8
Irrigation	8
Kind of money incirculation	8
Law enforcement	8
Number of elective officers	8
Political independence	8
Productivity of labor	8

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS OF BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Purchasing power	8
Research	8
Physical strength	8
"Sweating" industries	8
Animal and vegetable life	8
Iron	8
Experience	8
Factory industry	8
"Limitation of numbers" entering a trade	8
Committee system of organizing legislatures	8
Size of groups	8
Habit	8
American common law	7
Banks (or banking)	7
Citizenship	7
Composition of the population	7
Criticism (art and literary)	7
Food supply	7
Issuance of money	7
Kindness	7
Social control	7
Socialism	7
Socialization	7
Steel and iron industries	7
Utility	7
Change of season	7
Islands	7
Petroleum	7
Water	7
Process of production	7
Invention of new methods of transportation	7
Federalism	7
Cabinet system of government	7
Age	7
Bank reserves	6
Experimentation	6
Hours of labor	6
Length of term of office	6
Just taxation	6
Militarism	6

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS OF BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Organization of will	6
Price of exchange	6
Public spirit	6
Railroad	6
Shifting of taxes	6
Social mobility	6
Labor supply	6
Tyranny	6
Use of water power	6
Size of seaports	6
Coldness of climate	6
Rainfall	6
Accessibility of markets	6
Forests	6
Minerals	6
Inland waters	6
Oceans	6
Rivers	6
Equality (in general).	6
Newness of country	6
Price fluctuations	6
Balance of payments in international trade	5
Business risk	5
Commercial cities	5
Efficiency	5
Government policy	5
International gold shipments	5
Judicial procedure	5
Leadership in the House of Representatives	5
Over-production	5
Politician	5
President's duties	5
Representation in public office	5
Presidential system of government	5
Revolution	5
Social enlargement or expansion	5
Social selection	5
Social stability	5
Natural barriers	5
Location of forests	5

(Table continued)

TABLE X (Cont.)

THE MOST IMPORTANT CONCEPTS USED IN THE GENERALIZATIONS OF BILLINGS,
ARRANGED IN ORDER OF FREQUENCY OF OCCURRENCE

Concept	Total Score
Altitude	5
Writing	5
Duration of time	5
Cost	4
Creative work	4
Decentralization	4
Diplomacy	4
Expense (expenditure)	4
Foreign policy	4
Getting "pork"	4
Imitation	4
Industriousness	4
Interest (usury)	4
Land ownership	4
Material prosperity	4
Navigation	4
Need for military preparedness	4
Optimism	4
Over-capitalization	4
Patriotism	4
Political organization	4
Production of machinery	4
Relation of scientific management to the workers	4
Rapidity of political action	4
Territorial expansion	4
Time required for the process of production	4
Tolerance	4
Use of inventions	4
Use of personal credit	4
Coastal location	4
Lowlands	4
Marshlands	4
Mountain passes	4
Polar regions	4
Presence of water power	4
Industrial accidents	4
Crises	4
Freedom of discussion	4
Numbers	4
Comparative cost	4

Bixler's Study.⁴ - Miss Bixler attempted to discover the social problems of a particular group - labor. She analyzed seven periodicals and ten widely used books for their treatment of labor problems. Such a procedure ought to show problems which demand immediate attention on the part of the public, as well as to show how these problems become crystalized in the minds of the textbook writers. Miss Bixler's analysis was on the page basis, the number of pages running from 2572 to 65 per topic. The topic ranking is given below.

TABLE XI
SPACE DEVOTED TO PROBLEMS OF LABOR IN TEN WIDELY USED
BOOKS AND SEVEN PERIODICALS (Bixler)

Rank	Topic	Rank	Topic
1.	Industrial relations	12.	Cooperative associations
2.	Standard of living	13.	Recreation, leisure
3.	Physical welfare	14.	Giant power
4.	Government, politics	15.	Convict labor
5.	Trade-unionism	16.	"Big business"
6.	Wages	17.	The farmer
7.	Race problems	18.	Prohibition
8.	Education	19.	Transportation
9.	Women, children in industry	20.	Great men
10.	Radicalism	21.	Land settlement
11.	Religion, morality	22.	Improving personality
		23.	Unclassified

The above problems should be of much importance in the study of attitudes of children who come from homes of laboring people, and should

⁴ G. K. Bixler, "Social Problems of the Labor Group", Interpretation found in Bobbitt, Franklin, Curriculum Investigations, Supplementary Educational Monographs, No. 31, p. 90, University of Chicago, 1926.

be of importance in developing the proper attitudes toward labor.

Bobbitt's Study.⁵ - Bobbitt made three studies which are included for the purpose of comparison. He analyzed the periodical literature as found in the Readers Guide to Periodical Literature for the years of 1919-1921. The New York Times was analyzed for a period of nine months from April through December, 1924. A random sampling of 7370 pages of the Encyclopedia Britannica was taken as a standard basis for comparison with current materials. In each of these studies the classification grew out of what seemed to go together and not according to any preconceived plan.

The data found in the Encyclopedia should furnish evidence of what man has done in the past; the periodicals ought to show what the thinkers of the country are discussing; and the daily paper will indicate what people are doing at present. The degree of reflective thought upon these topics will probably be indicated in the above given order. The evidence from a single source might involve an element of chance; but, when several sources are surveyed and the findings show a degree of consistency, there can be no doubt as to the validity of the material.

Nearly half of the rankings in the first two columns are identical, or approximately so; and most of the rankings given in all three columns show a degree of consistency since they are not displaced from more than two to five places.

⁵ Franklin Bobbitt, "Curriculum Investigations," Supplementary Educational Monographs, No. 31, pp. 7-40, University of Chicago Press, Chicago, Illinois, 1926.

TABLE XII

THE COMBINED RANKS OF THE MAJOR CATEGORIES OF MAN'S ACTIVITIES, IN TERMS OF SPACE ALLOTTED EACH FROM THREE SOURCES (Bobbitt) *

Major Classes of Man's Activities	Periodicals	News-papers	Encyclopedia Articles
Government	1	1	3** & 14***
Nations and states (Political and economical)	2	2	.....
Education	3	11	29
Transportation and travel	4	3	30
Intellectual vision	5	5	.....
Geographical	6	.....	1
Buildings	7	16	18
Health, sanitation and disease	8	10	9
Food	9	25	32
Labor	10	14	.....
Religion	11	13	4
Play, sports, games	12	4	20
Animal world	13	21	5
Commerce	14	6	13
Agriculture	15	28	.....
Finance	16	7	.....
Matter, substances, chemistry	17	32	6
Family	18	19	33
Music	19	31	31
Races, people	20	29	24
Manufacturing	21	26	.....
Plant world	22	35	11
Art	23	22	16
Occupations	24	.....	19
Communication	25	12	39****
Human association	26	23	12
Heat, fuel	27	27	42
Clothing, textiles	28	.....	.....
Electricity	29	33	17
Philanthropy	30	24	34
Mining	31	37	.....
Light, color	32	42	41
Culture, levels and types	33	.....	.....

(Table continued)

* Franklin Bobbitt, "Curriculum Investigations, Supplementary Educational Monographs, No. 31, pp. 9, 25, 29, University of Chicago Press, 1926.

** Government includes law, military and international.

*** Government does not include law, military and international.

**** Not including language.

TABLE XII (Cont.)

THE COMBINED RANKS OF THE MAJOR CATEGORIES OF MAN'S ACTIVITIES, IN TERMS OF SPACE ALLOTTED EACH FROM THREE SOURCES (Bobbitt)

Major Classes of Man's Activities	Period- icals	News- papers	Encyclo- pedia Articles
Property	34	15	38
Psychology	35	36	43
Population	36	17	.....
Petroleum and products	37	18	.....
General business arrangement and man	38	.....	.....
Biological	39	41	23
Astronomical	40	39	45
Power	41	.....	45
Mechanics (Physics)	42	.....	28
Decoration	43	38	36
Cleaning	44	.....	.....
Time	45	.....	46
Mathematics	46	43	21
Crime	.....	8	.....
Accidents	.....	9	.....
Climatic	.....	37	.....
Personal service	.....	40	.....
Machinery, tolls	.....	44	22
Clerical service	.....	45	.....
Sound	.....	46	48
Biographies of persons	.....	.....	2
Law	.....	.....	7
Earth science	.....	.....	8
Literature	.....	.....	10
Military	.....	.....	15
Language	.....	.....	26
Theater	.....	.....	27
Mythical matters	.....	.....	35
Philosophy	.....	.....	37
International adjustment	.....	.....	40
Aeronautics	.....	.....	44
Stages of civilization	.....	.....	47

Bowman's Study.⁶ - Bowman's aim was to throw some light

upon what should be the most important topics in the teaching of high school

⁶ E. C. Bowman, A Study of Objectives in the Teaching of High School Economics. Unpublished Master of Arts Thesis, University of Chicago, Chicago, Illinois, 1922.

economics.

He assumed that the topics most frequently discussed in current periodicals were sufficiently important to be considered in the formation of an outline plan for the study of economic problems in high school. He found that topics which have significant importance have not yet come to be discussed in periodical literature.

Bowman studied the Readers Guide to Periodical Literature, and made a count of the number of articles in seven periodicals that discussed economic problems. This was done over a period of years (1912-1921). He also determined the economic terms that occurred in every thirtieth article. He did this to determine the economic concepts high school students should have in order to do effective work.

Topics which seemed to be of most importance were used in an attempt to show the trends over that period of time. He concluded that editorial writers would not give their time or space in their papers to economic topics which had no bearing upon our economic life. The trend of the topics discussed by editors was: (1) railroads, (2) taxation, (3) strikes, (4) trusts, (5) canals, (6) prices, (7) finance, (8) motor busses, (9) banks and banking, (10) immigration. His complete ranking of topics will be found in Table XIII.

(For Table XIII, see following page)

TABLE XIII

THE RANK OF ECONOMIC PROBLEMS AS INDICATED BY THE AMOUNT OF SPACE GIVEN TO THEM IN CURRENT PERIODICAL LITERATURE *

Rank	Rank
1. Railroads	33. Cooperation
2. Strikes	34. Income tax
3. Trusts	35. I. W. W.
4. Taxation not including tariff	36. Unemployment
5. Canals	37. Advertising
6. Prices	43. Credit
7. Motor busses and trucks	44. Debts, public
8. Finance	45. Population
9. Banks and banking	45. Sherman Anti-Trust Law
10. Immigration	46. Securities
11. Investments	49. Salaries
12. Panama Canal	50. Government regulation
13. Insurance	52. Arbitration and concilia- tion industrial
14. Labor and laboring classes	53. Budgets
14. Ships and shipping	54. Mortgages
14. Food supply	56. American Federation of Labor
15. Roads	56. Commerce
16. Bolshevism	58. Efficiency, Industrial
17. Bonds	58. Workmen's Compensation
18. Tariff	59. Gold as money
20. Trade unions	59. Savings
21. Money	61. Savings bank
23. Socialism	62. Transportation
26. Stocks	65. Waste
27. Corporations	65. Wealth
28. Cost of living	66. Competition
29. Wages	
30. Panama Canal tolls	
31. Export trade	
32. Railroads and freight rates	

A comparison of the space given by years shows a wide variation in rankings. As an illustration, strikes were given almost

*

E. C. Bowman, op. cit. Table XIX.

twice as much space in 1919 as in any other year. However, 1919 was the banner year for strikes. Railroads were given special attention during 1913 and 1914.

Cocking's Study.⁷ - Mr. Cocking secured the cooperation of the following groups: 500 club women not engaged in business, or in professional work; the superintendent of schools of each of the 99 counties in the state of Iowa; 50 city officials so selected as equalize proportional representation between large cities and small towns; 99 county officials, other than superintendents of schools; 150 teachers of civics in junior and senior high schools; 50 state officials; 100 representative city superintendents of schools; the president of the County Farm Bureau in each of the 99 counties; 100 city superintendents of schools; 100 representative members of the American Legion nominated for this work by the state adjutant; 100 clergymen, selected to represent the leading religious sects of the state; a miscellaneous group of 25 people selected from semi-public organizations not otherwise represented.

In addition, 50 representatives were chosen from each of the following businesses or professions: Bankers, lawyers, commercial travelers, common laborers, merchants, working women, and editors. These representatives were selected by the city superintendents in 50 Iowa towns. More home-makers were chosen than people from any other class, as that group is the largest that cooperated.

⁷ W. D. Cocking, *The Attitude of the Public to the Teaching of Citizenship*. Unpublished Master of Arts Thesis, State University of Iowa, Iowa City, Iowa, 1923.

About two out of five of those selected handed in complete returns. This proportion was maintained fairly well throughout all of the classifications, so that the returns represent a sampling of the various interests. The following problems were reported most frequently:

1. Relation to others, or community life
2. Obedience to law, law enforcement
3. Rights and duties of suffrage
4. Respect and love of flag and country
5. Study of constitution, laws and courts
6. Rights and obligations of taxation
7. Health and sanitation
8. Responsibility of the individual
9. Value and importance of education
10. Responsibility, rights, and duties as a citizen
11. Honesty
12. History of our government
13. Thrift
14. Cooperation
15. Reverence for God and Bible study
16. Morals
17. Care of public property
18. The American home and home life
19. Respect for officials
20. The immigration problem
21. Memorizing patriotic songs and selections
22. Biographies of great men
23. Dignity of labor
24. Courtesy
25. Public office - a public trust
26. Community organizations
27. Unselfishness, "Golden Rule"
28. Study of local, county, state and national government
29. Current events
30. Justice and tolerance
31. Value and history of political parties
32. Sacrifice
33. One language - The English Language
34. Jury service
35. Elections
36. International relations
37. Interdependence of social groups
38. Conservation of resources
39. The awfulness of war

- 40. Value of worthwhile things
- 41. Care of criminals
- 42. Safety first
- 43. Punctuality in discharge of duty
- 44. Roads

Hockett's Study.⁸ - Hockett analyzed the outstanding books of the problems and issues of contemporary American life. The books were selected upon the frequency of recommendation by leaders in public and academic life in America; men and women who are generally recognized as eminent authorities in their respective fields. Replies were received from one hundred of these persons, and the tabulations of data were made from the position ranking of each book mentioned by these one hundred people. The books selected for analysis were edited over a period of twenty years, from 1905 to 1925, with a majority of them coming from the press since the war.

The analysis was carried on under the following headings or titles:

- I. Problems and Issues of Government
- II. Problems and Issues of Industry and Business
- III. Social Problems
- IV. Problems and Issues of International Affairs

The method of analysis was by frequency of mention and by space given to the topic by the various authors. Mr. Hockett made no attempt to rank these problems according to importance. The writer used the space given to the topics in terms of the pages and ranked the data which was mentioned by five or more of the twenty-two authors

8

John Hockett, A Determination of the Major Social Problems of American Life. Contributions to Education, No. 281, Teachers College, Columbia University, New York, 1927.

included in the study. These data seem to be the most composite and complete selection of representative data found in the various researches.

Table XIV shows 54 of the 356 items given by Hockett.

TABLE XIV

THE RANK OF CRUCIAL PROBLEMS AS GIVEN BY HOCKETT

-
-
1. Broad social aims, and general problems of society
 2. Forms of economic organizations and industrial control
 3. Protection and improvement of conditions of labor
 4. Problems of education
 5. Distribution of wealth
 6. Officials
 7. Business
 8. The legislature
 9. Form and functions of government
 10. Miscellaneous problems of government
 11. Economic motives, aims and attitudes
 12. Economic wastes and abuses
 13. Elections
 14. Law and justice
 15. Economic consumption
 16. Corporations and monopolies
 17. Direct legislation and recall
 18. Representation
 19. Public opinion
 20. Crime and delinquency
 21. Political parties
 22. Relations of capital and labor
 23. War and armaments
 24. The press
 25. Class control of government
 26. Problems and issues of government
 27. International cooperation
 28. City government
 29. Health and population
 30. State government
 31. National defense
 32. Problems and issues of industry and business
 33. Buying and selling

(Table continued)

TABLE XIV (Cont.)

THE RANK OF CRUCIAL PROBLEMS AS GIVEN BY HOCKETT

-
-
34. Social legislation
 35. Finance and taxation
 36. Prohibition
 37. Labor organizations
 38. Dependencies of the United States
 39. Race problems
 40. International economic problems
 41. Miscellaneous social problems
 42. Civil rights
 43. Production of goods and development of resources
 44. Immigrant
 45. Cooperation between the United States and other nations
 46. Coal
 47. Banking and finance
 48. Pan-America
 49. The railroads
 50. Conservation
 51. The farmer
 52. Control of foreign affairs
 53. Tariff
 54. Women's position and divorce
-

The findings of Hockett have been used as the basic starting point for several investigations that are now under way in connection with the Lincoln School. The basic content of "The Social Science Pamphlets" was drawn from this study; of course the content had to be revised according to the grade for which it was intended.

Lee's Study.⁹ - Lee analyzed the civics textbooks over a period of twelve years (1915-1927) to ascertain the outstanding major issues. He selected the books which were most frequently used by schools in the

9

Baldwin Lee, Issues in the Social Studies, Social Science Monographs, No. 3, Teachers College, Columbia University, New York. Pp. 144-146.

North Central Association for his analysis. He grouped his topics for analysis under the following groups: (1) National government, (2) state government, (3) local government, (4) Congress, (5) practical politics, (6) taxation, (7) courts and the judiciary, (8) foreign relations, (9) immigration, (10) criminals, (11) labor and capital, (12) education, (13) social welfare, and (14) miscellaneous.

Under these headings, he listed more than nine hundred issues. Then by eliminating the duplications which occurred under the various headings, he found that there were still over four hundred. This number was then delimited by taking the frequency of mention of topics in ten or more of the textbooks that were being analyzed.

He sent out a questionnaire to determine: (1) What issues were recognized in social science classes; (2) what methods were used in the treatment of these issues; and (3) to what extent the exercises in the social science texts were used. He combined the findings of the questionnaire with those of the textbook analysis and gives twenty-five of the outstanding issues. Though these issues are of significant importance, the writer tried to evade any one of them in the selection of the test materials in order to make the test as objective as possible.

A Composite Rank Order List of the Most Important
Twenty-five Treatise Issues as Given by Lee ¹⁰

1. Should judges be subject to recall by the electorate?
2. Should judges in state courts be chosen by popular vote? In federal courts?

10

Ibid.

3. Should there be further restriction upon immigration into the United States?
4. Should the initiative and the referendum be adopted as means of direct legislation?
5. Should the recall of judicial decisions on constitutional questions be favored?
6. Should there be an educational qualification for voting?
7. Should the general property tax be abandoned?
8. Should candidates for public office be nominated by direct primary elections?
9. Should capital punishment be abolished?
10. Should the recall of elective officials be approved? Of appointive officials?
11. Should there be government ownership and operation of the railways? Of the telegraph? Of the telephone?
12. Should forms of social insurance, including compulsory health insurance, a system of old age pensions, and insurance against unemployment, be adopted by the state?
13. Should the tax exemption for all municipal, state, and federal bonds be repealed?
14. Should the principles advocated by the short ballot movement be approved?
15. Should a literacy test be required of all immigrants?
16. Should Orientals be excluded from the United States?
17. Should the United States have a protective tariff policy?
18. Should the office of public defender be created to defend the poor who are on trial for lawbreaking?
19. Should the system of proportional representation of political parties in legislative bodies be adopted?
20. Should courts be permitted to use probation instead of commitment at their discretion in dealing with offenders?

21. Should the use of the injunction in labor disputes be curtailed? Prohibited?

22. Should the powers of state or federal courts in the matter of declaring laws unconstitutional be limited? By requiring a two-thirds vote? By requiring a unanimous decision?

23. Should there be municipal ownership and operation of public utilities?

24. Should minimum wage laws be enacted? For women and children only?

25. Should there be compulsory arbitration of industrial disputes? In the public utility industries and in the food, fuel, clothing, mining, and transportation businesses only?

Meltzer's Study.¹¹ - Meltzer selected for analysis 112 issues of critical magazines spread over a period of five years, and four books. From these were selected concepts so that in the list would be included some from the various aspects of society, - social, economic, political, - some from the various modern problems, such as politics and government, world affairs, industry, et cetera; some more particular concepts, such as trade union, monopoly, wage earner, as well as more general concepts, such as democracy, liberalism, et cetera. Concepts which are used in two or more distinct meanings were omitted. An example is nationalism.

The magazines were of a cosmopolitan nature, thus providing for a broad range of concepts with which many people have had an opportunity to become familiar through reading. The "New Republic", "Outlook", "Living Age", and "Manchester Guardian Weekly", a local paper, were

¹¹ Hyman Meltzer, Childrens Social Concepts, Teachers College Contributions to Education, No. 192. Bureau of Publications, Teachers College, Columbia University, New York, 1925.

selected to use in the study. Meltzer realized the limitations of the list. Such books as the following were selected:

1. "The Great Society", by Graham Wallas
2. "Introduction to World Politics", by Herbert Adams Gibbons
3. "The New Democracy", by Thomas Weyl
4. "America Faces the Future", by Durant Drake

The topics in the books and magazines were recorded as to frequency of mention and ranked according to a weighting formula. The ranking is given in Table XV.

The findings of this study indicated a range from 0 to 87 meanings, as in the concept of socialism.

TABLE XV
SOCIAL CONCEPTS IN ORDER OF IMPORTANCE AS GIVEN BY MELTZER *

Name of Concepts	Rank	Name of Concepts	Rank
Nationalism, interests	1	Public opinion	9
Democracy, democratic	2	League of Nations	10
Industrial, - ills, waste,		Conservatism	11
stability, relations,		Diplomatic	12
resources, movement, control,		Prime Minister	13
war, region, society, state,		Imperialism	14
democracy, revolution	3	Treaty of Versailles	15
Colonial expansion - power,		Strike	16
colonies, colonization	4	Patriotism	17
Socialism, socialist	5	Bolshevism	18
Industry (British, steel, coal),		Radicalism	19
seasonal	6	Communism	20
International question,		Republican Party	21
arbitration, relation	7	Capitalism	22
Commercialism, commercial-power,		Personal liberties	23
expansion, blockade, ties, trade,		Employment problem	24
world trade, world commerce	8		

(Table continued)

* Hyman Meltzer, "Children's Social Concepts," A Study of Their Nature and Development, pp. 72-74. Teachers College Contributions to Education, No. 192. New York: Teachers College, Columbia University, 1925.

TABLE XV (Cont.)

SOCIAL CONCEPTS IN ORDER OF IMPORTANCE AS GIVEN BY MELTZER

Name of Concepts	Rank	Name of Concepts	Rank
Exploitation, economic by capitalist, newly discovered region	25	Militarism	57
Democratic party	26	Plutocracy	58
Immigration	27	Labor union	59
Indemnities	28	Americanism	60
Trade union	29	Aristocracy	61
Neutrality, state	30	Proletarian	62
Reparation	31	Frontier question	63
Revolutionist	32	Constitutional government	64
Foreign - policy, affairs, ministers	33	Export	65
Economic self-sufficiency, freedom, imperialism, determinism, expansion, interest, pressure	34	Tariff	66
Anarchism	35	Vested interests	67.5
Ministry	36	World market	67.5
Sovietism	37.5	Prohibition	69
Liberty party	37.5	Specialization	70
Autocracy	39	Americanization	71
Liberalism	40	Protection policy	72
Progressive	41	Trust	73
Wage-earner, system	42	Conservation natural resources	74
Labor Party	43	Ruhr situation	75.5
Industrialism, German	44	Despotism	75.5
Monarchy	45	Organized working class	77
World powers	46.5	Monroe Doctrine	78
Public affairs	46.5	Synadicalism	79
Standard of living	48	Sectionalism	80
Individualism, organized industry	49	Balance of power	81
Rehabilitation Europe	50	Competitive system	82
Big business	51	Interdependence	83
Near-East question	52	Class war	84
Medievalism	53	Protectorate	85
Washington Conference	54	Socialization	86
Reactionary	55	Political corruption	87
Secret negotiations, diplomacy treaties	56	Standardization	88
		Isolation	89
		Bureauracy	90
		Government ownership	91
		Natural resources	92
		European civilization	93
		Agricultural region	94
		Party government	95

(Table continued)

TABLE XV (Cont.)

SOCIAL CONCEPTS IN ORDER OF IMPORTANCE AS GIVEN BY MELTZER

Name of Concepts	Rank	Name of Concepts	Rank
Free Trade	96	Social surplus	136.5
Backward people	97	Inflated currency	136.5
World politics	98	Barbarism	138.5
Passive resistance	99	Imports	138.5
Pioneer	100	State rights	140.5
Pacifism	101	Collectivism	140.5
Oligarchy	102	Irreconcilables	142
Centralization	103	Self-sufficing community	143
Great society	104	Chauvinism	144
Demobilization	105	Feudalism	145
Open shop	106	Fundamentalists	146
Collective bargaining	107	Third party	147
Christianity	108	Trade route	148
Sphere of influence	109	Centralized government	149
Lausanne Conference	110	Evolution doctrine	150
Small nationalities	111	Academic freedom	151
Sabotage	112	Migration	152
Pan-Americanism	113	Masses - common people	152
Zionism	114	Prussianism	154
Bourgeois system	115	Balance of trade	155
Transportation	116	Proletarian dictatorship	156.5
Policy of compensation	117	Social revolutionaries	156.5
Open-door policy	118	Intellectualism	158
Large scale production	119	Ambassador	159
Republicanism	120	Factory system	160
Dictatorship	121	Jingoism	161
Property rights	122	Non-partisan League	162
I. W. W.	123	Compulsory arbitration	163.5
Monopoly	124	Boycott	163.5
Agricultural depression	125	Plebiscite	165
Materialism	126	Occidental - Japanese ex-	
A. F. of L.	127	clusion	166
Ship subsidy	128	Martial law	167.5
Monarchist's reactionaries	129	Modernism	167.5
Equality before the law	130	Criminality	169
Concentration business control	131	Union labor	170
Irretentistism	132	Consent of governed	171
Farm labor	133	Weltpolitik policy	173
Checks and balances in government	134	Tolerance	173
Paternalism	135	Outlawry of war	173

(Table continued)

TABLE XV (Cont.)

SOCIAL CONCEPTS IN ORDER OF IMPORTANCE AS GIVEN BY MELTZER

Name of Concepts	Rank	Name of Concepts	Rank
Recall	175.5	Conquest of continent	186
Period world discovery	175.5	Bonus	187
Parliamentary government	177	Debtor nation	188
Fascisti	178	Bourbonism	189
World relations	179	Filibustering	190
Factionalism	180	Standpaters	191
Creditor nation	181	Theocracy	192
Closed shop	182.5	Lookout	194
Capital levy	182.5	Home Rule	194
Fourteen points	184.5	Social obligation	194
Social cooperation	184.5	Public service corporat.	196
		Unearned income	197

Rugg's Study.¹² - Rugg analyzed six current civics textbooks, two in "problems of democracy" (then available), and six in economics and sociology. His plan was to determine similar evidence of the comprehensiveness of material in both groups of books.

He found that material treated in textbooks supposedly dealing with different content - government, economics and sociology - tend to treat topics in all three fields.

The problems and topics were ranked according to the space given the material in civics (including problems in democracy) and in economics and sociology combined. These data were given in terms of percentage of space and the writer re-ranked the data numerically, since the topics were given in alphabetical order.

These data are comparable to that of Bowman's which were

¹² Earle Rugg, "An Analysis of Social Science Textbooks," found in author's republished Ph. D. dissertation, Teachers College, Columbia University, New York, 1923.

given in an earlier treatment. Both studies are significant because they show that students may acquire the same concepts from newspapers, periodicals, encyclopedias, textbooks in the various fields, and environment might also be given. It could be added that Rugg also found much of the material in history courses to be of economic and social content. He found about 42.1 per cent of the material at the elementary school level, and 38.93 per cent in high school texts to be social and economic. High school textbooks were found to contain more than 58 per cent of material of political nature. Therefore, by careful selection, one might secure a large amount of data common to many basic sources. Table XVI shows the distribution of topics in textbooks.

TABLE XVI

RANK IN SPACE ALLOTMENT GIVEN TO PROBLEMS IN ECONOMICS AND SOCIOLOGY, AND ALSO TO SIMILAR PROBLEMS IN CURRENT CIVICS (Rugg)

Topic in Economics & Sociology	Topic in Current Civics
1. Population, people and race	1. Labor questions
2. Poverty and charities	2. Education
3. Delinquents, crime and punishment	3. Organization of society, type, customs, institutions, etc.
4. Heredity vs. environment (biological influence)	4. Public finance and taxation
5. History of industry	5. Population and race questions
6. Immigration	6. Suffrage and elections
7. Family, marriage and divorce, intermarriage	7. The family
8. Family history	8. National administration
9. Education	9. Health

(Table continued)

TABLE XVI (Cont.)

RANK IN SPACE ALLOTMENT GIVEN TO PROBLEMS IN ECONOMICS AND SOCIOLOGY, AND
ALSO TO SIMILAR PROBLEMS IN CURRENT CIVICS (Rugg)

Topic in Economics & Sociology	Topic in Current Civics
10. Consumption problems	10. Money and banking
11. Government regulations in Ed.	11. Transportation & communication
12. Public finance taxation expense and debt	12. Social reform movements
13. Labor and working conditions	13. Delinquents (criminals)
14. Economic history, early stage England and America	14. Business life (corporations)
15. Recreation and leisure	15. Political parties
16. Trade	16. History of government
17. State socialism, government ownership	17. The President of the United States
18. Money	18. Government control of business referendum
19. Family standards of living	19. Popular control of govern- ment initiative and referendum
20. Wages	20. Foreign affairs
21. Prohibition	21. Constitutions
22. Prices	22. County government
23. Evolution	23. National system of courts
24. Health	24. Territories
25. The worker	25. Religion and the Church
26. Distribution of social income	26. Town government
27. Value (economic)	27. National defense
28. Trusts and monopolies vs. competition	28. Police protection and power
29. Rent	29. Local public utilities
30. Primitive man	30. Recreation and leisure
31. Progress, social and economic	31. State constitution
32. War society in general (nature)	32. Defectives
33. Social forces (Psy., tradition, custom, etc.)	33. Fire protection
34. Feeble-minded and insane	34. Wealth and resources
35. Credit	35. National commissions
36. General community life, cities, origin, growth, government	36. State legislation
37. Transportation, communication	37. Rural life
38. Profits	38. Relation of U.S. and States
39. Economic ideals, efficiency	39. Representative government
40. Interest	40. Distribution of government- al powers

(Table continued)

TABLE XVI (Cont.)

RANK IN SPACE ALLOTMENT GIVEN TO PROBLEMS IN ECONOMICS AND SOCIOLOGY, AND ALSO TO SIMILAR PROBLEMS IN CURRENT CIVICS (Rugg)

Topic in Economics & Sociology	Topic in Current Civics
41. Unemployment	41. Geography of the community
42. History of government	42. State executive (gov.)
43. Natural resources and wealth	43. State courts
44. Women in industry	44. Housing
45. Water resources and their uses	45. Distribution of national income
46. Tariff	46. Prohibition and the traffic
47. Forests	47. Importance of government
48. Topography (layout) Geographic influences	48. Libraries
49. The blind	
50. Social ideals	
51. Family, general, home, size, function	
52. Economic endeavor, goals, and how obtained	
53. Social insurance	
54. Nature of economics	
55. Religion and Church	
56. Land use and production	
57. Exchange, marketing	
58. Large scale production	
59. Exchange (general)	
60. The deaf	

Wells' Study. - Wells used Bobbitt's theory, that the activities of major concern are reflected in newspapers and periodicals. He used the following sources: (1) Newspapers representing ten different sections of the country, published between December 21, 1923, and February 15, 1925 (105 issues in all); (2) The Reader's Guide to Periodical Literature, 1924; and (3) The New York Times, 1924.

The study attempts to point out the major classes of activities about which citizens in a democracy should be informed. The agreement in rank of the criteria is even more marked than that found in Bobbitt's study of the same kind.

The topics discussed give an index of the variety of problems which a person encounters in his reading activities. However, not a large percentage of people consult the Reader's Guide in directing their reading, nor will a large percentage of people have an opportunity to read the New York Times, although the consistency of topics, as found in newspapers from various sections of the country, indicates that the concepts formed should be similar.

The persistency of these topics (found by Bobbitt and Wells) has been studied by Palmer¹³, who found them to have a high degree of persistence. The findings of Wells' study are shown in Table XVII.

(For Table XVII, see following page)

13

P. L. Palmer, (Interpretation of Bobbitt, Curriculum Investigations, Chapter VI), "The Evidence from the Literary Digest". Supplementary Educational Monographs, No. 31, pp. 40-53, University of Chicago Press, Chicago, Illinois, 1926.

TABLE XVII

RANK OF ACTIVITIES ACCORDING TO THE PER CENT OF FREQUENCIES FOUND IN THE
NEW YORK TIMES INDEX AND THE READER'S GUIDE, COMPARED WITH THE RANK
OF THE ACTIVITIES ACCORDING TO THE PER CENT OF SPACE FOUND
IN 105 NEWSPAPERS (Wells)*

Activity	Column space in 105 Newspapers	Frequencies in New York Times	Frequencies in Readers Guide
1. Finance	1	1	1
2. Defense	6	2	4
3. Foreign affairs	5	5	3
4. Office, public	4	4	9
5. Legislation	2	3	14
6. Commerce	7	7	6
7. Labor	8	8	5
8. Education	11	11	2
9. Justice	3	6	17
10. Industry	9	13	7
11. Political parties	10	12	13
12. Social improvements	15	10	12
13. Natural resources	12	16	10
14. Moral reform	17	15	8
15. Prices	13	9	20
16. Civic participation	14	17	16
17. Postal service	18	23	23
18. Immigration	29	14	11
19. Works, public	19	19	17
20. Pensions	20	17	22
21. Suffrage	23	22	19
22. Public utilities	16	24	26
23. Inspection, civic	24	21	24
24. Constitution	28	26	15
25. Monetary	22	20	28
26. Territories	26	25	20
27. Publicity	25	29	25
28. Corporations	30	21	29
29. Science	27	27	27
30. Public opinion	21	30	30
31. Monopoly	31	28	32
32. Personal rights	32	32	31

* C. O. Wells, *The Political Science of Everyday Life, as Revealed by Analysis of Newspapers and Periodicals*, unpublished Master of Arts thesis, University of Chicago, Chicago, Illinois, 1925.

What Do Teachers and Courses of Study Demand of Students in the Social Studies? - Osburn ¹⁴ found that a large number of relatively insignificant fact questions were being asked by teachers. He analyzed the questions of 2250 teachers, and found, after he had eliminated all duplications, that there were more than 2300 questions. These were distributed by subjects as follows:

1. Elementary American History	993
2. Secondary American History	363
3. Ancient History	262
4. Medieval History	<u>461</u>
Total	2388

A total of 56,504 distinct questions was found in Osburn's list.

The writer analyzed some of the recent courses of study and the syllabi for the social studies to determine the number of topics or questions with which pupils, taking these courses, might come in contact. The courses and syllabi, when given for the following states, were analyzed: (1) Indiana, (2) Minnesota, (3) Missouri, and (4) New Jersey.

The following subjects were selected to ascertain the average number of fact questions listed in the state courses of study:

- (1) European Background for American History, (535 fact questions);
- (2) World History (1636 fact questions); (3) American History (1158 fact questions); (4) United States History (606 fact questions); (5) Citizenship (all types of civics included - 821 fact questions); and
- (6) Problems of Democracy (436 fact questions, and 300 exercises

¹⁴ W. J. Osburn, Are We Making Good at Teaching History?, p. 9. Bloomington, Illinois: Public School Publishing Company, 1926.

which averaged three or more basic facts, making a total of 1336 facts.) When this list is combined, a total of 6082 fact questions is found; and, if a student should take a course each year for six years, he would be held responsible for an average of over 1000 questions a year.

The list of questions or topics is so extensive that it would be almost impossible to subject high school pupils to a test of sufficient length to test their ability to answer even one-fourth of the questions covered in the various types of civics and problems of democracy. A general information test will have to take an extensive sampling of this range of facts in order to be of reasonable validity.

The topics which teachers of the social studies have studied ought to furnish a crude guide for such a sampling. They will probably stress the points or topics that have been emphasized in their training.

Nature of Subject Matter Courses in the Social Sciences in Teachers Colleges. - This phase of the study would not be complete without some treatment of the content taught in courses in teachers colleges which prepare teachers for high schools. Rugg and Dearborn¹⁵ have given a brief summary which is quoted herewith:

15

E. U. Rugg and N. E. Dearborn, The Social Studies in Teachers Colleges and Normal Schools, pp. 46-51. Greeley, Colorado: Colorado State Teachers College, 1928.

Topics Listed. In the 44 courses in geography, 223 different topics were listed. Those mentioned in 5 or more courses (but none mentioned by more than 18 courses) include:

1. Geographical principles
2. Meaning of geography
3. Influences of environment on man
4. Geography of most important United States regions
5. Geographies of leading countries
6. Relations to nations independency
7. Ocean currents
8. Planetary winds
9. Latitude and longitude
10. Rotation
11. Revolution
12. Standard time
13. Map drawing
14. Climate
15. Surface water
16. Topical vs. type method of teaching
17. Project and problem method
18. Regional geography
19. Geography correlated
20. Home geography
21. Mineral influence on man's activities
22. Projects
23. Atmosphere
24. Relief features

Topics listed. Of the 43 courses in economics, a total of 151 topics was listed (none by more than 17). Those common to 5 or more courses include:

1. Production
2. Value and price
3. Money and credit
4. Trade cycle
5. Protection and free trade
6. Business organization
7. Rent
8. Tariff problems
9. Monopoly
10. Business combinations
11. Labor problems
12. Interest
13. Transportation
14. Banking
15. Taxation

16. Distribution of wealth
17. Wages
18. Capital
19. Economic development of the United States.

Topics listed. Of the 47 courses in sociology, a total of 263 topics was listed (none more than 16 times). Those common to 5 or more of the courses include:

1. Nature of society
2. Population
3. The family
4. Immigration
5. Social control
6. Social organization
7. Education - the school
8. Religion - the church
9. Crime
10. Poverty
11. Divorce
12. Social processes
13. Heredity and environment
14. Race problems
15. Public opinion
16. Social evaluation
17. Social institutions
18. Social origins

Topics listed. A total of 105 topics was reported in 20 courses in government. Those used in 5 or more courses (none more than 7 times) include:

1. Political parties
2. Powers and limitations
3. Executive department of United States government
4. Judicial department of United States government

In general, the number of topics indicated does not include as wide a range as found for the high school. However, Rugg and Dearborn found a total of 1645 topics listed, though not more than 7 per cent of them were common to all courses. The topics included in history courses were so general in nature and dealing with periods of development, that they were not quoted by the writer. The method

courses were mere generalizations, and, in many cases, were offered to supply content which had not been gained in content courses. Judging the richness of the courses by those of the high school, it seems that students could expect but little motivation from the teachers.

This phase of the study has been an attempt to validate the material that is to make up the content of the text materials for the study. The studies reviewed show:

1. Some consistency of social problems as indicated by Bassett's study of political platforms, and as mentioned in President Hoover's first address to Congress.

2. Many basic generalizations or concepts of various meanings which might apply to the several subjects in the social sciences. These generalizations were shown in Billings' study.

3. That there is a noticeable, and in many instances, the same rank correlation between the problems stressed in current literature and in textbooks. This was shown by the studies of Bixler, Bobbitt, Bowman, and Wells.

4. That frontier thinkers in business, governmental, and social affairs point out the crucial problems, as indicated by Hockett's study.

5. That there are issues or problems, as found in Lee's study, whose solutions are debatable questions. These issues, if placed in a test, would most likely affect its objectivity.

6. An overlapping of basic subject matter content in social science textbooks, as indicated by Rugg's study.

7. Many meanings, suggested by the various social science concepts when presented to children, as shown by Holtzer.

8. A wide range of fact questions that have been presented to children in the elementary and high schools. These facts should aid in the formation of concepts about social situations and problems, if the teachers' aims and those indicated by the state courses of study, are aids to concept formation through fact presentation.

9. A cross-section of the needs and interests of society as was shown by Cocking's study.

Implications

1. It seems that where the range of problems is so wide, one must select concepts or meanings which will extend over the whole scale.

2. The problems were selected from many sources and ranked by various means; therefore, it does not seem logical to attempt to rank them as to importance. Hockett says: "It is, of course, impossible to present a list of problems and issues in strict rank order of importance. To attempt it would be similar to the attempt to evaluate the relative worth to a person of his heart and head." ¹⁶

3. From the range of topics and problems given in those researches, it seems highly probable that the extent of high school students' information could be tested from a well-selected list of these problems.

¹⁶ John A. Hockett, A Determination of the Major Social Problems of American Life, p. 28. New York: Bureau of Publications, Teachers College, Columbia University, 1927.

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CHAPTER VI
COLLECTION AND TREATMENT OF DATA

This phase of the study will be treated as follows:

1. The preliminary steps in the development of the experimental test will be given.
2. The development and administration of the final forms of the experimental test will be described.
3. The administration of the tests and the representativeness of the sampling will be discussed.
4. The data will be treated in several different ways in order to show:
 - a. The distribution of the scores according to ages and grades.
 - b. The measures of variability.
 - c. The correlations between forms and between parts of the tests.
 - d. The validity of tests as indicated:
 - (1) By the correlations between the test scores and grades made in the social studies.
 - (2) By the correlations between test scores and teachers' estimates of students' intellectual ability.
5. The reliability of the tests will be determined.
6. The variability of student responses from grade to grade will be determined.
7. The reasoning ability of high school students as

indicated by their ability to render correct judgments with regard to social-civic situations will be determined.

Finally, an evaluation of student responses will be given, and the findings of the study summarized.

Preliminary Steps in the Development of the Tests.-

The researches reviewed in Chapter V, served as the basis for the selection of the topics to be placed in Part II of the tests. However, it was decided to select the fact questions directly from textbooks which were most commonly used. Those books having the highest frequency of use in the North Central Association schools were analyzed for the basic content of Part I of the tests.

The books analyzed were as follows:

Principal Tests		
Author	Community Civics	Frequency
Hughes	Community Civics	96
Dunn	The Community and the Citizen	17
Hill	Community Life and Civic Problems	11
Hughes	Economic Civics	6
Civics		
Magruder	American Government	129
Gitteau	Government and Politics, etc.	50
Ashley	New Civics	46
Woodburn and Moran	Citizen and Republic	39
Reed	Form and Functions of American Govt.	23
Garner	Government in the United States	18
Forman	American Democracy	18
Hughes	Community Civics	10
Vocational Civics		
Gowin and Wheatly	Occupations	13
Giles	Vocational Civics	11
Hughes	Economic Civics	2

Author	Economics	Frequency
Thompson	Elementary Economics	104
Ely and Wicker	Elementary Principles of Economics	37
Carver	Elementary Economics	32
Burch and Near- ing	American Economic Life	27
Bullock	Elements of Economics	19
Marshall and Lyon	Our Economic Organization	17
Sociology		
Towne	Social Problems	67
Ellwood	Sociology and Modern Social Problems	46
Burch and Patterson	American Social Life	22
Tufts	Real Business of Living	4
Social Science		
Hill	Community Life and Civics	4
Burch and Patterson	American Social Life	4
Tufts	Real Business of Living	3
Towne	Social Problems	2 <u>1</u>

The books most widely used were selected as content guides. The indexes of these books furnished the original topics, 600 of which were compiled for comparison. There were 356 topics, a large number being common to texts used in the various classifications of civics, and which were found either in economics or sociology. From this list 152 topics were selected, and these topics may be found in Table XVIII.

1

W. S. Monroe, and I. O. Foster. The Status of the Social Sciences in the High Schools of the North Central Association. University of Illinois Bulletin.

Tables XVIII and XIX show the topics selected to make up the content of the tests.

TABLE XVIII

TOPICS SELECTED FOR INFORMATION TEST TO BE USED IN THE STUDY

1. Advertising	38. Distribution of immigrants
2. Air transportation	39. Divorce laws
3. Aliens	40. Divorces
4. Americanization	41. Elections
5. American Legion	42. Election system
6. Arbitration	43. Economic policies of government
7. Assimilation of immigrants	44. Economic value
8. Ballot	45. Economic waste
9. Bank run	46. Effect of child labor on unions
10. Blacklist	47. Environment
11. Boycott	48. Equality of educational opportunity
12. Budgets	49. Farmers marketing problems
13. Business organization	50. Federal bank supervision
14. Capitalistic system	51. Federal courts
15. Child labor	52. Fourteen points
16. City managers	53. Freedom
17. Civil and political rights of aliens	54. Freedom of worship
18. Civil service	55. Freedom of speech
19. Churches	56. Function of Vice-President
20. Collective bargaining	57. Fundamentalists
21. Commercial advertising	58. Governmental control of education
22. Concentration and integration of industry	59. Government and price control
23. Constancy of value of money	60. Governmental control of housing conditions
24. Constitutional amendments	61. Ignorance of the law
25. Conservation	62. Immigrant labor
26. Control of banks	63. Immigration laws
27. Control of public officials	64. Imprisonment for debt
28. Control of rubber supply	65. Income tax
29. Cooperation	66. Industrial revolution
30. Cooperative marketing	67. Interstate commerce commission
31. Corporation charters	68. Invisible government
32. Corruption of officials	69. Judges salaries
33. Democracy and crime control	70. Jury system
34. Democracy and majority rule	71. Labor organizations
35. Determination of morals	72. League of Nations
36. Direct taxes	73. Legal coinage
37. Distribution of taxing powers	74. Living and cash wage
	75. Majority rule

(Table continued)

TABLE XVIII (Cont.)

TOPICS SELECTED FOR INFORMATION TEST TO BE USED IN THE STUDY

76. Manufacturing	111. Rents and income taxes
77. Marriage laws	112. Responsibility in public office
78. Mass production	113. Russian government
79. Middlemen	114. Safety work
80. Military preparedness	115. Single tax
81. Mob law	116. Secret trial
82. Monopolies	117. Size of American families
83. Monotonous labor	118. Socialistic policies of government
84. Municipal laws	119. Socialism
85. Natural and legal monopolies	120. Socialist party
86. National migration	121. Socialistic plans
87. Nomination of president	122. Spoils system
88. Objection to immigrants	123. Slowness of law system
89. Open shops and unionism	124. Standard of living
90. Patronage in politics	125. State control of industry
91. Political rights	126. State constitutions
92. Political caucus	127. State revenues
93. Population increase	128. Strike
94. Private property and taxation	129. Supply and demand
95. Prices of stocks	130. Supreme court
96. Promptness of legislatures	131. Supremacy of national government over state government
97. Propaganda	132. Tariff
98. Public approval of new laws	133. Tariff, state
99. Public education	134. Taxes and costs
100. Public office 2	135. The rights of Congress
101. Public opinion 2	136. Voters and voting
102. Public opinion and law enforcement	137. Voting
103. Pure democracy	138. War department and schools
104. Quality production	139. Water power
105. Radicals	140. Women in industry 2
106. Railroad fares and rates	141. Workingman's compensation acts
107. Recall 2	142. Working day
108. Recreation 2	
109. Referendum	
110. Regulation of railroads	
	143. Miscellaneous 6

The numerals indicate the number of items under the general heading.

TABLE XIX
TOPICS SELECTED FOR JUDGMENT TEST TO BE USED IN THE STUDY

1. Administration of cooperative business	33. Fraud and treatment of offender
2. Assimilation of immigrants	34. Governmental aid to farmers
3. Attitude toward contemporary society	35. Government in business
4. Attitude toward criticism of courts	36. Governmental control of labor and industrial problems
5. Attitude toward unjust criticism by the press	37. How to help destitute people
6. Attitude towards persons accused of crime	38. Importance of conservation of basic resources
7. Attitude toward trusts	39. Importance of various resources
8. Bank control and protection of the public	40. Improvement of jury service
9. Benefits from governmental expenditures	41. Improvement of policies of labor unions
10. Business administration of monopolies	42. Improvement of poverty conditions
11. Capitalistic production	43. Improvement of heredity
12. Causes for high interest rates	44. Industrial labor policies
13. Child labor	45. Industry and standard of living
14. Civil service laws	46. Initiative and referendum
15. Class government	47. Intelligent loyalty
16. Control of centralization of wealth	48. Interdependence of farming and industry 2
17. Control of public transportation	49. Insurance and protection
18. Control of radical movements	50. Joint ownership of business by capital and labor
19. Control of radicals	51. Joint ownership and labor disputes
20. Control of railroads	52. Judging climatic causes for crop distribution
21. Cooperative trade	53. Judging a nation's greatness
22. Development of interests	54. Judging a nation's progress
23. Disease prevention	55. Jury system
24. Dishonest competition	56. Justification of criticism of government
25. Distribution of costs of industrial conflict	57. Laborers' attitude toward machinery
26. Distribution of industry	58. Labor representation in Congress
27. Direct and indirect philanthropy	59. Legal control of public service rates
28. Economical purchasing	60. Location of cities
29. Effectiveness of international law	61. Location and economic value
30. Financial advice	62. Localization of educational control
31. Foreign trade	63. Machine production
32. Formation of opinions	64. Means of avoiding bad government
	65. Means of eliminating poverty
	66. Means of eliminating an acquired monopoly

(Table continued)

TABLE XIX (Cont.)

TOPICS SELECTED FOR JUDGMENT TEST TO BE USED IN THE STUDY

67. Merchant marine	89. Reasons for immigration to cities
68. Migration to city	90. Reasons for providing free parks
69. Military preparedness	91. Reasons for rapid development of transportation and communication
70. National relationships	92. Reasons for studying social sciences
71. Obedience to the law	93. Reasons for studying great state papers
72. Open and closed shop	
73. Organization of social workers	
74. Our material independence of other countries	
75. Payment of tariff	
76. Permanent improvement of poverty conditions	94. Removal of unwise laws
77. Perpetuation of local government	95. Renting vs. purchasing a home
78. Poor municipal administration	96. Responsibility for health
79. Preservation of family life	97. Reward for physical injury by public carriers
80. Profiteering on food	98. Unemployment
81. Protective tariff	99. Social problems as a result of congestion
82. Protecting women in industry	100. Strikes
83. Public attitude toward big business	101. Suspended judgment
84. Punishment of criminals	102. Unemployment and accident insurance
85. Racial attitude	103. Tax burdens and complaints
86. Reasons for obeying the law	104. When to issue bonds
87. Reasons for formation of big corporations	105. Workers attitude toward his employer
68. Reasons for immigration laws	

The topics included in Tables XVIII and XIX were selected after careful consideration of the topics given in the findings of the various researches, and of the content of the more modern textbooks in civics, economics and sociology.

A comparison of the topics included in one of the recent outlines for civics will show the degree of relationship existing between

topics given in the content of the test and the content which makes up a recent outline in civics. The table of contents given below shows the big general headings. There were a number of sub-heads under each one of the topics included in the table. The topics treated in this table under the title of industry and labor will sufficiently show the extensity of the topics included in modern textbooks and outlines. These are as follows:

XXII. Industry and labor

Modern industrial organization. Corporations. Combinations in industry. The control of industrial combinations. The federal trade commission. The general relations of government to industry. Labor's part in the industrial order. History of labor organizations. The American Federation of Labor; its organization and program. Methods and policies of labor. Collective bargaining. The right to strike. The closed shop and the open shop. Conciliation and arbitration. Compulsory arbitration. Industrial accidents and employers' liability. Child labor laws. Minimum wage laws. The problem of unemployment.

Table of Contents of the Improvement of Civics Instruction¹

A. The American Environment

1. Human Society
2. United States Geography and Its Influences Upon Society
3. Peoples, Races, and Racial Problems
4. American Home and Community
5. Economic Factors and Organization

B. American Government

- a. Foundations of Government
 6. Nature and Forms of Government
 7. Citizen, Rights and Duties
 8. Popular Control of Government

¹ A. W. Brown, The Improvement of Civics Instruction.
Ypsilanti: Standard Printing Company, 1929.

- b. Electoral Mechanism
 - 9. Suffrage and Elections
 - 10. Party Organization and Machinery
- c. Local and State Governments
 - 11. Counties and Rural Communities
 - 12. City Government
 - 13. Municipal Problems
 - 14. State Government
 - 15. Legislature
 - 16. Governor
 - 17. Courts and Law
- d. National Government
 - 18. National Constitution
 - 19. Congress
 - 20. President and Cabinet
 - 21. Courts and Law
- C. Functions of Government
 - a. Economic
 - 22. National Resources, Conservation and Public Domain
 - 23. Agricultural Interests
 - 24. Encouragement and Regulation of Commerce
 - 25. Industry and Labor
 - 26. Currency, Banking and Credit
 - 27. Public Utilities
 - 28. Public Finance
 - b. Social
 - 29. Public Health
 - 30. Poor Relief, Correction and Other Welfare Problems
 - 31. Education
 - c. International
 - 32. National Defense
 - 33. Foreign Relations
 - 34. United States as a World Power
 - 35. League of Nations
 - 36. World Problems and Democracy

After the form of the test had been decided upon, and a large number of the situations had been devised from the topics given in Table XIX, it was decided to use a representative group of these situations in an experimental preliminary test in order to ascertain: (1) language difficulties, and (2) the time required to read and respond to the type of situations to be used in the test. A list of 36 topics was selected for the preliminary test. These situations are not given here, since they were included in the final form of the tests.

The instructions given to junior and senior high school students taking this test were as follows:

1. Do not mark your answer to the question until you are fairly sure that you have the question well in mind, and try to mark all questions correctly, for your paper will not be used if you do not mark an answer to all of the questions.
2. You will need to work rapidly. As soon as you have read the questions and answers, try to think through the whole situation as it was given and decide upon the best answer. After you have done this, place an X on the line before what you consider to be the right answer.

Sample Test Problems

The first problem is marked correctly; the other one has been left for you to think through and answer. You may need to re-read the statement of the problem before you decide the answer. The answers to the other problems are to be marked in the same way.

1. If you found a boy lying in the street apparently injured you should

- | | |
|---|--|
| | a. look the other way and pretend not to see him. |
| | b. try to learn his name and phone his family. |
| X | c. stop a passing auto and take him to the hospital at once. |

2. We should obey the laws in order

- | | |
|--|--|
| | a. to set other people a good example. |
| | b. To keep out of jail and preserve our good reputation. |
| | c. to make our country safe and happy. |

The teachers were requested (1) to select from each grade in the high school five dull pupils, five average, and five who were considered the best in their grade in the social studies; (2) to have each child record the time required to complete the test, since every child was allowed to work at his own rate of speed; (3) to instruct pupils not to guess; (4) to have pupils underscore any words which they did not understand after they had completed the test; and (5) to write any answers which they thought better than the ones given to the questions.

Six schools, located in Alabama, Ohio, and Kentucky, were selected to carry on the preliminary testing program. These schools represented the following types of communities: (1) St. Bernard, Ohio, an industrial community; (2) Brilliant, Alabama, a coal mining village; (3) Cleves, Ohio, a cosmopolitan village; (4) Mt. Olivet, Kentucky, a rural village; (5) Piedmont, Alabama, a cotton mill village; and (6) Tuscaloosa, Alabama, a college town. It was thought that the sampling ought to be representative of a larger sampling obtained from a greater number of schools.

The tests were scored according to the right responses, and then scored again by the formula $S = R - \frac{W}{(N-1)}$. After some experimentation as to the position of individuals within the class intervals when ranked by the two methods, it was decided that the rights alone would be used in scoring the final test papers.

No consistent language difficulties were found. Many of the poor students, according to the classification by the principals, underscored several words, but no words were found underscored consistently by members of the dull group. As many words were underscored by members of the dull group in the senior high

school as in the junior high school. No language difficulties were indicated by those in the superior group, and a very small number of the average group underscored any words. No words or groups of words were underscored consistently by all groups. It was decided to simplify the language in the final form of the test as much as possible without giving leads or cues to the situations or questions.

The average time taken per situation was 37 seconds, with a range of 18 to 72 seconds. This time basis, with that used by similar tests, was taken as the standard amount of time per situation for the final testing program.

The Development of the Test. - The aims of the social studies, as reviewed in Chapter III, indicated several outstanding objectives which might be used in the development of a test. First, those aims given by the state courses of study, teachers, teacher training institutions, and experts all agree on the need for information as was indicated by the rank position of this aim. Secondly, the contributors to the Historical Outlook listed scientific thinking as being the most important aim. Thirdly, many aims were indicated which dealt with attitudes, appreciations, virtues, et cetera, which in the main, would have to be measured individually by specially devised tests.

It was decided to develop tests that would determine the various civic, economic, and general facts which students have acquired; and, furthermore, to determine the ability to render correct judgments about civic, economic, and other social situations.

It was realized that to test the ability to render correct judgments with regard to the various types of situations would involve a number of complexities dealing with attitudes, ideas, ideals, or in general, mind sets, prejudices or beliefs. In order to reduce these complexities to a minimum, it was decided to avoid situations which were known to be direct issues of a questionable nature that might result in an answer determined by prejudice. Too, the meaning of each situation must be clear, consistent with life problems outside the school, useable or workable, simple in nature, and not directly in conflict with majority

belief. To illustrate, a situation which sets forth the idea that a communistic government would be better for this country than our present form of democratic government, would not be justified in the light of the criteria just given. Prejudice, probably, would be such a potent factor that, regardless of the nature of the situation, the majority answer would be negative. Thus we see that prejudices or biased opinions might determine the response to a situation of this kind. Expressed meanings, then, may in a large degree be determined by the attitudes, adjustments, prejudices and opinions that have been formed in the course of experience. The same situation might suggest many meanings to different individuals; whereas, there are general meanings that hold good for many objects or situations. The meaning of democracy might be applied to situations dealing with labor, education, religion, racial relations, and a score of others.

The materials of the social sciences are of such nature that the mind cannot deal with them according to law or rules, as in mathematics, physics, or chemistry. The conclusions or judgments rendered will, generally, be in the terms of generalizations or principles which might apply to particular situations. The minimum number of facts will be included in each situation in order that the individual will need to draw upon past experiences to make intelligent decisions about the particular situations.

Dewey² points out three phases of judging, namely,

² John Dewey, How We Think, pp. 101-102. Boston: D. C. Heath Company, 1910.

"(1) a controversy, consisting of opposite claims regarding the same objective situation; (2) a process of defining and elaborating these claims and of sifting the facts adduced to support them; (3) a final decision, or sentence, closing the particular matter in dispute and also serving as a rule or principle for deciding future cases."

We see that, under the conditions given by Dewey, ideas are in conflict in the first phase. These ideas must have meanings to the individual. Dewey says: "An idea is a meaning that is tentatively entertained, formed, and used with reference to its fitness to decide a perplexing situation, - a meaning used as a tool of judgment. . . . Ideas are . . . not genuine ideas unless they are tools in a reflective examination which tend to solve a problem." ³

The phases mentioned by Dewey provide for the larger meaning of judgment. In speaking of the large and narrow meanings of judgment, Monroe says:

The term judgment is employed in a larger and more vital sense and in a narrow and more formal one. In its pregnant sense it means the act (or the power) of weighing facts or evidence, in order to reach a conclusion or decision; or (as is usual with words denoting acts) the result, the outcome of the process, the decision reached by the process of reflective inquiry and deliberation. In this sense judgment expresses the very heart of thinking. All thinking is, directly or indirectly, a part of the act of judging, of forming an estimate or valuation after investigating and testing. The difference in the adequacy of different cases of thinking is due to the care and thoroughness with which the operations of critical summoning and weighing of evidence are performed. The evaluating nature of judgment and its relation to a reasonably reached, intellectually valid conclusion, are suggested by the judicial procedure from which the word "judgment" is derived. There is

3

Ibid., pp. 108-110.

primarily something at issue, at stake, something which is as yet undetermined, uncertain, but which needs to be decided. Without a crisis of uncertainty of this sort, without a questionable or problematic situation, there could be no judging. Then there follows the calling and hearing of witnesses, presenting all the facts relevant to settling the matter - that is to say, there are the processes of observation, recollection, etc., which bring in the data or evidence upon which the correct decision depends. Then there is the shifting, comparing, classifying, and relating operation by which is determined the respective force, the authority, to be assigned to this fact or that. The weighing or evaluating process involves the use of general rules or principles bearing upon cases of this sort that have been established in prior experience. Finally the judgment issues in a decision, or declaration that the case is thus and so, within certain limits of probable error. From this sketch it is evident that judging involves in individualized concrete form all the operations of thinking or reflective inquiry, both material and formal; that is, the material operation by which facts are gathered and the formal one by which facts are weighed and their meaning determined. From the standpoint of logical analysis, existence and meaning are thus the defining traits of judgments.

In its narrow and more technical sense a judgment is a statement of a relation between two objects, or between two contents of thought, two meanings. This is the meaning which the term "judgment" has gradually assumed in formal logic; from its standpoint the vitally practical meaning of judgment just expounded is sometimes looked upon as merely psychological in character. From the standpoint of judgment proper the actual operation of thinking as performed in life, the formal statement of relationship "in abstracto," is one important stage in the development of a controlled judgment. It marks a summing up, a gathering together of the best outcome of prior reflections. Such formulations are indispensable factors in the adequately performed vital judgment. Because the function of formulation is so important, judgment is not unfrequently identified with the statement of relations, or with the proposition. ⁴

The attempt to measure students' abilities to render correct responses will be concerned primarily with the larger meaning of judgment. However, some situations may be so simple that there will be no doubt in the minds of the more intelligent and mature students. In this case, the

⁴ Paul Monroe, A Cyclopedia of Education, pp. 571-572. New York: The Macmillan Company, 1925.

outcome or response may be merely a statement of the relation between the three items given as possible answers.

Part I of the test, which includes the fact questions, was made up of true and false questions in order to obtain the greatest number of answers in the shortest time. Part II consists of various situations with multiple choice answers (three). Part I contains 76 items, and Part II contains 54 reasoning situations.

After the preliminary tests had been given, it was decided to make the time a constant factor. Each pupil was allowed to work at his own rate of speed for forty-five minutes after the instructions had been given. It was estimated that from twelve to fifteen minutes would be required by the average students to complete Part I, thus having about thirty minutes for Part II. This proved to be adequate for all grades except the seventh and eighth, although the brighter students in these grades completed the tests.

No attempt was made to arrange the items according to difficulty for the experimental test. A few items were selected because of their nature and possible easiness to be placed first in each part of the tests.

Administration of the Tests. - The tests were administered by teachers during regular class periods in the social studies. Students were instructed not to guess. Each student indicated on the tests the various courses that he had taken in the social studies. All tests were collected and mailed to the writer to be scored.

The Representativeness of the Data. - The tests were given to high school students in Alabama, Indiana, Kentucky, Ohio, Louisiana, and Pennsylvania. A sampling was taken from sixteen schools distributed as follows: Three in Alabama, four in Indiana, two in Kentucky, six in Ohio, and one each in Louisiana and Pennsylvania. The schools represented the following types of communities: Cotton-mill village, two college towns, coal-mining village, two industrial communities, army post, rural high school, and five representative schools from Hamilton County, Ohio. The population of the towns ranged from 1900 to 50,000, and the enrollment ranged from 113 to 2400. The entire enrollment of the smaller schools was tested, while groups of various sections in the social studies in the larger high schools were used. The largest school was used for experimental purposes dealing with the revised forms of the test.

The total of 3763 students was tested, and of this number 1339 took both forms of the test, while the same form was administered twice to eighty different students. Form A was taken by 1941 students and 1822 students took Form B. The above distribution and sampling ought to be fairly representative of the measures which would be obtained from a larger number.

Treatment of the Data

Method of Scoring. - The reliability of the formulas R , $R-W$, and $S = R - \frac{W}{(N - 1)}$ was examined to ascertain which one should be used for scoring the tests. The research workers do not seem to be in agreement as to the best formula to use for scoring purposes. Holzinger

5
 appears to have decided against correcting for chance. He holds that the correction formula becomes a linear function of rights alone. Ruch has, probably, done more research than any other individual on testing the reliability of various forms of tests, and he is of the opinion that the correction formulae penalize the student.⁶ Cocks carried on an extensive study with the several formulas, and he concludes that the R formula is fairer to the student than the correction formulas.⁷

The reliability of the various tests which were used in the several experiments was not noticeably improved by the use of the correction formulas. Nevertheless, it was decided to check the reliability of the experimental tests by the correction formulas since the tests were scored by the R formula. The results of this check will be found in the discussion on the reliability of the data.

The keys for the tests were agreed upon in most cases by the writer and his adviser; and thirty-eight graduate students and teachers examined the tests and keys. They criticized the keys for items 7 and 49 of Part II, Form A, and item 41 of Part II, form B. The criticisms of these were (1) one answer might be as good as another, (2) circumstances might change the answers,

⁵ K. H. Holzinger, "On Scoring Multiple Response Tests," Journal of Educational Psychology, Vol. XV (1924), 445-447.

⁶G. M. Ruch, The Objective or New Type Examination, p. 357. New York: Scott Foresman and Company, 1929.

⁷A. W. Cocks, The Pedagogical Value of True-False Examination, p. 44. Baltimore: Warwick and York, 1929.

and (3) the best answer might be a matter of personal opinion.

The tests were administered to 75 juniors and seniors in college and their answers were generally in agreement with the keys. The answers in no case were found to be more than 40% incorrect for any given item.

Distribution of the Scores According to Ages and Grades.-

The cumulative frequencies, according to ages for both forms of the test, are shown in Tables XX to XXV inclusive. These data are tabulated from the raw scores, and are thrown into class or score intervals of five units in all tables. The lowest score value in any interval is the lower limit of that interval. To illustrate, in an interval of 0 - 5, the lowest score could be zero, but the highest would be four since the scores are given in whole and not in fractional units.

An inspection of Tables XX to XXV shows that, although the older children scored higher on the tests and parts of the tests than younger children, considerable overlapping exists particularly after the thirteenth chronological year is reached.

The peak of development for these particular tests seems to have been reached at the eighteenth year as indicated by the present findings. Those people who are nineteen or over usually have lower norms than those immediately below that age. This is perhaps caused by pupils being over-age chronologically, and under-age mentally.

There is generally a gradual accumulation of frequencies up to the midpoints and then a gradual decline above, thus giving a rough approximation of the normal curve when the data are grouped for all ages and grades.

The distribution of the scores by grades is given in Tables XXVI to XXXI. There is considerable overlapping from grade to grade. The ninth grade did not increase its norms in proportion to the increase of the other grades from year to year.

The rise of the medians is gradual throughout all grades, with the exception of the ninth grade. The distribution is approximately normal when taken for each grade, but skewed in the negative direction making for a positive accumulation of the scores. Fifty per cent or more of the questions in the tests, while fifty per cent of the twelfth grade answered seventy-eight per cent or more of the questions.

TABLE XX

THE DISTRIBUTION SCORES ACCORDING TO AGES OF HIGH SCHOOL PUPILS
TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, FORM A

Scores	Ages										Totals	
	11	12	13	14	15	16	17	18	19	20		
120												
115						3	3	1				7
110				2	7	7	13	13	1	1		44
105		1	5	3	15	25	50	13	5			117
100			7	8	18	30	37	24	6	2		132
95			5	18	22	35	35	19	11	2		147
90		4	8	19	41	46	43	30	7	1		196
85	1	2	15	24	35	56	39	14	10	3		199
80		5	17	29	39	52	32	13	5	1		193
75	1	3	32	41	63	39	25	17	3			224
70		11	31	40	38	26	22	6	2	1		177
65	1	10	29	56	54	29	16	6	3			204
60		13	26	24	30	18	12	8	2			131
55	1	8	14	18	19	15	5	2				82
50		7	7	13	6	6	4	1				44
45		4	2	8	1	1						16
40		2	4	4	6	1						17
35			1	2	1	2	1					7
30		1										1
25	1		1									2
20			1									1
Totals	5	71	205	309	395	388	337	165	55	11		1941
Medians	67.5	65	72.8	73.7	78.4	85.4	91.4	92.9	88.8	92.5		81.67

TABLE XXI
THE DISTRIBUTION SCORES ACCORDING TO AGES OF HIGH SCHOOL PUPILS TAKING THE
BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, FORM A, PART I

Scores	Ages										Totals
	11	12	13	14	15	16	17	18	19	20	
70					1	3	3	2			9
65				5	8	20	32	21	4		90
60		1	11	18	41	48	88	39	14	3	263
55		2	20	32	45	96	73	39	17	4	328
50		6	26	57	82	81	52	33	12	2	351
45	1	16	63	79	96	75	46	18	5	2	401
40	2	22	44	66	71	41	28	8	3		285
35		10	23	28	29	16	10	3			110
30		8	12	15	16	4	4	2			61
25	1	1	5	3	2	2					14
20		2	1	5	2	1					11
15	1	2		1	2	1	1				8
10		1									1
Totals	5	71	205	309	395	388	337	165	55	11	1941
Medians	41.4	43.5	46.4	47.3	48.9	53.3	56.9	57.4	55.7	56.9	51.00

TABLE XXII
THE DISTRIBUTION SCORES ACCORDING TO AGES OF HIGH SCHOOL PUPILS TAKING THE
BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, FORM A, PART II

Scores	Ages										Totals
	11	12	13	14	15	16	17	18	19	20	
45		1	1	6	17	17	34	12	2	1	91
40	1	2	17	21	39	68	76	37	14	2	277
35	1	9	21	38	75	83	73	45	13	3	361
30	1	4	37	66	83	87	61	30	10	2	381
25		20	50	70	78	52	46	22	10	2	350
20		17	46	60	58	50	28	10	2	1	272
15	1	8	23	33	34	19	16	9	3		146
10	1	8	6	9	9	9	3		1		46
5		2	3	6	2	1					14
0			1			2					3
Totals	5	71	205	309	395	388	337	165	55	11	1941
Medians	32.5	26.3	27.4	28.3	30.9	33.5	35.9	36.3	35.6	35.8	31.83

TABLE XXIII

THE DISTRIBUTION SCORES ACCORDING TO AGES OF HIGH SCHOOL PUPILS TAKING THE
BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, FORM B

Scores	Ages										Totals
	11	12	13	14	15	16	17	18	19	20	
120						1					1
115						2	5	4	2		13
110				4	3	5	16	6	1		35
105		1	1	1	12	8	22	13	1	1	60
100			3	5	16	17	32	23	4		100
95			5	12	22	34	39	26	8	2	148
90		1	6	6	37	24	37	30	6	1	148
85		7	21	23	35	37	27	23	5	1	179
80		8	16	28	30	25	27	10	5	1	150
75	1	12	25	33	36	33	24	12	8	3	187
70	1	11	46	29	37	29	20	12	5	3	193
65	1	18	42	45	54	29	19	2	3		213
60		17	27	35	27	20	9	5	2		142
55	2	21	26	39	23	17	6	4			138
50		11	12	14	8	9	1				55
45	1	4	8	9	8	5	1				36
40		1	2	5	1						9
35		1		3	1	2					7
30				2		2					4
25	1			1	1						3
20				1							1
Totals	7	113	240	295	351	299	285	170	50	12	1822
Medians	58.8	65.4	70.3	69.3	77.3	80.7	91.1	92.8	87.0	80.0	77.94

TABLE XXIV

THE DISTRIBUTION SCORES ACCORDING TO AGES OF HIGH SCHOOL PUPILS TAKING THE
BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, FORM B, PART I

Scores	Ages										Totals
	11	12	13	14	15	16	17	18	19	20	
70				2		3	11	9	2		27
65			2	5	19	15	37	25	2	2	107
60		3	13	14	31	35	63	37	14	1	211
55	2	9	27	33	60	64	60	48	15	3	321
50	1	16	43	54	63	62	48	22	7	4	320
45		26	67	62	75	45	36	15	4	2	332
40	3	34	52	69	66	46	21	9	4		304
35		16	27	27	20	19	7	5	1		122
30		7	8	17	12	6	2				52
25		1		6	3	2			1		13
20	1	1		4							6
15			1	2	1	1					5
10					1	1					2
Totals	7	113	240	295	351	299	285	170	50	12	1822
Medians	44.2	44.6	47.4	46.9	49.8	52.4	57.4	58.5	57.6	55	51.17

TABLE XXV

THE DISTRIBUTION SCORES ACCORDING TO AGES OF HIGH SCHOOL PUPILS TAKING THE
BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, FORM B, PART II

Scores	Ages										Totals
	11	12	13	14	15	16	17	18	19	20	
45				2	1	7	6	5	1		22
40		1	1	10	35	29	62	33	6	2	179
35		2	15	20	51	44	63	41	11	2	249
30		10	33	43	58	74	62	37	13	3	333
25	1	24	45	53	73	49	45	25	10	5	330
20	1	27	71	76	69	54	26	17	3		344
15	1	30	51	58	51	28	15	10	2		246
10	2	16	20	26	10	12	6	2	3		97
5	2	2	4	7	3	2			1		21
0		1									1
Totals	7	113	240	295	351	299	285	170	50	12	1822
Medians	13.8	21.4	23.2	23.7	28.0	30.3	34.1	34.5	32.3	31.7	28.06

TABLE XXVI
 THE DISTRIBUTION OF SCORES MADE BY HIGH SCHOOL PUPILS
 TAKING THE BURTON SOCIAL-SCIENCE-CIVICS TEST, FORM A

Scores	Grades						Totals
	7	8	9	10	11	12	
120							
115			1			6	7
110			3	5	7	29	44
105		3	13	12	26	63	117
100	1	5	11	17	35	63	132
95		7	27	29	41	43	147
90	2	10	36	45	54	49	196
85	5	13	41	50	63	27	199
80	8	22	55	48	34	26	193
75	19	35	72	60	23	15	224
70	23	43	54	31	20	6	177
65	26	53	70	32	17	6	204
60	27	24	53	17	5	5	131
55	19	20	28	12	3		82
50	16	10	15	2		1	44
45	7	2	6	1			16
40	4	5	8				17
35	2	1	4				7
30	1						1
25	2						2
20		1					1
15							
10							
5							
0							
Totals	162	254	497	361	328	339	1941
Medians	65.58	71.28	75.73	82.66	89.92	99.01	81.67

TABLE XXVII
THE DISTRIBUTION OF SCORES MADE BY HIGH SCHOOL PUPILS
TAKING THE BURTON SOCIAL-SCIENCE-CIVICS TEST, FORM A, PART I

Scores	Grades						Totals
	7	8	9	10	11	12	
70				1	1	7	9
65		1	7	9	19	54	90
60	1	8	31	32	66	125	263
55	2	19	60	57	104	86	328
50	11	38	98	101	66	37	351
45	43	71	133	86	49	19	401
40	52	67	90	53	15	8	285
35	22	32	43	12	7	3	119
30	16	11	23	10	1		61
25	5	5	4				14
20	5	1	5				11
15	4	1	3				8
10	1						1
Totals	162	254	497	361	328	339	1941

TABLE XXVIII
THE DISTRIBUTION OF SCORES MADE BY HIGH SCHOOL PUPILS
TAKING THE BURTON SOCIAL-SCIENCE-CIVICS TEST, FORM A, PART II

Scores	Grades						Totals
	7	8	9	10	11	12	
45			15	13	15	48	91
40	2	14	38	48	67	108	277
35	16	26	63	91	85	80	361
30	20	45	108	84	79	45	381
25	41	79	90	62	41	37	350
20	36	52	105	41	28	10	272
15	26	25	59	17	11	8	146
10	14	7	15	5	2	3	46
5	6	5	3				14
0	1	1	1				3
Totals	162	254	497	361	328	339	1941

TABLE XXIX
 THE DISTRIBUTION OF SCORES MADE BY HIGH SCHOOL PUPILS
 TAKING THE BURTON SOCIAL-SCIENCE-CIVICS TEST, FORM B

Scores	Grades						Totals
	7	8	9	10	11	12	
120						1	1
115			1	1		11	13
110			4	3	5	23	35
105		1	3	9	12	35	60
100		6	6	18	21	49	100
95	1	5	11	35	37	59	148
90	2	6	22	38	38	42	148
85	7	24	31	46	43	28	179
80	13	26	32	32	30	17	150
75	18	50	31	41	34	13	187
70	31	45	49	34	26	8	193
65	32	77	50	37	16	1	213
60	45	37	37	9	10	4	142
55	63	25	31	15	1	3	138
50	28	9	11	5	2		55
45	16	9	9	2			36
40	5	1	3				9
35	4		3				7
30			4				4
25	2		1				3
20	1						1
15							
10							
0							
Totals	268	321	339	325	275	294	1822
Medians	61.67	70.28	72.09	82.73	87.15	97.62	77.94

TABLE XXX
 THE DISTRIBUTION OF SCORES MADE BY HIGH SCHOOL PUPILS
 TAKING THE BURTON SOCIAL-SCIENCE-CIVICS TEST, FORM B,
 PART I

Scores	Grades						Totals
	7	8	9	10	11	12	
70			3	1	2	21	27
65		3	7	13	24	60	107
60	3	15	25	33	47	88	211
55	12	40	47	77	70	75	321
50	28	65	64	73	63	27	320
45	60	92	66	58	43	13	332
40	86	73	73	44	20	8	304
35	48	26	25	18	4	1	122
30	23	7	14	6	2		52
25	4		8			1	13
20	1		3	2			6
15	2		3				5
10	1		1				2
Totals	268	321	339	325	275	294	1822

TABLE XXXI
 THE DISTRIBUTION OF SCORES MADE BY HIGH SCHOOL PUPILS
 TAKING THE BURTON SOCIAL-SCIENCE-CIVICS TEST, FORM B,
 PART II

Scores	Grades						Totals
	7	8	9	10	11	12	
45			3	2	4	13	22
40		3	10	40	44	82	179
35	6	16	28	61	54	84	249
30	21	44	56	77	74	61	333
25	41	68	65	69	56	31	330
20	67	92	94	48	32	11	344
15	79	69	61	22	8	7	246
10	39	25	20	6	3	4	97
5	14	4	2			1	21
0	1						1
Totals	268	321	339	325	275	294	1822

The Measures of Variability. - Two measures of variability were used for the purpose of comparison. The first was the standard deviation, $\sigma = \sqrt{\frac{FD^2}{n}}$ ⁸; the second was the coefficient of variation, $\frac{-100\sigma}{Av}$ ⁹. The results of the application of these formulas to the data obtained are found in Tables XXXII to XXXIV.

TABLE XXXII

COMPARISON OF THE TESTS IN TERMS OF THEIR MEASURES OF CENTRAL TENDENCY AND VARIABILITY

Grade	Form A			Form B		
	12	12.44	12.41	100.17	10.60	10.60	99.84
11	12.33	13.50	90.33	12.05	14.00	86.02
10	12.61	15.80	79.70	13.97	16.80	83.25
9	15.83	19.52	77.91	15.21	21.39	73.06
8	11.20	15.30	73.16	12.75	17.44	73.11
7	11.45	16.24	70.51	10.75	17.08	62.95

These Tables show the standard deviation for the tests as a whole and for each of their parts, and also the coefficients of variation and the medians for each grade. There are noticeable differences in size of sigma from grade to grade, but there is little difference in their magnitudes for the upper grades taking Form A. These differences are more noticeable in Form B, which seemed to be considerably more difficult than Form A. There is a close agreement of results in terms of the measures of variability for most grades. The large deviations

⁸ Karl Pearson, "Contributions to the Mathematical Theory of Evolution," p. 80. Part I, Philosophical Transactions, A, CLXXXV (1894).

⁹ Ibid., p. 271, A, CLXXXVII (1896).

found in the ninth grade are probably explained by the fact that some schools do not offer civics in the ninth grade, and there does not seem to be the same tendency to accumulate scores near the median in this grade as in the other grades.

TABLE XXXIII
COMPARISON OF PARTS OF THE TESTS IN TERMS OF THEIR
MEASURES OF CENTRAL TENDENCY AND VARIABILITY

Grade	Part I, Form A			Part II, Form A		
	σ	C.V.	Median	σ	C.V.	Median
12	6.61	11.10	59.53	6.40	16.34	39.29
11	7.31	12.12	60.03	6.95	19.56	35.54
10	7.55	14.85	50.84	7.58	23.34	32.48
9	8.70	18.35	47.40	8.69	30.52	28.47
8	7.55	16.37	46.11	7.43	27.58	26.94
7	7.25	17.17	41.22	8.65	34.46	25.10

TABLE XXXIV
COMPARISON OF PARTS OF THE TESTS IN TERMS OF THEIR
MEASURES OF CENTRAL TENDENCY AND VARIABILITY

Grade	Part I, Form B			Part II, Form B		
	σ	C.V.	Median	σ	C.V.	Median
12	7.75	11.99	64.62	7.00	17.56	39.87
11	7.75	12.91	60.03	7.57	22.84	33.14
10	7.83	14.69	53.31	8.03	23.36	34.38
9	8.17	16.92	48.29	9.68	40.17	24.10
8	7.38	15.02	49.14	7.48	30.34	24.65
7	6.80	15.88	42.83	7.38	36.05	20.47

Correlations Between Forms and Parts I and II of the Experimental

Test. - The Pearsonian Product-Moment Method of Correlation was used in all

attempts to show the degree of relationship between any two phases of the data.

The content of the tests was similar, but not exactly alike in details; it was decided to determine this likeness by grades rather than for the entire group, and then to show the relationship between the parts of the tests in the same manner.

The correlations range from .62 to .78 with comparatively small probable errors as shown in Table XXXV.

TABLE XXXV

CORRELATIONS BETWEEN FORMS A AND B OF THE EXPERIMENTAL TESTS

Grade	No. of Cases	r	P. E.
12	227	.75	.0192
11	246	.75	.0186
10	200	.72	.0230
9	357	.78	.0140
8	175	.62	.0309
7	123	.69	.0310

These correlations may be interpreted as showing marked or high reliability. The coefficient of correlation is twenty times as large as the probable error in any grade.

The correlations between the parts of the test show a wider range than those between the entire forms. The correlations between Part I of Form A and Part I of Form B, or between information and information, show a range of from .22 to .88. These correlations may be taken to mean that there is little or

no relationship in the seventh grade to a very high relationship in the twelfth grade. Table XXXVI gives the correlations which show noticeable fluctuations and, probably, significant ones.

TABLE XXXVI
CORRELATIONS BETWEEN FORM A, PART I, AND FORM B, PART I, OF THE
EXPERIMENTAL TESTS

Grade	No. of Cases	r	P. E.
12	220	.88	.0103
11	249	.64	.0254
10	209	.60	.0300
9	356	.67	.0198
8	200	.54	.0338
7	116	.22	.0604

These correlations range from what may be termed high in the twelfth grade to low in the seventh grade. The larger coefficients in the ninth and twelfth grades may be due to the fact that a majority of the students in these two grades were taking civics, economics, problems of democracy, or sociology.

The writer is of the opinion that these variations in the magnitude of the coefficients are not the result of experimental technique, for the correlations between the second part of the test show no extreme variations.

The correlations between Parts II of the test, or between judgment and judgment, do not show as wide a range as found between the first parts of the tests. However, this range is quite notice-

able. The correlations range from .29 in the seventh grade to .64 in the eleventh grade. The twelfth grade correlation fell below that of the eleventh. This probably shows that students who have acquired a mass of facts do not always apply them to solve perplexing problems. The probable error is so large for the seventh grade that the relationship is of little or no value. The other correlations show significant though not high relationships. Table XXXVII shows the relationship of judgments with judgments from grade to grade.

TABLE XXXVII
CORRELATIONS BETWEEN FORM A, PART II, AND FORM B, PART II, OF THE EXPERIMENTAL TESTS

Grade	No. of Cases	r	P. E.
12	241	.62	.0267
11	248	.64	.0254
10	210	.59	.0304
9	357	.59	.0299
8	200	.54	.0338
7	116	.29	.0562

The correlations between Parts I and II of the same forms of the test represent the key problem of this study, that is, what relationship is there between the facts which a student has and the judgments which he will render? The correlations found were not high. The range on Form A was from .40 to .64, and the

correlations ranged from .36 to .62 on Form B. The highest correlations were found in the eleventh grade for both forms of the test. There are indications that instruction and training have noticeable effects on the relationship between information and judgment as was shown by the increase in the coefficients of correlation.

TABLE XXXVIII
CORRELATIONS BETWEEN PARTS I AND II OF FORMS A AND B
OF THE EXPERIMENTAL TESTS

Grade	Form A			Form B		
	No. of Cases	r	P.E.	No. of Cases	r	P.E.
12	318	.59	.0249	346	.60	.0232
11	217	.64	.0268	291	.62	.0244
10	412	.58	.0221	284	.55	.0272
9	478	.50	.0231	373	.50	.0233
8	259	.42	.0545	318	.49	.0300
7	156	.40	.0455	274	.38	.0349

It is obvious that we do not know what facts were being used in rendering judgments with regard to the given situations. The facts in the test may have played an important part, and we are led to believe that they contribute an important part, since the number of facts from grade to grade is increased and there is a noticeable increase in the size of the coefficients of correlation. The median number of facts available, as indicated by tests, increase more than fifty per cent from the seventh to the twelfth grades. The coefficients of correlation increase in about the same ratio. The coefficients of variability also give evidence to

substantiate this belief.

As the grade level increases, the coefficients of variability decrease, there being a decrease of more than fifty per cent from the seventh to the twelfth grade, while the coefficients of variability in information decrease only about twenty-five per cent.

It would be interesting to note what effect the lengthening of the test three times its present length would have on the reliability in the seventh and eleventh grades respectively. By the use of Spearman-Brown¹⁰ formula, we can show this effect.

This is $r_x = \frac{nr}{1 - (n-1)r}$ ¹¹. Substituting in the formula, the value of r for these grades, we find the coefficient for the seventh grade to be .66, while the coefficient for eleventh is .84. It is doubtful whether it should be lengthened at all, since adolescent boys and girls would be tested severely if subjected to even a ninety-minute test.

10

C. Spearman, "Correlation Calculated from Faulty Data," British Journal of Psychology, Vol. III (1910), 290-291.

11

W. Brown, "Some Experimental Results in the Correlation of Mental Abilities," British Journal of Psychology, Vol. III (1910), 299.

The Validity of the Tests.- Validity may be defined in several ways, but, in general, a test is thought to be perfectly valid when it measures exactly what it purports to measure. The most frequently used methods of validating tests (as given in the Second Yearbook of the National Society for the Study of Educational Sociology, 1929, pages 152-155) are:

1. Text-book analysis
2. Correlation with school marks
3. Pooled judgments of competent persons
4. Items selected for right degree of difficulty
5. Social utility
6. Correlation with previously validated measures
7. Logical or psychological analysis
8. An increase in the percentage of successes with successive ages or grades.
9. Empirical try-out
10. Correlation between parts of the test, each part testing for a different feature
11. Analysis of courses of study
12. Determination of social utility by scientific job analysis

Several of the above methods of validation might be used in this study. It has been shown in the description by the various researches dealing with content materials that many concepts or topics were found in civics, economics, sociology, and periodical literature. The analysis of the content of the various courses of study showed that many of the same topics were treated by more than

one subject in the social studies. These criteria furnished the starting points in the validation of the tests; nevertheless, there were other methods used which might be listed as follows:

1. The correlation with school marks in the social studies.
2. The correlation with pooled judgments of teachers as to the students' abilities.
3. The correlation between parts of the test, each part testing for a different feature.
4. The increase of percentage of successes with successive ages or grades.

The chief emphasis as to the validity of the tests is to be placed upon the first two criteria. Nevertheless, the last two criteria might be used as a check on the first two. Kelley says, "Before accepting criterion-correlations as final, we must know the reliability of our criterion."¹² The reliability coefficients of the tests were given in Table XXXV. The writer realizes that grades and teachers' estimates of students' intelligence were subjectively determined, as well as the random selection of the topics from research studies and textbooks for the content of the test. For this reason, several criteria were selected to serve as a check upon one another. The items may be checked separately by Tables XLVII to LI as to validity by the fourth criteria; that

12

T. L. Kelley, "The Reliability of Test Scores," Journal of Educational Research, (1921) Vol. 3, No. 5. p. 370.

is, by the percentage of successes from grade to grade for each item, while the indirect method of correlation between the parts of the tests may be used to test the validity of the parts. These correlations may be found in Table XXXVIII.

The grades in the social studies of five different schools were used in determining the relationship between the scores made on the tests and teachers' marks.

The results of these correlations are given in Table XXXIX.

TABLE XXXIX
CORRELATIONS BETWEEN THE SCORES MADE ON THE EXPERIMENTAL TESTS AND GRADES MADE IN THE SOCIAL STUDIES

Grade	Form A			Form B		
	No. of Cases	r	P.E.	No. of Cases	r	P.E.
12	108	.50	.0506	110	.50	.0469
11	108	.51	.0480	87	.58	.0482
10	131	.43	.0487	135	.47	.0452
9	153	.46	.0430	149	.51	.0420
8	128	.44	.0480	134	.50	.0442
7	82	.26	.0703	78	.27	.0699

The validity, as found by the correlation of test scores with school marks or grades, was low; but these correlations coefficients are representative of those found between

13

between standard intelligence tests and school marks. The correlations between scores made on Part I of the tests and school marks were lower than the correlations between school marks and the entire tests. These correlations may be found in Table XL.

TABLE XL
CORRELATIONS BETWEEN THE SCORES MADE ON PART I OF THE
EXPERIMENTAL TESTS AND GRADES MADE IN THE SOCIAL
STUDIES

Grade	FORM A			FORM B		
	No. of Cases	r	P.E.	No. of Cases	r	P.E.
12	108	.44	.0507	110	.45	.0513
11	88	.39	.0608	87	.45	.0585
10	116	.36	.0552	117	.39	.0527
9	154	.36	.0508	151	.47	.0434
8	113	.39	.0542	117	.28	.0570
7	81	.18	.0749	81	.21	.0724

The correlations between the scores made on Part II and school marks were higher than those between Part I and school marks, with the exception of grade seven, and, in this case, Form B showed .01 higher correlation. The correlations may be considered as low, and those for the seventh grade were too low to be considered as having any validity. There is a higher degree of consistency in the correlations on Part II than on Part I.

13

G. M. Ruch, and G. D. Stoddard, Tests and Measurements in High School Instruction, p. 221. New York: World Book Co., 1927.

TABLE XLI

CORRELATIONS BETWEEN THE SCORES MADE ON PART II OF THE EXPERIMENTAL
TESTS AND GRADES MADE IN THE SOCIAL
STUDIES

Grade	Form A		Form B			
	No. of Cases	r	P. E.	No. of Cases	r	P. E.
12	108	.50	.0539	110	.50	.0482
11	88	.50	.0532	87	.49	.0552
10	116	.43	.0522	117	.48	.0478
9	154	.44	.0512	154	.50	.0414
8	113	.43	.0544	117	.38	.0532
7	81	.16	.0735	79	.22	.0721

Correlations between Teachers' Estimates of Students'

Intellectual Ability and Test Scores. - The revised forms of the test were administered to 300 students in Byrd High School Shreveport, Louisiana. This school used a cumulative system of teacher rating of pupils. To illustrate how the system works, if a student has four teachers who rate him as to ability - A, B, C, and D, respectively, the combined average would be B-. This is done for each pupil at the end of the first semester of each year. By the time a pupil has reached

the twelfth grade, we have three composite ratings from possibly ten or twelve teachers. This method provides for the change of opinion which might occur from time to time on the part of a teacher or several teachers concerning the ability of students - at least we can say that it gives an average of estimates of a student's ability which perhaps is the best single criterion that might be obtained.

The ratings were recorded on the tests as A, B, C, D, and F. The key gives these letters the following values: A = 95 - 100; B = 90 - 94; C = 80 - 89; D = 75-79; and F is below 74. The midpoints of these values were taken as the scores for purposes of correlation, with the exception of F which was scored as 70. The results of the correlations are shown in Table XLII.

TABLE XLII
CORRELATIONS BETWEEN TEACHERS' ESTIMATES OF STUDENTS' INTELLECTUAL ABILITY AND TEST SCORES

Grade	Entire Test		Form A				Entire Test		Form B			
	r	P.E.	Part I		Part II		r	P.E.	Part I		Part II	
12	.72	.051	.70	.054	.74	.048	.76	.045	.71	.052	.73	.050
11	.72	.046	.66	.054	.70	.049	.77	.038	.70	.047	.74	.043
10	.69	.054	.65	.056	.69	.051	.70	.046	.69	.051	.71	.048
9	.64	.059	.60	.068	.65	.060	.66	.058	.62	.062	.68	.054
8	.58	.071	.50	.080	.56	.073	.57	.070	.54	.076	.57	.070
7	.46	.084	.42	.088	.48	.082	.44	.086	.43	.087	.50	.080

These correlations seem to be much more important than those obtained from the tests and grades in the social subjects. The probable error in each case is high because of the small number of students in

each grade, the largest number contained in any one grade being fifty. The correlations ran almost as high as those between the forms of the test. They were fairly consistent throughout all the grades, the noticeable differences being in the first two grades of the junior high school.

The Reliability of the Data. - The reliability of a test is determined by the consistency with which it measures the capacity of those taking it. When the reliability coefficient is 1.00, the test is an absolutely accurate measure of whatever capacity it tests; when the reliability is .00 the test has just no reliability. The lower the reliability coefficient, the less the reliability or consistency of the test as a measuring instrument.

There are factors outside of the test materials that may operate to increase or decrease the reliability of a test. These factors are: 13

1. Variation in the behavior of the examiner.
2. The variation of the examiner as a result of the instructions for giving the test.
3. The variation of pupils themselves.

These factors are outside the control of the test maker, with the exception of the factor of instructions. The instructions on both forms of the test were identical; therefore, this factor should not have operated to produce a degree of unreliability.

13

William A. McCall, How to Measure in Education, pp. 307-308. New York: The Macmillan Company, 1922.

The same forms of the tests, given to pupils after an interval of six weeks, show reliability coefficients of .93 and .91 respectively for Forms A and B. While this self correlation is fairly high, the number of people repeating was very small for any particular grade, and all grades were thrown together making for spurious correlation. There were forty-two people who took Form A twice, and thirty-eight who took Form B twice. No claims are made that a reliability coefficient this large would be obtained from larger numbers; however, it is reasonable to believe that the reliability coefficient would be high, since the correlations between the two forms of the test were .79 with a P.E. of .0101, and .73 with a P.E. of .0128 for the senior and junior high school grades. Although these correlations are not considered high, they may be considered as reliable since the probable errors are so small. By applying Kelley's formula ¹⁵ for the index of reliability, $r_{\text{obt. true}} = \frac{r}{\sqrt{1 - r^2}}$, we find that the coefficient of .79 has a maximum value of .8888, and the coefficient of .73 has a maximum value of .8544. These indexes of reliability are somewhat lower than those obtained by self correlation of the tests, using small numbers. This variation is probably due to the fact that the content of the two forms of the tests is not the same, and especially is this true of Part II of the tests.

Applying the probable error of measurement formula, $P.E._m = 6745 \sigma \sqrt{1 - r^2}$, to the obtained coefficients, we find

¹⁵ T. L. Kelley, "A Simplified Method of Using Scaled Data for Purposes of Testing," School and Society, Vol. IV (1916), 34, 71.

$P. E. _m = .6745 \times 14.05 \sqrt{1 - .79}$ which, by clearing, we get

$P. E. _m = 4.01$. Garret says: "We may interpret this result (PE_m) to mean that the chances are even that the true score of any individual in the group falls within the range, obtained score 4.01." 15

For a given obtained score of 100, the chances are even that the true score would fall within the limits of 95.99 - 104.01. Applying this same formula to the coefficient of correlation obtained for the junior high school, we find $P.E._m$ equals 5.12, which is somewhat less reliable than for the senior high school.

The above formula might be applied to the correlations found for each grade, as given in Table XXXIX; however, it was not thought best to use this particular formula since there were noticeable variations in the size of the standard deviations. The following formulas were used to test the accuracy of the measures:

$$1. \quad m = \frac{(\sigma_1 + \sigma_2)}{2} \sqrt{1 - r_{12}}$$

$$2. \quad P. E. _m = 6745K \left(\frac{(\sigma_1 + \sigma_2)}{2} \right) \sqrt{1 - r_{12}}$$

$$3. \quad \frac{P. E. _m}{Av} \quad , \quad \text{and}$$

$$4. \quad \frac{P. E. _m}{\sigma}$$

The results of the application of formulas 1, 2, 3, and 4 to the various phases of the data are found in Tables XLIII to XLVI in-

15

H. E. Garrett, Statistics in Psychology and Education, p. 275. New York: Longmans, Green and Company, 1926.

clusive. These results may be interpreted in the same way for the data given in all Tables mentioned above. We see that the correlations are for the same forms and grades, and the standard deviations are reduced to a single base by the formula. Consequently, the standard and probable errors of the measures become identical; however, by applying formulas 3 and 4, we can reduce the measures to ratios which are directly comparable.

We may interpret the $\sigma_{(m)}$ (3.50) of a given score of 100 in the following manner:

The chances are 68 in 100 that the obtained score of 100 does not diverge from the true score more than 3.5. Stated in another way, the chances are 68 in 100 that the true score lies within the limits 96.5 and 103.5. We can be practically certain that the true score will fall somewhere within the limits of $100 \pm 3(3.5)$.

Using the same score (100) and substituting P. E. $_m$, we can say:

The chances are 1:1 that the true score of a pupil making this score lies between $100 - 3.5$ and $100 + 3.5$; i.e., between 96.5 and 103.5.

The chances are about 4:1 that the true score lies between $100 - 2(3.5)$ and $100 + 2(3.5)$; i.e., between 93 and 107.

The chances are approximately 24:1 that the true score lies between $100 - 3(3.5)$ and $100 + 3(3.5)$; i.e., between 89.5 and 110.5.

If we take formula $\frac{P.E._{(m)}}{\text{median}}$ and substitute the score 100 for the median using the P. E. $_{(m)}$ (3.5), we will have $\frac{3.5}{100}$ which gives

a ratio of .035. The obtained ratios, as given in Table XLIII, range from .03 to .06, which Odell considers as being satisfactory, or the smallest ratios as being among the best.¹⁶

By taking the ratio of the standard deviation to the P. E._m, we have ratios ranging from .28 to .44. These ratios may be interpreted as being fairly high. The chances are about 1:1 that the obtained score differs from the true score by an amount not greater than the obtained ratio for that given grade when applied to the obtained standard deviation.¹⁷

These measures of reliability are satisfactory for group measurement, but are not recommended for individual measures. Since all discussions of the data are in terms of group action, the measures are sufficiently reliable for the interpretation of these actions.

TABLE XLIII

THE STANDARD AND PROBABLE ERRORS OF THE MEASURES AS DETERMINED BY THE COEFFICIENTS OF CORRELATION, FORMS A AND B

Grades	r	$\sigma_{(m)}$	P. E. _(m)	$\frac{P. E. (m)}{Av}$	$\frac{P. E. (m)}{\sigma}$
12	.75	5.76	3.88	.04	.31
11	.75	5.59	3.42	.03	.27
10	.72	7.03	4.85	.06	.38
9	.78	7.23	4.85	.06	.31
8	.62	7.37	4.97	.06	.44
7	.69	6.17	4.39	.06	.39
#B					
12	.75	5.76	3.88	.03	.36
11	.75	5.59	3.42	.03	.28
10	.72	7.03	4.85	.05	.34
9	.78	7.23	4.85	.06	.31
8	.62	7.37	4.97	.06	.38
7	.69	6.17	4.39	.06	.40

#B stands for the data which accrued from Form B of the test

¹⁶ C. W. Odell, Educational Measurement in High School, pp.64-65. New York: The Century Company, 1929.

¹⁷ G. M. Ruch and G. D. Stoddard, Test Measurements in High School Institutions, p. 309. New York: World Book Company, 1927.

Table XLIII may be read in the following manner: The first column gives the grades taking both forms of the test; the second, the coefficients of correlations between the two forms of the test; the third, the standard error of the scores; the fourth, the probable error of the score; the fifth, the probable error in terms of the ratio to the median; and the sixth, the probable error in terms of the ratio to the standard deviation. Tables XLIV to XLVI may be read in the same way.

TABLE XLIV

THE STANDARD AND PROBABLE ERRORS OF THE MEASURES AS DETERMINED BY THE COEFFICIENTS OF CORRELATION BETWEEN FORMS A AND B OF PART I OF THE TESTS - INFORMATION

Grades	r	σ	P. E. (m)	$\frac{P. E. (m)}{Av}$	$\frac{P. E. (m)}{\sigma}$
12	.88	2.25	1.52	.02	.37 ^{A*}
11	.64	3.65	2.46	.04	.32
10	.60	5.18	2.14	.03	.26
9	.67	5.45	3.68	.07	.37
8	.54	5.14	3.47	.07	.48
7	.22	6.37	4.29	.09	.62
B#					
12	.88	2.25	1.52	.02	.25
11	.64	3.65	2.46	.04	.37
10	.60	5.18	2.14	.03	.25
9	.67	5.45	3.68	.07	.40
8	.54	5.14	3.47	.04	.43
7	.22	6.37	4.29	.10	.50

* A Form of the experimental test

B Form of the experimental test

TABLE XLV

THE STANDARD AND PROBABLE ERRORS OF THE MEASURES AS DETERMINED BY THE COEFFICIENTS OF CORRELATION BETWEEN FORMS A AND B OF PART II OF THE TESTS - JUDGMENT

Grades	r	σ (m)	P. E. (m)	$\frac{P.E. (m)}{Av}$	$\frac{P.E. (m)}{\sigma}$
12	.62	4.38	2.95	.04	.40
11	.64	4.37	2.95	.08	.41
10	.59	4.66	3.14	.09	.40
9	.56	6.03	4.07	.14	.48
8	.54	4.61	3.11	.11	.47
7	.29	5.98	4.03	.14	.56
					A*
12	.62	4.38	2.95	.08	.44
11	.64	4.37	2.95	.09	.41
10	.59	4.66	3.14	.10	.46
9	.56	6.03	4.07	.16	.41
8	.54	4.61	3.11	.13	.43
7	.29	5.98	4.03	.22	.56
					B#

* A Form of the experimental test

B Form of the experimental test

(Table XLVI follows)

TABLE XLVI

THE STANDARD AND PROBABLE ERRORS OF THE MEASURES AS DETERMINED BY THE COEFFICIENTS OF CORRELATION BETWEEN PARTS I AND II OF FORMS A AND B

Grades	r	σ (m)	P. E. (m)	P. E. (m) Av	P. E. (m) σ
					P. I
12	.59	4.16	2.80	.04	.42
11	.64	4.28	2.89	.04	.39
10	.58	4.90	3.30	.06	.43
9	.50	6.14	4.14	.08	.47
8	.42	5.70	3.84	.08	.50
7	.40	6.15	4.14	.10	.57
					P. II
12	.59	4.16	2.80	.07	.43
11	.64	4.28	2.89	.08	.41
10	.58	4.90	3.30	.10	.43
9	.50	6.14	4.14	.14	.47
8	.42	5.70	3.84	.14	.51
7	.40	6.15	4.14	.16	.47
					P. I. B.
12	.60	4.65	3.14	.04	.40
11	.62	4.71	3.17	.05	.41
10	.55	5.31	3.58	.06	.45
9	.50	6.30	4.26	.08	.52
8	.49	5.30	3.57	.07	.48
7	.38	5.58	3.76	.08	.55
					P. II. B.
12	.60	4.65	3.14	.07	.44
11	.62	4.71	3.17	.09	.41
10	.55	5.31	3.58	.10	.44
9	.50	6.30	4.26	.16	.44
8	.49	5.30	3.57	.14	.47
7	.38	5.58	3.76	.18	.40

Key: P. I. is for Part I, Form A, and P. I. B. is for Part I, Form B; parts one and two of both forms were correlated with each other.

TABLE XLVII
 THE RELIABILITY OF THE MEDIANS AS SHOWN
 BY THE PROBABLE ERROR FOR FORMS A AND B

Grades	Form A		Form B	
	Medians	P. E.	Medians	P. E.
P.I*				
12	59.53	.55	64.62	.64
11	60.03	.58	60.03	.62
10	50.84	.67	53.31	.68
9	47.40	.57	48.29	.54
8	46.11	.63	49.14	.69
7	41.22	.80	42.83	.73
P.II*				
12	39.29	.53	39.87	.58
11	35.54	.55	33.14	.60
10	32.48	.67	34.38	.70
9	28.47	.57	24.10	.64
8	26.94	.60	24.65	.69
7	25.10	.97	20.47	.82
P.III*				
12	100.17	1.03	99.84	.87
11	90.33	.96	86.02	.95
10	79.70	1.11	83.25	1.23
9	77.91	1.03	73.06	.99
8	73.16	1.05	73.11	1.20
7	70.51	1.29	62.95	1.20

* P.I shows the medians and probable errors for Part I of Forms A and B of the test, P.II those for Part II, and P.III those for the entire test.

The reliability of the medians in the above Table were determined by the formula, given by Gregory¹⁸, which is $O_{ma} = \frac{5}{4} \times \frac{O_{dis.}}{\sqrt{n}}$. We may interpret the probable errors in this way: For any given median,

¹⁸ C. A. Gregory and O. M. Renfrow, Statistical Method in Education and Psychology, p. 112. Cincinnati: C. A. Gregory Company, 1929.

the chances are 50 in 100 that the true median does not differ from the obtained median by more than the distance equal to the probable error, either in the positive or negative direction. We may be practically certain that the true median falls within the limits obtained by multiplying the probable error by four, if we subtract and add this sum to the obtained median.

The size of the probable error is fairly large, but the range would not be so great between any obtained median and the true median in Parts I and II of the tests, although the range would be quite large for the whole of either test.

The medians of the eighth and ninth grades are almost identical in Form B, although there are noticeable differences in the other form. It was not thought necessary to compare the medians as to their true differences, since the forms of the test were not equated for this experiment, and also since the ratios were given in Tables XLIII to XLVI.

The obtained medians were not taken from the entire distribution, but from the correlation Tables. It was thought that they would be more comparable because they were obtained from the same individuals on both forms of the experimental test.

An Attempt to Improve the Reliability Coefficients. -

After finding the reliability coefficients for the junior high school grades to be low, it was decided to check for guessing. The scores for the seventh and ninth grades were checked by the two formulas, R - W and

$S = R - \frac{W}{(n-1)}$. The corrected scores for the two forms were then correlated, and the coefficients were increased .03 for the seventh grade and .01 for the ninth. It was decided that this improvement did not warrant the necessary work required.

The forms were equated and administered to 150 students in the same school. The reliability coefficients were .83 and .88 respectively for the junior and senior high school grades. The number of students included in this experiment does not warrant making any claim that the coefficients would be this high for larger numbers. Nevertheless, it is reasonable to believe that there would be no great change in the size of the coefficients when larger numbers are used.

The Variability of Student Responses from Grade to Grade. -

In order to compare the results of one grade directly with those of another grade, it was decided to analyze the tests grade by grade. This was done by the "Proportion - of Pupils - Solving Method." ²⁰ This method was not used with the intention of equalizing the problems or situations, but rather as a means of direct comparison of results for each given item or situation, and to equate the forms of the test.

The tests were arranged according to rank order, then beginning with the highest score and taking every other test paper until the last paper was reached. This gave the sampling which was

²⁰ C. A. Gregory, Fundamentals of Educational Measurement, pp. 206-211. New York: D. Appleton and Company, 1924.

used in the analysis. The same was done for all grades, with the exception of the seventh, which was so small it was taken in its entirety.

The results of this procedure are found in Tables XLVII to LI. The test items are to be found in close proximity, i.e., when possible the items are placed opposite the Tables, and the reader may examine the results for any given situation or item for any grade.

SOCIAL INTELLIGENCE TEST

Prepared by W. H. BURTON

EXAMINATION: FORM A

For grades 7 to 12, inclusive

Published by C. A. Gregory Company, 345 Calhoun Street
Cincinnati, Ohio

Score:.....
Part I:.....
Part II:.....
Total:.....

Do not open this paper until you are told to do so. Fill these blanks, giving your name, age, grade, etc. Write plainly.

Name.....

Age last birthday.....years. Grade or class.....

School.....City.....

Teacher.....Date of this examination.....

How many semesters (including the present) have you studied:

Civics?..... United States History?..... American History?.....

Ancient History?..... European History?..... English History?.....

Geography?..... Commercial Geography?..... Physical Geography?.....

Economics?..... Problems of Democracy?..... Sociology?.....

DIRECTIONS

The purpose of this test is to determine your social intelligence and reasoning ability concerning certain social facts and situations. The test consists of two parts. In the first part, there are a number of true and false statements. If the statement is true, place a circle around the letter "T". If the statement is false, place a circle around the letter "F."

The following example will make this clear:

F. All persons born or naturalized in the United States are citizens of the United States.

The statement is true, hence we have placed a circle around the letter "T."

When you have completed Part I, go immediately to Part II. This part consists of a group of situations with a number of answers, but there is only one correct answer. You are to select the best answer according to the way you interpret the situation. Here is an example of a situation like those found in the test:

The government has, in recent years, attempted to control and regulate certain labor and industrial problems. Which of the following do you think is a proper field for state inspection and control?

- a. Hours of labor and working conditions such as sanitation, safety, and the morals about the factory or workshops.
- b. Wages to be paid.
- c. The hiring and discharging of workers.

This situation has been marked correctly by placing a cross (X) before Part "a" which is the correct answer. You are to mark the correct answers to the situations in Part II of the test in the same way. Work as rapidly as possible but not so rapidly that you do not have time to get the situations clearly in mind. If you come to a situation in part which you cannot answer, do not spend too much time on it but go on to the next.

After the signal is given to start, allow 45 minutes for test.

PART I. SOCIAL INFORMATION

Put a circle around the letter "T" if the statement is true and a circle around the letter "F" if the statement is false.

- T F 1. Advertising has done but little to promote trade.
- T F 2. Laws prohibiting divorce will not improve society.
- T F 3. The capitalistic system is the present method of production in this country.
- T F 4. All sections of our country agree on the purpose and kind of tariff which we shall have.
- T F 5. American manufacturers of rubber goods own most of the world's crude rubber supply.
- T F 6. Democracy is impossible in a large nation, because literally, rule by the people can only be carried out in small communities.
- T F 7. Immigrants from southern Europe can be and have been easily assimilated by the citizens of the United States.
- T F 8. Labor unions prefer open shops to closed ones.
- T F 9. The farmers are not the richest and most progressive group in American society.
- T F 10. Environment plays a large part in determining what an individual may become in society.
- T F 11. There is no phase of state government over which the national government is not supreme.
- T F 12. Amendments to the federal constitution are made nearly every year.
- T F 13. The political caucus is a common method of nominating state and national officials.
- T F 14. The recall is a method used by the public in some states to remove undesirable people from public office.
- T F 15. State constitutions were not made by the federal government.
- T F 16. The chief function of the Interstate Commerce Commission is to buy and sell goods.
- T F 17. Radicals in politics are people who have extreme views about the common social practices.
- T F 18. Freedom of speech should never be questioned by the authorities at any time.
- T F 19. A ballot is a printed ticket used in voting.
- T F 20. America has relatively few divorced people.
- T F 21. The size of the American family tends to increase.
- T F 22. Practically 95% of the legal voters in the United States go to the polls and vote when the opportunity is given.
- T F 23. Collective bargaining means the organization of a group of people to secure better economic returns.
- T F 24. American democracy operates on the principle that the majority is supreme.
- T F 25. All corporations must be chartered by the state or national government.
- T F 26. Most of the taxes levied by the United States government are not direct taxes.
- T F 27. The boycott is a weapon used by capital to enforce its demands against labor.
- T F 28. The American public is constantly seeking more and better recreation.
- T F 29. The act of working together voluntarily for a desired end is cooperation.
- T F 30. Income tax is a general property tax.
- T F 31. The present trend in national migration is to the farm.
- T F 32. America produces most of the world's oil supply.
- T F 33. "Concentration of industry" and "Integration of industry" mean the same.
- T F 34. The enforcement of law is determined more by public opinion than by the fact that a law is written on the statute books.
- T F 35. Perhaps the greatest objection to immigrants coming to our country is caused by their ignorance of American customs and standards of life.
- T F 36. The Russian government is operated according to the wishes of the great masses of the people.
- T F 37. Public opinion is usually the expression of the public's wishes in regard to important issues and problems.

TABLE XLVIII
 PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
 STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I,
 FORM A

Item	7	8	9	10	11	12	
1. C	77.34	90.00	95.33	96.67	93.65	96.03	*
f	21.33	9.33	4.67	3.33	6.35	3.97	
o	1.33	.67					
2. C	57.34	46.67	49.34	46.66	48.43	57.17	
f	40.66	51.33	49.33	52.67	23.80	42.04	
o	2.00	2.00	1.33	.67	27.77	.79	
3. C	53.33	52.67	59.33	65.33	73.82	80.96	
f	36.00	36.00	30.67	28.00	23.80	15.87	
o	10.67	11.33	10.00	6.67	2.38	3.17	
4. C	42.67	63.34	68.67	68.00	82.55	85.72	
f	54.66	36.00	30.00	30.67	16.66	13.49	
o	2.67	.67	1.33	1.33	.79	.79	
5. C	48.67	56.66	61.33	58.00	65.09	73.82	
f	50.00	42.67	36.67	41.33	34.12	26.18	
o	1.33	.67	2.00	.67	.79		
6. C	25.34	24.67	24.66	22.67	31.76	16.71	
f	68.66	71.33	70.67	77.33	68.24	82.50	
o	6.00	4.00	4.67			.79	
7. C	30.67	38.00	41.33	33.33	49.21	54.77	
f	61.33	54.00	52.67	60.00	49.20	38.88	
o	8.00	8.00	6.00	6.67	1.59	6.35	
8. C	44.67	42.67	49.33	44.00	46.05	68.26	
f	52.66	54.00	50.00	55.33	53.16	30.95	
o	2.67	3.33	.67	.67	.79	.79	
9. C	70.67	78.00	81.33	76.00	84.92	84.93	
f	29.33	20.67	18.00	23.33	15.08	14.28	
o		1.33	.67	.67		.79	
10. C	64.00	68.67	86.00	92.67	94.45	95.24	
f	25.33	24.00	13.33	6.00	4.76	4.76	
o	10.67	7.33	.67	1.33	.79		

*Key: The correct responses are indicated by capital letters; other letters represent false statements, and o indicates omitted answers. This key may be used for Tables XLVII to LI.

TABLE XLVIII (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I, FORM A

Item	Grades					
	7	8	9	10	11	12
11. C	38.00	45.33	32.00	32.67	48.42	53.19
f	56.00	50.00	62.00	65.33	49.99	46.02
o	6.00	4.67	4.00	2.00	1.59	.79
12. C	56.67	73.34	68.00	69.33	84.93	94.45
f	38.66	25.33	50.67	30.67	14.28	4.76
o	4.67	1.33	1.33		.79	.79
13. C	29.34	41.33	39.33	41.33	49.22	43.29
f	55.33	48.67	52.00	48.67	48.40	51.16
o	15.33	10.00	8.67	10.00	2.38	5.55
14. C	58.01	58.00	74.00	74.00	76.99	78.58
f	32.66	31.33	20.00	23.33	20.63	19.04
o	9.33	10.67	6.00	2.67	2.38	2.38
15. C	34.00	57.33	58.00	76.00	76.70	90.48
f	60.00	40.67	38.67	24.00	23.01	8.73
o	6.00	2.00	3.33		.79	.79
16. C	18.00	58.00	62.00	56.00	74.61	89.69
f	75.33	42.00	36.67	42.67	23.80	9.52
o	6.67		1.33	1.33	1.59	.79
17. C	42.67	49.33	59.34	70.00	78.57	85.72
f	41.33	36.00	31.33	27.33	19.84	14.28
o	16.00	14.67	9.33	2.67	1.59	
18. C	41.01	49.33	54.67	52.00	60.33	69.85
f	53.66	48.67	42.00	45.33	39.67	29.36
o	5.33	2.00	3.33	2.67		.79
19. C	75.33	92.00	94.67	98.67	99.21	96.83
f	22.00	6.67	5.33	1.33	.79	3.17
o	2.67	1.33				
20. C	80.00	82.67	89.33	94.67	94.45	95.24
f	17.33	15.33	10.00	5.33	5.55	2.38
o	2.67	3.00	.67			2.38
21. C	18.67	33.33	26.00	50.00	67.46	71.43
f	76.66	64.67	62.00	46.33	30.95	28.57
o	4.67	2.00	2.00	.67	1.59	

TABLE XLVIII (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I, FORM A

Item	Grades					
	7	8	9	10	11	12
22. C	24.01	34.00	52.66	58.66	65.09	77.79
f	71.32	64.67	46.67	40.67	34.91	21.42
o	4.67	1.33	.67	.67		.79
23. C	48.67	54.67	50.66	75.33	79.37	95.24
f	38.66	34.00	46.67	20.67	18.25	.79
o	12.67	11.33	2.67	4.00	2.38	3.97
24. C	68.67	72.67	70.67	80.00	84.13	86.51
f	23.33	21.33	24.00	18.00	15.08	12.70
o	8.00	6.00	5.33	2.00	.79	.79
25. C	72.76	80.00	89.34	83.34	84.92	93.65
f	21.33	17.33	9.33	15.33	15.08	6.35
o	6.00	2.67	1.33	1.33		
26. C	48.01	52.00	59.34	54.67	63.50	60.33
f	48.66	46.00	37.33	44.00	34.91	39.67
o	3.33	2.00	3.33	1.33	1.59	
27. C	50.67	56.67	59.34	56.00	51.59	51.60
f	40.66	40.00	35.33	42.67	44.44	48.40
o	8.67	3.33	5.33	1.33	3.97	.79
28. C	86.67	90.00	95.33	96.67	96.83	99.21
f	8.00	10.00	4.00	3.33	3.17	.79
o	5.33		.67			
29. C	87.33	85.33	87.33	91.33	97.62	94.45
f	8.00	10.67	10.00	8.67	2.38	5.55
o	4.67	4.00	2.67			
30. C	42.00	53.34	55.33	64.67	76.20	83.34
f	55.33	45.33	44.67	35.33	23.80	16.66
o	2.67	1.33				.79
31. C	50.00	57.33	65.33	79.33	83.34	93.66
f	38.00	34.67	28.00	18.67	15.87	5.55
o	12.00	8.00	6.67	2.00	.79	.79
32. C	71.33	80.00	82.67	78.67	88.01	81.75
f	26.00	16.67	15.33	20.00	11.90	16.66
o	2.67	3.33	2.00	1.33	.79	1.59

TABLE XLVIII (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM A

Item	Grades					
	7	8	9	10	11	12
33. C	71.33	66.00	75.33	86.00	78.58	74.61
f	18.00	24.00	12.67	10.67	16.66	19.04
o	10.67	10.00	12.00	3.33	4.76	6.35
34. C	65.33	58.00	64.00	68.00	78.58	74.61
f	26.00	36.00	32.67	37.33	19.04	25.39
o	8.67	6.00	3.33	4.67	2.38	
35. C	34.00	75.34	61.33	70.00	79.37	73.82
f	32.00	21.33	38.67	29.33	19.84	26.18
o	4.00	3.33		.67	.79	
36. C	48.67	54.67	56.00	58.00	55.56	70.64
f	47.33	40.00	41.33	40.67	42.85	26.98
o	4.00	5.33	2.67	1.33	1.59	2.38
37. C	72.67	79.34	88.00	88.67	88.89	96.04
f	18.00	17.33	9.33	10.00	10.32	3.17
o	9.33	3.33	2.67	1.33	.79	.79
38. C	73.33	77.33	93.33	84.66	84.93	94.45
f	22.00	20.67	2.67	12.67	14.28	4.76
o	4.67	2.00	4.00	2.67	.79	.79
39. C	57.34	50.00	58.00	64.00	76.11	78.58
f	36.66	47.33	34.00	34.67	23.80	19.04
o	6.00	2.67	8.00	1.33	.79	2.38
40. C	49.33	66.00	68.00	57.33	57.95	74.61
f	46.00	34.00	30.67	42.67	41.26	24.60
o	4.67		1.33		.79	.79
41. C	80.66	86.00	90.67	90.00	96.03	96.83
f	12.67	12.67	7.33	9.33	3.97	3.17
o	6.67	1.33	2.00	.67		
42. C	46.67	60.67	67.34	76.00	72.22	80.95
f	44.00	38.00	29.33	24.00	26.19	17.46
o	9.33	1.33	3.33		1.59	1.59

TABLE XLVIII (Cont.)
 PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
 STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
 FORM A

Item	Grades					
	7	8	9	10	11	12
43. C	43.35	48.00	44.00	48.67	46.84	62.71
f	51.32	50.00	53.33	50.00	53.16	37.29
o	5.33	2.00	2.67	1.33		
44. C	71.33	74.00	82.00	86.66	92.07	94.45
f	24.00	22.67	17.33	12.67	7.93	4.76
o	4.67	3.33	.67	.67		.79
45. C	30.01	40.66	66.00	60.67	61.91	73.82
f	64.66	56.67	49.33	37.33	36.50	25.39
o	5.33	2.67	4.67	2.00	1.59	.79
46. C	44.01	47.34	59.34	63.34	75.40	73.81
f	39.33	39.33	29.33	32.66	23.01	24.60
o	16.66	13.33	11.33	4.00	1.59	1.59
47. C	44.00	72.67	79.23	89.33	90.48	96.03
f	49.33	27.33	19.33	10.67	9.52	3.97
o	6.67		1.33			
48. C	79.33	82.00	92.66	94.00	97.62	97.62
f	18.00	17.33	6.67	6.00	2.38	2.38
o	2.67	.67	.67			
49. C	42.01	42.00	45.34	62.00	73.02	74.61
f	42.66	48.00	45.33	33.33	22.22	25.39
o	15.33	10.00	9.33	4.67	4.76	5.55
50. C	52.00	57.33	63.34	66.00	85.73	85.72
f	33.33	30.67	27.33	28.00	11.10	7.14
o	14.67	12.00	9.33	6.00	3.17	7.14
51. C	42.00	51.33	56.67	69.33	76.99	63.02
f	50.00	44.67	42.00	28.67	22.22	35.39
o	8.00	4.00	1.33	2.00	.79	1.59
52. C	72.00	62.00	72.66	76.66	84.13	87.30
f	21.33	32.67	24.67	22.67	14.28	12.70
o	6.67	5.33	2.67	.67	1.59	
53. C	69.34	81.34	80.00	82.00	92.07	94.45
f	20.66	13.33	14.00	16.00	7.14	4.76
o	10.10	5.33	6.00	2.00	.79	.79

TABLE XLVIII (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM A

Item	Grades					
	7	8	9	10	11	12
54. C	48.00	91.67	64.00	70.66	76.20	77.79
f	40.00	4.33	33.33	28.67	23.80	21.42
o	12.00	4.00	2.67	.67		.79
55. C	50.00	59.33	67.34	66.66	77.78	85.72
f	40.00	34.00	29.33	30.67	29.63	13.49
o	10.00	6.67	3.33	2.67	1.59	.79
56. C	26.67	50.00	50.00	50.67	61.12	79.27
f	66.66	48.00	48.67	49.33	38.09	20.63
o	6.67	2.00	1.33		.79	
57. C	81.33	82.67	94.00	94.66	94.45	96.83
f	16.00	14.00	4.00	4.67	4.76	2.38
o	2.67	3.33	2.00	.67	.79	.79
58. C	70.67	80.00	83.33	96.00	93.86	91.27
f	25.33	18.00	16.00	4.00	6.35	8.73
o	4.00	2.00	.67		.79	
59. C	38.01	45.33	59.33	50.00	50.81	61.91
f	43.33	42.00	40.67	40.00	43.64	34.12
o	18.66	12.67		10.00	5.55	3.97
60. C	30.68	36.67	92.66	44.00	53.18	81.75
f	46.66	52.00	10.67	50.67	42.06	18.25
o	22.66	11.33	6.67	5.33	4.76	.79
61. C	19.34	17.33	16.00	16.00	26.20	40.49
f	73.99	80.00	83.33	84.00	73.80	59.51
o	6.67	2.67	.67			
62. C	84.67	86.66	76.00	75.34	83.34	92.86
f	11.33	12.67	23.33	23.33	16.66	7.14
o	4.00	.67	.67	1.33		
63. C	13.34	56.00	55.33	57.34	73.82	80.17
f	77.99	43.33	42.67	41.33	25.39	19.04
o	8.67	.69	2.00	1.33	.79	.79
64. C	88.34	60.67	64.67	60.00	66.67	80.96
f	4.33	37.33	34.00	40.00	33.33	19.04
o	7.33	2.00	1.33			

TABLE XLVIII (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I FORM A

Item	Grades					
	7	8	9	10	11	12
65. C	42.68	59.33	60.00	70.66	74.61	77.78
f	44.66	24.00	36.00	28.67	25.39	19.84
o	12.66	6.67	4.00	.67		2.38
66. C	59.34	66.00	75.33	79.33	88.09	88.10
f	28.66	24.67	22.00	16.67	10.32	11.11
o	12.00	9.33	2.67	4.00	1.59	.79
67. C	44.00	34.67	50.00	53.33	61.91	67.46
f	40.00	56.00	45.33	44.67	34.12	28.57
o	16.00	9.33	4.67	2.00	3.97	3.97
68. C	39.34	80.66	44.67	53.33	59.54	72.22
f	51.99	12.67	50.00	44.67	39.67	26.19
o	8.67	6.67	5.33	2.00	.79	1.59
69. C	68.00	70.66	69.34	72.00	79.37	73.02
f	24.00	25.33	27.33	26.00	20.63	26.98
o	8.00	4.00	3.33	2.00		
70. C	54.67	70.66	76.00	74.63	80.96	92.48
f	36.00	26.67	23.33	24.67	19.04	9.52
o	9.33	2.67	.67	.67		
71. C	57.34	63.33	60.67	65.33	65.09	77.78
f	33.33	32.67	37.33	32.67	32.53	20.63
o	4.67	4.00	2.00	2.00	2.38	1.59
72. C	55.34	53.33	51.33	64.00	63.50	72.23
f	32.66	36.00	42.00	32.67	34.91	27.77
o	12.00	10.67	6.67	3.33	1.59	
73. C	54.01	71.34	77.33	69.34	77.79	84.13
f	30.66	25.33	18.00	27.33	21.42	14.28
o	15.33	3.33	4.67	3.33	.79	1.59
74. C	69.34	72.00	42.66	76.00	68.26	75.40
f	22.66	22.67	30.00	22.00	29.36	23.01
o	8.00	5.33	4.67	2.00	2.38	1.59
75. C	74.67	78.67	82.67	80.67	81.75	80.16
f	18.00	17.33	15.33	17.33	17.46	19.84
o	7.33	4.00	2.00	2.00	.79	
76. C	72.67	73.34	88.00	84.67	84.13	91.28
f	16.66	21.33	10.00	14.00	13.49	7.93
o	10.67	5.33	2.00	1.33	2.38	.79

- T F 38. Conservation means the preservation of our human and natural resources.
- T F 39. Child labor is detrimental to organized labor.
- T F 40. The education of our citizens is supported and carried on entirely by local governments.
- T F 41. Workingmen's Compensation Acts are laws providing for a part payment of wages or salaries to persons who are injured in industry.
- T F 42. Mob law may be perfectly right and justified when courts are slow in punishing criminals.
- T F 43. Most laws passed by state legislatures must be referred to the people for approval or rejection.
- T F 44. Public opinion plays a large part in democratic government.
- T F 45. The influence of rural churches is gaining rapidly in this country.
- T F 46. It is a well known economic law that supply varies directly with demand.
- T F 47. Immigrants, upon their arrival in our country, usually locate in the rural sections of the country.
- T F 48. Immigrant labor has usually been cheaper than native American labor.
- T F 49. The present system of production is known as mass methods.
- T F 50. Carl Marx is looked upon as the father of modern socialism.
- T F 51. Military preparedness means that all men should have military training without regard to other activities.
- T F 52. The American Legion is an organization to which ex-service people may belong.
- T F 53. Present business organization tends towards huge corporations.
- T F 54. Equality of opportunity in education is the same in all states of the Union.
- T F 55. In democratic government there is always a low crime rate.
- T F 56. The amount a person wastes is none of society's business, if the person can afford it.
- T F 57. The Supreme Court of the United States is the highest tribunal of the nation.
- T F 58. In general, ignorance of the law does not excuse an individual who violates it.
- T F 59. The fundamentalists are probably the best informed people we have on biology and the origins of animal and plant life.
- T F 60. Monopolies are created in big business to promote the interests of the buying public.
- T F 61. The price of food and clothing vary from year to year but the value of the American dollar remains constant.
- T F 62. The United States government makes no attempt to control or regulate the business of the railroads.
- T F 63. The United States is a member of the League of Nations.
- T F 64. All banks are supervised by the Federal government.
- T F 65. Aliens generally enjoy all civil rights, but not the political rights, of our government.
- T F 66. The consumer and buying public are affected by the high taxes which industries pay on their equipment.
- T F 67. The socialistic program maintains that all instruments of production should be owned by the state.
- T F 68. All state revenues are derived from a general property tax.
- T F 69. The state governments attempt to control and regulate working conditions in industry.
- T F 70. Civil service employees usually do not work for individuals.
- T F 71. Rents received from land do not affect the income tax of land owners.
- T F 72. Middlemen are essential to the welfare of modern industry.
- T F 73. Arbitration means the settlement of disputes between two parties by a disinterested party or parties.
- T F 74. The government makes no effort to control any phase of price-fixing dealing with modern industry.
- T F 75. Since about 1880, the government has taken a less active part in the regulation and control of big business.
- T F 76. There is no difference between natural and legal monopolies.

PART II. JUDGMENT IN SOCIAL SITUATIONS

Read the paragraphs carefully and put a cross (X) before the answer you think is correct.

- 1.—The population of the United States consists of people of many races, including white, red, black and yellow. Yet, all of these people are Americans. A member of the white race living in a mixed group should, in dealing with other races, assume an attitude:
 -a. of superiority.
 -b. of open-mindedness.
 -c. of doubt and distrust.

- 2.—Our great state papers such as the Bill of Rights, the Declaration of Independence, Constitution of the United States, and Washington's Farewell Address should be:
 -a. studied in school primarily to discover their defects.
 -b. studied in school primarily to discover their virtues.
 -c. largely ignored in favor of more recent problems of vital interest.

- 3.—The best reason for passing immigration laws is:
 -a. to exclude those who work more cheaply than native American labor.
 -b. to exclude illiterates and those who would have great difficulty in reaching our social, economic and moral standards.
 -c. because our nation is already thickly populated and more citizens would make life more difficult.

- 4.—The great variety and large amount of crops produced in the United States are largely a result
 -a. of the scientific training which a large part of the farmers have had.
 -b. of a favorable climate and rich soil.
 -c. of the manufacture and importation of huge quantities of fertilizer.

- 5.—A city has a community chest fund to care for those who are not financially able to care for themselves. An efficient organization is in charge of the administration of the fund. If you lived in this city and a beggar approached you soliciting help, you should:
 -a. give him money.
 -b. give him the address of the proper social agency to take care of his needs.
 -c. pay no attention to his request for help because there is a social agency for that purpose.

- 6.—The paying of accident, sickness, and unemployment insurance to certain people tends to promote excuses for idleness under the pretense of being sick or injured. It gives such people the idea of getting something for nothing. This is most likely to be the case with:
 -a. high salaried professional men.
 -b. the skilled mechanics in industry.
 -c. the uneducated laborers who earn a very small wage.

- 7.—Two men of very different economic and social standing in the community each lost a leg through the negligence of a railroad company. If a jury wishes to reward each man according to the physical and social injury received, should it:
 -a. award each man the same money damages?
 -b. award the poor man more damages than the rich one?
 -c. award the rich man more than the poor man?

- 8.—If a law, which seemed to be just and equitable when it was being enacted, later proved to be unjust to certain individuals and groups of individuals, the best interests of good government and the welfare of the nation would demand that:
 -a. the injured party or parties be free from punishment when their interests demand that they ignore the law.
 -b. the law be enforced as long as it is on the statute books.
 -c. not only the injured parties should ignore the law, but others should be encouraged to ignore it as a means of having the law revised.

TABLE XLIX
 PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
 STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II
 FORM A

Item	Grades						
	7	8	9	10	11	12	
1. a	22.59	34.99	19.90	18.75	12.50	10.36	
	B	64.50	60.02	74.76	78.13	81.58	89.64
	c	12.10	3.33	5.34	2.50	5.92	
	o	.81	1.66		.62		
2. a	29.36	18.33	15.53	10.00	9.21	7.32	
	B	58.54	72.51	77.19	83.18	85.53	87.81
	c	10.49	7.50	5.82	6.20	5.26	4.26
	o	1.61	1.66	1.46	.62		.61
3. a	32.37	25.83	22.33	33.63	26.31	14.02	
	B	32.24	36.68	41.26	37.00	63.82	76.83
	c	33.07	35.83	35.92	28.75	9.87	9.15
	o	2.42	1.66	.48	.62		
4. a	18.55	32.50	32.52	43.75	41.44	46.34	
	B	67.74	62.50	60.20	48.80	51.98	48.18
	c	12.90	4.17	7.28	6.20	5.26	4.26
	o	.81	.83		1.25	1.32	1.22
5. a	21.78	5.83	3.88	4.38	1.97	2.44	
	B	74.99	85.84	92.72	91.86	94.74	94.51
	c	3.23	7.50	3.40	1.88	3.29	3.05
	o		.83		1.88		
6. a	16.94	10.00	11.16	9.38	5.26	4.88	
	b	6.45	3.33	4.85	2.50	1.32	2.44
	C	75.00	85.01	83.02	86.87	93.42	92.68
	o	1.61	1.66	.97	1.25		
7. a	63.73	76.66	76.21	77.50	71.04	77.43	
	b	18.55	13.33	14.08	14.38	21.70	18.29
	C	17.72	10.01	9.23	7.50	6.61	4.28
	o			.48	.62	.65	
8 a	12.99	14.46	9.71	6.20	8.55	7.32	
	B	68.46	58.04	80.88	71.29	68.43	68.90
	c	14.52	24.17	17.47	19.38	21.05	21.95
	o	4.03	3.33	1.94	3.13	1.97	1.83

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II
FORM A

Item	Grades					
	7	8	9	10	11	12
9. a	33.07	39.16	27.67	28.13	19.73	16.46
B	31.44	41.68	50.49	57.49	65.14	76.22
c	33.88	18.33	21.84	12.50	15.13	7.32
o	1.61	.83		1.88		
10. a	40.34	38.33	43.68	45.63	36.84	35.36
B	58.85	56.67	53.41	50.62	59.20	63.42
c		2.50	2.91	3.13	2.64	1.22
o	.81	2.50		.62	1.32	
11. a	15.33	17.50	8.25	12.50	7.24	6.71
b	.81	10.00	11.16	5.00	6.58	14.63
C	80.63	72.50	80.11	81.25	87.18	78.05
o	3.23		.48	1.25		.61
12. a	16.13	19.17	13.11	20.00	10.52	4.26
B	68.54	74.16	78.64	71.87	80.19	94.52
c	12.10	5.00	7.28	6.88	2.64	1.22
o	3.23	1.67	.97	1.25	.65	
13. a	6.45	8.33	4.85	3.75	7.89	3.66
B	20.95	23.34	33.99	46.25	45.41	68.07
c	71.79	67.50	61.16	49.38	46.70	28.66
o	.81	.83		.62		
14. a	6.45	5.00	4.85	5.63	7.24	3.65
b	30.65	31.66	32.52	33.75	30.26	29.27
C	59.67	60.01	62.15	58.12	61.85	66.47
o	3.23	3.33	.48	2.50	.65	.61
15. A	76.61	67.50	74.64	79.37	77.63	89.64
b	19.36	15.83	16.02	10.00	13.16	6.71
c		16.67	8.74	9.38	9.21	3.65
o	4.03			1.25		

9.—There are many people in our country who are destitute and living in poverty. They must be helped from time to time by some social agency or by individuals. Do you think that the best policy for assisting needy people is:

-a. to encourage greater support of the community chest and social welfare agencies by the wealthier citizens?
-b. to insist on such conditions in society that continually more and more people will be self-supporting?
-c. to give more money from the taxes of the city government to care for public charities?

10.—If you were attempting to judge the progress of a nation in terms of the amount and kind of power used, and the conservation of its natural resources, which of the following would you consider the most progressive:

-a. a nation using coal and oil as its chief source of power?
-b. a nation using water power as its chief source of power?
-c. a nation using animal power as its chief source of power?

11.—Sooner or later any great nation must give some attention to the conservation of its resources, whether they be natural resources such as forests, lands, minerals, etc., or human resources such as health, talent, and the ability to achieve. Which of the resources mentioned below do you consider of chief importance in a conservation program?

-a. The fertility of the soil and the extent of the forests.
-b. Minerals of all kinds such as iron, coal, and oil.
-c. Human health, talent, and the ability to achieve.

12.—Trial by jury in American courts is defective in many respects, and, perhaps, can be improved most:

-a. by compelling every person called for jury service to serve.
-b. by encouraging good citizens to recognize jury service as a part of their duty to the state.
-c. by requiring at least half of the jurors to be women.

13.—A man stole a car from a dealer and was arrested and tried in the criminal court. Upon conviction, he was sentenced to ten years in prison. The chief reason for sending the man to prison was because:

-a. he had wronged the car dealer.
-b. he had injured society by committing an unlawful act.
-c. he was setting a bad example for young citizens.

14.—The causes of poverty, like the causes of crime, are to be found largely in social and economic conditions. The local and state governments are in part responsible for conditions of poverty and should give governmental aid as far as possible. There are, however, many private agencies for doing social work. When such agencies are organized, should they be:

-a. separate and independent of one another?
-b. under the control of the local government?
-c. centralized into one organization and under one control?

15.—From one to three million people are out of employment daily in the United States because of poor health. Industry, schools, places of social amusement, and the whole social structure are affected by the condition of each individual's health. The government inspects our food and helps in many other ways to protect us. No one social agency can assume full responsibility for the nation's health. Where do you think the greatest responsibility for health should rest?

-a. Upon each individual member of society.
-b. Upon the social community and the state.
-c. Upon the national government.

16.—Women in industry have brought about many problems relative to the preservation of the home, moral conditions of the factory, and the health of girls and mothers. Perhaps the welfare of society can be safeguarded best by:

-a. preventing women from working in highly organized industries.
-b. paying high enough wages to heads of families so that it will be unnecessary for married women to work except in a few cases in carefully selected industries.
-c. making the wage scale so high for women that employers cannot afford to employ them.

17.—In our American industries, we find people of many nationalities doing the work which is to be done. When business conditions necessitate the closing of industries or operating on part time, should the managers of industry:

-a. first discharge the foreigners, or those of foreign parentage, and continue operation with native Americans?
-b. discharge those of any nationality who are not well liked by the foremen?
-c. give all employees an equal opportunity according to the service they render?

18.—The actions of people are frequently determined by their opinions about other people. Opinions, oftentimes, determine the destiny of large groups of people or a nation. An opinion was largely responsible for the discovery of America. In forming an opinion about a person or a problem a student should be most influenced:

-a. by what the general public thinks about the person or problem.
-b. by what his friends think about the person or problem.
-c. by what the facts show after he has considered all phases of the thing or person in question.

19.—Our law-making bodies have enacted many laws to govern our citizens. Many persons who know the laws do not abide by them or respect them, while others are earnestly seeking to be guided by them. Should we obey the laws primarily because:

-a. we should set a good example for other people?
-b. if we do not, we will interfere with the rights and privileges of those who do obey them?
-c. good citizens respect people who obey the laws?

20.—In modern society, the family is apparently less stable and of less importance than it was a hundred years ago. A few radicals have suggested that society would not suffer greatly if the family were abolished. Which of the following do you think is the best reason for preserving the family:

-a. for the reproduction, care, and training of children?
-b. as a mode of life, which is more comfortable and convenient than could be secured from a different organization of society?
-c. as the most economical method of living and developing the natural resources of the nation?

21.—In the last fifty years, there has been a decided tendency for people in the rural sections to move to the small towns and cities. The chief cause of this movement probably has been:

-a. the lack of educational and economic opportunities, together with the long hours of labor required in the country.
-b. the exploitation of the farmer by bankers and money lenders.
-c. the demand of industry in the cities for men reared on the farms who know little about labor organizations, hence are easier to control by employers.

22.—The population of our country is being concentrated in the cities because of manufacturing, transportation, communication, and trade needs. When people crowd into cities to participate in the above activities, do you think that the problems of living become:

-a. fewer and easier to manage?
-b. greater and harder to manage?
-c. static and relatively unchanged?

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II
FORM A

Item	Grades						
	7	8	9	10	11	12	
16.	a	26.62	14.16	11.16	18.13	9.21	7.93
	B	62.89	80.01	81.07	78.75	87.50	89.02
	c	7.26	5.00	7.77	2.50	2.64	2.44
	o	3.23	.83		.62	.65	.61
17.	a	10.49	11.67	8.25	10.63	9.21	6.10
	b	4.03	1.67	2.91	.62	.65	.61
	C	81.45	85.83	88.84	88.13	90.14	92.68
	o	4.03	.83		.62		.61
18.	a	19.36	14.16	12.13	10.63	9.21	2.44
	b	8.07	5.83	3.88	3.13		.61
	C	67.73	77.51	83.99	83.74	90.79	95.73
	o	4.84	2.50		2.50		1.22
19.	a	42.76	29.16	22.33	20.60	20.39	18.29
	B	35.46	33.43	44.17	47.53	53.31	59.15
	c	19.36	37.50	32.04	31.25	25.65	21.95
	o	2.42		1.46	.62	.65	.61
20.	A	74.99	67.50	60.20	69.37	63.17	62.81
	b	8.07	15.00	11.16	14.38	18.42	17.07
	c	12.91	15.00	27.18	15.63	17.76	16.46
	o	4.03	2.50	1.46	.62	.65	3.66
21.	A	74.19	65.00	62.64	61.25	63.82	68.91
	b	7.26	7.50	9.22	18.75	19.73	12.19
	c	13.71	25.00	27.18	18.75	16.45	17.68
	o	4.84	2.50	.96	1.25		1.22
22.	a	12.10	9.16	8.25	5.63	6.58	2.44
	B	75.80	76.68	83.01	87.49	86.84	90.24
	c	7.26	14.16	7.28	5.63	6.58	6.71
	o	4.84		1.46	1.25		.61

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II
FORM A

Items	Grades					
	7	8	9	10	11	12
23. A	51.59	48.35	54.86	52.50	62.51	67.07
b	25.01	32.49	36.89	37.50	31.57	28.05
c	17.75	19.16	6.31	8.75	5.92	4.27
o	5.65		1.94	1.25		.61
24. a	2.42	2.50	.48	.62	.65	
B	70.96	80.83	79.82	91.88	88.17	95.12
c	25.81	16.67	19.90	6.88	11.18	3.66
o	.81			.62		1.22
25. a	14.52	18.33	12.62	14.38	6.58	3.66
b	10.49	13.33	7.77	5.63	5.92	1.83
C	71.70	66.67	79.13	78.11	86.85	93.29
o	3.23	1.67	.48	1.88	.65	1.22
26. A	33.85	44.17	52.91	51.24	53.29	67.07
b	38.72	28.33	33.01	39.38	39.47	29.88
c	25.01	27.50	13.11	7.50	7.24	1.83
o	2.42		.97	1.88		1.22
27. a	23.39	27.50	19.42	23.13	19.73	27.44
b	8.07	15.83	13.11	10.63	13.81	9.76
C	63.70	54.17	64.56	63.74	65.81	61.58
o	4.84	2.50	2.91	2.50	.65	1.22
28. a	16.94	18.33	17.47	13.13	19.73	13.41
b	24.20	17.50	12.62	13.75	9.21	5.49
C	51.60	60.00	66.51	70.63	69.09	80.49
o	7.26	41.7	3.40	2.50	1.97	.61
29. a	16.13	21.67	18.93	13.12	10.52	9.15
b	4.84	4.17	2.91	3.75	4.00	.61
C	74.19	72.49	76.70	81.88	84.23	90.24
o	4.84	1.67	1.46	1.25	.65	

- 23.—Poor business in one large industry often causes poor business in many other industries, and results in a general business depression. Do you think that these conditions exist because:
-a. industries are directly or indirectly dependent upon one another for their welfare?
 -b. industries are working in competition with one another?
 -c. they sell their goods directly to one another?
- 24.—Our modern industry is so organized that men usually must do one specific job. Machines have been standardized to make special parts of automobiles and other things, thus making for the standardization of parts. The amount of production has been increased by this method. The manufacturer should in using such methods produce:
-a. a poorer article at the same price as that made by hand.
 -b. a better article at a cheaper price.
 -c. a better article at a higher price.
- 25.—There is a great variation in industrial products in this country. We find certain sections producing but a single product, while other sections produce many products which are used for various purposes. Do these differences exist mainly because:
-a. of inventions which have been made in that locality?
 -b. of the nationality of the people?
 -c. of the nature of the climate and natural resources?
- 26.—American business tends to form large organizations. The steel companies, the railroad companies, the motor-car companies, and the chain stores are examples. Most of our manufacturing, transportation, and some of our farming is carried on by organizations known as corporations. Do you think that large companies are formed mainly for the purpose of:
-a. making business more profitable and rendering competition less keen?
 -b. selling goods more cheaply for the benefit of the public?
 -c. providing more work for people to do?
- 27.—The distribution of costs of industrial conflicts between capital and labor from 1916 to 1926 were as follows: (1) Four per cent of the cost was borne by the employers, (2) fourteen per cent of the cost was borne by the employees, and (3) eighty-two per cent of the cost was borne by the general public. Under such conditions, the public is justified in:
-a. demanding that there be no more strikes.
 -b. asking that it be consulted as to when strikes will be called.
 -c. asking the government to pass laws to protect parties not directly involved in strikes.
- 28.—A study of the employee ownership in American industry from 1918 to 1928 shows that 315,497 employees of the leading corporations owned in excess of four million shares of stock in the companies which engaged their services. These shares were valued at approximately \$455,000,000. Will such a condition in industry tend:
-a. to cause labor unrest?
 -b. to influence industrial unions to call strikes?
 -c. to make industry more stable?
- 29.—Modern business is organized on a competitive basis. However, many people object to all forms of competition, giving as their reasons the following: (1) it is detrimental to the mental and physical welfare of the individual; (2) it destroys our natural resources; and (3) it is morally wrong. Competition becomes morally wrong, when:
-a. men engage in clever advertising to secure trade.
 -b. college students struggle for honors on the football field.
 -c. men care more for getting money than for honor.

- 30.—The standard of living in industrial nations like Great Britain, France, Germany, and the United States has risen more rapidly than that of the countries which are largely dependent upon agriculture for a livelihood. In industrial nations have advanced more rapidly than agricultural nations primarily because:
-a. industry tends to produce more industrious people than agriculture.
 -b. industrial countries generally use more scientific methods of producing wealth.
 -c. industry does not have to rely upon the forces of nature for its success.
- 31.—The comfort and welfare of the American people are very dependent upon our connections with other countries of the world. If all countries were to sever their connection with our country, our nation would suffer most because:
-a. of lack of food and clothing.
 -b. of lack of scientific tools and machine supplies.
 -c. of the need of labor to carry on our daily work.
- 32.—The invention and use of machines for producing goods have caused many people to migrate to the cities to secure employment. This migration has been accompanied by an increase in (a) the cost of living; (b) the price of goods; (c) the amount of production; and (d) the number of people in industry. Under such conditions, the laborer should:
-a. object to machines, for they cause men to be thrown out of employment during the period of change from hand to machine production.
 -b. object to machines, because they necessitate long hours of monotonous labor.
 -c. appreciate the machines, because they improve living conditions.
- 33.—Labor unions are organized in practically every trade of economic importance to society. There are more than four million members of the various unions in this country. They desire to get the highest wages possible for their work, and to have the best of working conditions. These organizations probably would succeed best in accomplishing their desire, if they would:
-a. induce the state legislatures to pass more labor laws controlling working conditions.
 -b. improve their services and modify public opinion about their labor policies.
 -c. prevent immigrants and other cheap laborers from obtaining the good jobs.
- 34.—Co-operative trade is carried on for the benefit of a particular group of people. The farmers carry on co-operative marketing to obtain better prices for their produce. Business conducted in such a manner has probably done most:
-a. to divide the interests of the people, and to discourage experimentation and the discovery of better business methods.
 -b. to unite the people and to produce better business methods than could be developed by the small business man.
 -c. to eliminate all competition.
- 35.—During the last one hundred years, a revolution in transportation and communication has taken place. The automobile, railroad, steamship, telephone, and wireless instruments are evidences of this revolution. This development probably has been hastened most by:
-a. the invention of engines which relieved man of much laborious work and made possible our great economic wealth.
 -b. the expansion of the American universities.
 -c. the demand of the farmers for better means of transportation and communication.
- 36.—The question as to whether or not an employer shall maintain an open shop has been the cause of many strikes. The open shop employs both union and non-union men, while the closed shop employs only union men. The open shop is most likely to be:
-a. more democratic in dealing with its employees than a closed shop.
 -b. more nearly controlled by workers than a closed shop.
 -c. more nearly controlled by employers than a closed shop.

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II

FORM A

Item	Grades						
	7	8	9	10	11	12	
30.	a	33.07	26.67	24.27	19.38	12.50	4.88
	B	41.92	52.50	55.83	56.87	63.23	72.56
	c	19.36	20.00	19.42	23.13	23.02	21.95
	o	5.65	.83	.48	.62	.65	.61
31.	A	49.96	46.67	47.10	39.37	44.09	52.44
	b	19.36	20.00	18.44	25.63	23.68	29.27
	c	30.65	33.33	30.58	31.25	30.91	18.29
	o	4.03		3.88	3.75	1.32	1.22
32.	a	11.29	11.67	11.16	18.75	6.58	11.58
	b	3.23	6.67	6.31	4.38	3.95	6.10
	C	80.64	79.16	75.25	73.11	88.82	79.88
	o	4.84	2.50	7.28	1.88	.65	2.44
33.	a	24.20	25.00	18.93	22.50	19.08	14.63
	B	40.31	42.50	44.68	43.75	51.98	64.04
	c	26.62	30.00	23.29	30.00	26.97	17.68
	o	8.87	2.50	13.10	3.75	1.97	3.65
34.	a	6.45	11.67	4.85	3.13	2.63	3.66
	B	72.58	69.16	74.74	76.87	82.25	84.75
	c	12.10	14.17	11.16	17.50	13.81	9.15
	o	8.87	5.00	9.22	2.50	1.31	2.44
35.	A	55.63	47.51	54.86	60.62	51.98	68.31
	b	10.49	20.83	10.19	11.88	11.18	11.58
	c	25.01	30.83	25.24	23.75	34.21	16.46
	o	8.87	.83	9.71	3.75	2.63	3.65
36.	a	30.65	31.66	35.43	42.50	33.55	48.17
	b	20.97	25.83	18.93	20.60	23.02	9.76
	C	37.09	40.01	55.04	31.27	40.80	38.41
	o	11.29	2.50	10.68	5.63	2.63	3.66

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II
FORM A

Item	Grades						
	7	8	9	10	11	12	
37.	a	26.62	30.83	13.11	21.25	17.10	10.36
	b	19.36	24.17	16.02	13.13	9.21	3.66
	c	39.50	40.00	62.62	59.42	60.09	82.32
	o	14.52	5.00	8.25	6.20	4.60	3.66
38.	a	8.07	7.50	4.85	1.25	3.95	5.49
	b	25.01	29.16	26.21	31.25	34.86	27.44
	c	54.01	57.51	58.26	60.62	57.24	63.41
	o	12.91	5.83	10.68	6.88	3.95	3.66
39.	a	16.13	13.33	8.25	3.13	7.89	6.10
	b	11.29	29.17	19.41	30.63	28.29	40.85
	c	58.06	49.17	61.18	57.49	58.56	48.78
	o	14.52	8.33	11.16	8.75	5.26	4.27
40.	a	8.07	10.00	9.22	6.88	6.58	4.27
	b	12.10	15.83	13.59	9.38	10.52	6.10
	c	58.86	62.50	63.60	71.86	78.30	83.54
	o	20.97	11.67	13.59	11.88	4.60	6.10
41.	A	56.44	43.34	55.84	55.00	47.38	65.24
	b	7.26	12.50	12.13	8.75	12.50	6.71
	c	22.59	35.83	18.44	27.50	34.86	15.85
	o	13.71	8.33	13.59	8.75	5.26	5.49
42.	a	21.78	18.33	12.62	8.13	7.24	5.49
	b	9.68	11.66	8.74	5.00	2.63	1.22
	c	51.60	58.35	64.08	78.12	84.87	87.19
	o	16.94	11.66	14.56	8.75	5.26	6.10
43.	a	35.49	40.00	35.43	43.13	36.84	27.44
	B	36.28	31.67	39.81	38.12	47.38	60.36
	c	11.29	9.16	9.71	10.00	10.52	6.10
	o	16.94	19.17	15.05	8.75	5.26	6.10

7.—Unemployment involves not only a lessened income, but it is definitely related to (1) the destruction of the workers' efficiency, (2) the entrance of women into industry, (3) removal of children from school, (4) industrial and political unrest, and (5) social demoralization. The unemployment situation probably could be improved most by:

-a. more legislation to protect those who are out of employment.
-b. more highly organized labor unions.
-c. by better business organization and administration of industry.

8.—During the World War the government entered business on a large scale; it took over the railroads, and built many factories in connection with war activities. After the close of the war, public opinion compelled the government to dispose of many very costly plants and retire from business. The principal reason why the people wanted the government to retire from business was because:

-a. the government was a poor producer of goods.
-b. private business could not succeed in competition with the government.
-c. the function of the government is to control and protect business, and not to participate in business.

9.—The United States manufactures and uses seventy per cent of the world's rubber supplies. Ninety per cent of the crude rubber is owned or controlled by England. English producers realized that this condition existed and raised the prices of crude rubber to where it became burdensome to car owners. Under such conditions, the American producers and manufacturers should attempt:

-a. to buy out the English owners of the rubber industry.
-b. to remove the tariff from crude rubber in order to make manufactured rubber goods cheaper for the consumer.
-c. to start rubber farms of their own in order to insure an adequate rubber supply at a reasonable cost.

10.—The government spends its income for the education, protection and welfare of its citizens. In this procedure many expenses are incurred. From which of the sources of expenditures do you think the government will derive the most benefit over a long period of time?

-a. Expenditures made for public works like post offices, governmental buildings, and waterways.
-b. Expenditures made for the protection of its citizens by the police force, courts and military and naval forces.
-c. Expenditures made for public education for its future citizens.

11.—The United States has, nearly always, carried on a large trade with other countries both in exports and imports, and today our demands for foreign goods are increasing. The best reason for carrying on foreign trade is that it tends to increase:

-a. wealth and comfort by providing goods which could not be produced for the same cost at home.
-b. the amount of goods produced at home.
-c. the sale of American goods in undeveloped countries.

12.—The United States made a treaty with Great Britain agreeing to make the toll for ships passing through the Panama Canal the same for all nations. She later passed a law permitting American shippers to use the canal at a lower rate than was paid by foreign shippers. In order to have made this law just and equitable, it should have been referred:

-a. to the American citizens for approval.
-b. to the French owners from whom the canal rights were bought.
-c. to those countries who were involved in the treaty.

13.—The minimum qualification of teachers, teachers' salaries, length of school terms, and the nature of the subject matter to be taught should be determined primarily by:

-a. the local community who pays the taxes and who knows its needs and wants.
-b. experts chosen by the state for that purpose.
-c. the county which is one of the main political units of the state.

44.—Obedience to international law depends upon the honor of nations. In the past, strong nations have, at times disregarded international law in dealing with weaker nations. International law would probably be most effective if:

-a. all governments were monarchies.
-b. all governments were modeled after the present Russian government.
-c. all governments recognized and adhered to democratic principles of government.

45.—The government has given large sums of money and great tracts of land to many railway companies in this country. These companies have become great corporations which have, many times, used unfair methods in competing with other companies and in discriminating against the small shipper. Under such conditions, the government should regulate and control these companies primarily because:

-a. the government aided them in the establishment of the roads.
-b. they are a menace to the smaller railway companies.
-c. the interests of all the citizens should be protected.

46.—The administrations of city government have been quite short, in some cases only one or two years, and there has been much graft and corrupt methods used in giving positions to people who helped in electing the officials. In order to avoid this situation, many well-governed cities have passed civil service laws. Which of the reasons given below do you think is the best for passing such laws?

-a. The most capable persons are employed, and efficient service can be maintained continuously.
-b. The members of all parties have an opportunity for employment.
-c. The officials are not always sure of surrounding themselves with personal friends, and are not so apt to attempt graft.

47.—The government guarantees personal liberty, the protection of life and property, and the right to participate in government. It also gives the citizens the right to petition for new rights and to change the laws. Where a government gives so many rights, its people are very likely to assume liberties which are not intended. If a person does not like a law he should:

-a. disobey it himself and encourage other people to disobey it.
-b. disobey it himself, and let others do as they like concerning it.
-c. obey it but seek to have it repealed.

48.—There are many complaints against local government because of expense, graft, and indifference on the part of officials and the general public. Some critics suggest that local government be abolished. Local government should be fostered and promoted in preference to a strong centralized government, which controls local affairs through its appointed agents, mainly because:

-a. it takes a great burden from the central government.
-b. it is the basis of real democracy.
-c. it is a matter of only local concern.

49.—A young man, who has a wife and two small children, earns \$120 a month, out of which he has saved \$200 during the last two years. He pays \$45 a month rent, and \$12 a month for insurance. An automobile salesman tries to sell him a car on which he would have to make a cash payment of \$200 which he has saved, and pay \$25 a month until the balance is paid. The car is to be used strictly for pleasure. A man in these financial circumstances should:

-a. buy the car immediately.
-b. postpone the purchase of the car until some future date.
-c. not buy the car at all.

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II
FORM A

Item	Grades						
	7	8	9	10	11	12	
44.	a	14.52	14.17	5.82	6.25	6.58	1.22
	b	2.42	9.16	5.82	3.13	.65	1.83
	C	63.70	55.83	70.40	80.62	85.53	89.63
	o	19.36	15.83	17.96	10.00	7.24	7.32
45.	a	17.75	16.67	13.59	11.25	7.24	3.65
	b	5.65	14.17	9.22	8.13	3.95	3.65
	C	55.63	55.83	60.69	69.37	82.89	84.16
	o	20.97	13.33	16.50	11.25	5.92	8.54
46.	A	34.66	47.51	34.77	43.12	55.93	77.44
	b	27.43	23.33	26.21	25.63	18.42	6.10
	c	12.10	10.83	19.41	17.50	17.76	7.92
	o	25.81	18.33	19.41	13.75	7.89	8.54
47.	a		5.83	2.43	.62	2.63	.61
	b	10.49	7.50	3.38	4.38	1.32	1.22
	C	67.73	67.50	76.72	82.50	86.18	88.41
	o	21.78	19.17	17.47	12.50	9.87	9.76
48.	a	27.43	24.17	22.33	18.13	14.47	12.19
	B	37.88	39.16	43.21	49.36	60.53	60.38
	c	12.10	16.67	12.13	16.88	15.13	17.17
	o	22.59	20.00	22.33	15.63	9.87	10.36
49.	a		4.17	.97	1.88	7.24	.61
	b	25.81	34.17	37.86	40.00	42.76	47.56
	C	51.60	41.66	61.64	43.12	41.45	42.07
	o	22.59	20.00	22.81	15.00	8.55	9.76

TABLE XLIX (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART II

FORM A

Item	Grades						
	7	8	9	10	11	12	
50.	a	3.23	5.83	2.43	2.50	2.63	.61
	b	7.26	10.00	2.91	3.75	4.60	1.22
	C	65.31	64.17	72.36	75.62	81.59	
	o	24.20	20.00	23.30	18.13	11.18	10.36
51.	a	7.26	8.33	4.37	6.20	4.60	1.83
	B	38.70	38.34	49.03	50.05	62.51	64.64
	c	28.23	30.83	22.33	25.00	20.39	19.51
	o	25.81	22.50	24.27	18.75	12.50	14.02
52.	a	16.94	18.33	10.68	11.25	16.45	10.36
	b	14.52	16.67	8.25	8.75	7.24	5.49
	C	41.11	44.17	53.40	61.25	63.81	69.52
	o	27.43	20.83	27.67	18.75	12.50	14.63
53.	A	46.76	51.67	47.09	46.34	55.92	60.37
	b	13.71	20.83	11.65	15.63	17.76	14.02
	c	12.91	6.67	14.56	18.75	13.16	9.76
	o	26.62	20.83	26.70	19.38	13.16	15.85
54.	a	10.49	20.00	16.99	30.00	28.29	33.53
	B	40.31	31.67	30.58	35.62	30.27	32.94
	c	16.13	25.83	20.39	15.00	24.34	15.24
	o	33.07	22.50	32.04	19.38	17.10	18.29

50.—A group of girls in a home economics class discover that all of their groceries, which were bought from a certain grocery store, are short in weight. The girls report the matter to their principal. The principal should:

-a. go immediately and accuse the groceryman of fraud, and if he denies it, call a policeman.
-b. warn the patrons of the grocery to go elsewhere.
-c. check the report, and upon finding it true, report the matter to the proper authorities.

51.—The people of America have been criticized by immigrants for their lack of neighborliness. In order to cope with this problem, and in order to establish a better understanding between native Americans and immigrants, cities have established social centers, and have provided activities to give both groups an opportunity to understand one another. Which of the following do you consider the most essential in helping these two groups to live together harmoniously?

-a. Help the immigrants prepare for positions which will aid them economically.
-b. Train the immigrants in the development of broad social sentiments, and provide activities which will improve their understanding of American life.
-c. Help the immigrants to provide better homes for themselves and their children.

52.—The late Viscount Bryce, an authority on American government, said that the government of cities was the one conspicuous failure of government in the United States. The government of American cities is bad primarily because of:

-a. ignorance on the part of the majority of the citizens.
-b. a lack of sufficient funds with which to carry on good government.
-c. indifference on the part of many citizens as to what is going on in the management of the city.

53.—A man, who is thirty years old and in moderate circumstances has a wife and two small children. He is debating whether or not he should buy some life insurance, and if he does buy a policy, what kind? If he buys an endowment policy, it will cost him about twice as much as a "straight life policy." However, the endowment policy will not only provide protection to his family for a period of twenty years, but will, at the end of that period, be worth the face value of the policy, which is more than the policy cost him. Assuming that the prospective purchaser is thrifty and wants to make the best provision possible for himself and family, should his prospective purchaser is thrifty and wants to make the best provision possible for himself and family, his primary interest should be:

-a. to provide all the protection he can for his family with the money he has to expend.
-b. to purchase insurance primarily as a money-saving proposition which incidentally provides some protection for his family.
-c. to invest his savings in a safe business proposition which will probably net him and his family a larger income than he could get from the insurance company.

54.—There are radical political groups in this country which have given the government much trouble during the last ten years. The government has deported several hundred alien Russians who were acting as agents for the Bolshevistic government. These groups seek to secure control of the government by any method which will place them in power. The governmental officials have repeatedly refused to permit them to hold mass meetings, and to send much of their literature through the mails. The chief reason for this restriction is:

-a. because of their beliefs about the principles and form of government.
-b. because of the methods practiced in securing control of the government.
-c. to prevent the intelligent leaders of the country from adopting new and untried methods of government.

SOCIAL INTELLIGENCE TEST

Prepared by W. H. BURTON

EXAMINATION: FORM B
For grades 7 to 12, inclusive

Published by C. A. Gregory Company, 345 Calhoun Street
Cincinnati, Ohio

Score:
Part I:
Part II:
Total:

Do not open this paper until you are told to do so. Fill these blanks, giving your name, age, grade, etc. Write plainly.

Name

Age last birthday years. Grade or class

School City

Teacher Date of this examination

How many semesters (including the present) have you studied:

Civics? United States History? American History?

Ancient History? European History? English History?

Geography? Commercial Geography? Physical Geography?

Economics? Problems of Democracy? Sociology?

DIRECTIONS

The purpose of this test is to determine your social intelligence and reasoning ability concerning certain social facts and situations. The test consists of two parts. In the first part, there are a number of true and false statements. If the statement is true, place a circle around the letter "T". If the statement is false, place a circle around the letter "F."

The following example will make this clear:

T. F. The geographical location of a country does not, in any way, determine what type of industries it will have.

The statement is false, hence we have placed a circle around the letter "F."

When you have completed Part I, go immediately to Part II. This part consists of a group of situations with a number of answers, but there is only one correct answer. You are to select the best answer according to the way you interpret the situation. Here is an example of a situation like those found in the test:

The best reason for passing immigration laws is:

- a. to exclude those who work more cheaply than native American labor.
- ...X... b. to exclude illiterates and those who would have great difficulty in reaching our social, economic, and moral standards.
- c. because our nation is already thickly populated and more citizens would make life more difficult.

This situation has been marked correctly by placing a cross (X) before Part "b" which is the correct answer. You are to mark the correct answers to the situations in Part II of the test in the same way. Work as rapidly as possible but not so rapidly that you do not have time to get the situations clearly in mind. If you come to a situation or part which you cannot answer, do not spend too much time on it but go on to the next.

After the signal is given to start, allow 45 minutes for test.

PART I. SOCIAL INFORMATION

Put a circle around the letter "T" if the statement is true and a circle around the letter "F" if the statement is false.

- T F 1. Child labor encourages thrift and economic development.
- T F 2. The blacklist is used by employers to keep undesirable workmen out of their plants.
- T F 3. The amount spent by the American public for recreation is small in comparison with what other large nations spend.
- T F 4. All banks are controlled by the state governments.
- T F 5. The single tax proponents believe that land should bear the burden of all taxation.
- T F 6. Society, and not the individual, largely determines what is morally right.
- T F 7. Labor organizations aim to work for better and more uniform labor conditions in the world.
- T F 8. A national bank may legally make gold and silver coins.
- T F 9. The United States War Department conducts certain schools for the government.
- T F 10. Voting in a democracy is usually compulsory.
- T F 11. An unnaturalized foreign resident of a country is an alien.
- T F 12. Freedom from unnecessary interference of the government is one form of liberty.
- T F 13. The referendum is the power given voters to accept or reject a new law.
- T F 14. Freedom of religious worship is not mentioned in the Constitution of the United States.
- T F 15. A person accused of crime may be secretly tried under our system of courts.
- T F 16. A person may be imprisoned for the non-payment of a debt even though made honestly.
- T F 17. Private property may be sold by the government for the payment of taxes on the property.
- T F 18. Congress was not given the right to control and regulate immigration by the Constitution.
- T F 19. An estimate of future expenditures is a budget.
- T F 20. Most manufacturing in America is carried on by small concerns.
- T F 21. All murder cases are tried in the Federal courts.
- T F 22. The United States government controls all phases of American education.
- T F 23. The Socialist party is one of the strongest parties in this country.
- T F 24. Americanization is the process of teaching our national ideals to foreigners.
- T F 25. Propaganda is a method of spreading beliefs or opinions.
- T F 26. The Industrial Revolution was a conflict between Americans and immigrants in industry.
- T F 27. The "Fourteen Points" were suggested by a European statesman as a basis for peace during the World War.
- T F 28. The railroads are free to charge whatever rates and fares they may desire.
- T F 29. Any state may place a tariff on foreign goods coming into that state.
- T F 30. The strike is a method used by labor to secure its demands from the employer.
- T F 31. America has made more progress than any other country in the development of air transportation.
- T F 32. Commercial advertising is carried on quite extensively in this country.
- T F 33. All American industries emphasize quality rather than quantity in producing goods.
- T F 34. Most of the dull toil of factory work was done away with upon the introduction of machines.
- T F 35. The supervision and control of public officials in this country is adequate to prevent the misuse of the office for private gains.
- T F 36. The system of conducting elections in America is very expensive.
- T F 37. Most cities in this country are governed by city managers.
- T F 38. When government is carried on by the majority, it is always efficient and above question.

TABLE I
 PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
 STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
 FORM B

Item	Grades					
	7	8	9	10	11	12
1. C	44.01	68.00	70.01	79.34	85.33	79.34
f	55.99	32.00	28.66	19.33	14.67	20.00
o			1.33	1.33		.66
2. C	69.34	74.00	80.00	84.00	74.00	83.34
f	28.66	24.00	19.33	15.33	25.33	16.00
o	2.00	2.00	.67	.67	.67	.66
3. C	80.00	78.67	74.67	89.33	84.67	90.00
f	20.00	20.66	23.33	10.67	15.33	10.00
o		.67	2.00			
4. C	50.00	79.34	81.34	72.00	82.00	88.00
f	50.00	20.66	18.66	28.00	18.00	12.00
o						
5. C	57.34	54.67	50.00	54.66	71.33	72.66
f	40.00	42.00	38.00	42.67	26.67	22.67
o	2.66	3.33	12.00	2.67	2.00	4.67
6. C	52.67	48.67	76.01	67.33	68.00	73.33
f	45.33	50.00	22.66	32.00	31.33	26.67
o	2.00	1.33	1.33	.67	.67	
7. C	86.00	95.33	96.00	94.00	96.00	97.34
f	12.67	4.00	4.00	4.67	4.00	2.00
o	1.33	.67		1.33		.66
8. C	74.00	80.00	84.67	82.66	88.00	88.66
f	26.00	19.33	15.33	16.67	22.00	10.67
o		.67		.67		.67
9. C	60.00	58.67	70.67	84.00	81.33	84.67
f	40.00	40.00	25.33	14.67	18.67	14.00
o		1.33	4.00	1.33		1.33

Key: The correct responses are indicated by capital letters; other letters represent false statements, and o indicates omitted answers.

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM B

Item	Grades					
	7	8	9	10	11	12
10. C	55.34	67.34	74.67	88.66	81.33	92.00
f	42.66	30.66	20.00	10.67	18.67	7.33
o	2.00	2.00	5.33	.67		.67
11. C	68.01	83.34	89.33	83.34	88.00	94.67
f	30.66	15.33	10.67	15.33	11.33	5.33
o	1.33	1.33		1.33	.67	
12. C	63.34	65.33	72.00	70.67	77.33	87.34
f	35.33	32.00	24.00	27.33	22.67	12.00
o	1.33	2.67	4.00	2.00		.66
13. C	48.01	63.34	71.33	60.00	76.67	80.00
f	49.33	33.33	26.00	34.67	22.00	18.67
o	2.66	3.33	2.67	5.33	1.33	1.33
14. C	80.00	80.67	84.00	80.67	73.33	85.34
f	19.33	18.00	14.67	19.33	26.67	13.33
o	.67	1.33	1.33			1.33
15. C	54.67	66.67	68.67	76.00	84.00	88.00
f	45.33	33.33	30.00	24.00	14.67	11.33
o			1.33		1.33	.67
16. C	59.34	68.67	58.01	64.66	68.00	74.67
f	40.66	30.00	40.66	34.67	31.33	25.33
o		1.33	1.33	.67	.67	
17. C	84.67	84.00	92.00	91.33	95.33	96.00
f	15.33	14.67	8.00	8.00	4.00	3.33
o		1.33		.67	.67	.67
18. C	78.67	72.01	62.67	70.00	53.33	59.34
f	21.33	26.66	35.33	26.00	46.00	39.33
o		1.33	2.00	4.00	.67	1.33
19. C	58.67	80.34	80.00	82.67	76.66	90.00
f	40.66	19.33	18.00	15.33	22.67	10.00
o	.67	1.33	2.00	2.00	.67	

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM B

Item	Grades					
	7	8	9	10	11	12
20. C	87.33	90.67	95.34	89.33	96.67	96.67
f	12.00	9.33	3.33	10.67	3.33	3.33
o	.67		1.33			
21. C	56.67	70.01	77.33	66.67	74.66	80.66
f	43.33	28.66	22.00	32.00	24.67	18.67
o		1.33	.67	1.33	.67	.66
22. C	43.34	52.00	64.67	61.33	76.00	89.33
f	55.99	48.00	34.00	38.67	23.33	10.00
o	.67		1.33		.67	.67
23. C	48.67	65.34	80.78	77.33	86.00	92.67
f	50.00	33.33	19.22	22.67	14.00	7.33
o	1.33	1.33				
24. C	81.34	82.00	84.67	83.33	90.66	93.33
f	18.66	18.00	15.33	16.00	8.67	6.00
o				.67	.67	.67
25. C	44.01	59.34	76.00	72.67	85.33	98.00
f	53.33	36.66	24.00	25.33	12.00	2.00
o	2.66	4.00		2.00	2.67	
26. C	39.34	55.34	46.67	56.67	54.00	73.34
f	59.33	44.66	50.00	40.00	44.67	25.33
o	1.33		3.33	3.33	1.33	1.33
27. C	48.01	59.34	47.33	47.33	62.67	54.67
f	51.99	36.66	40.00	46.00	32.00	42.66
o		4.00	12.67	6.67	5.33	2.67
28. C	75.34	83.33	81.34	84.67	88.00	94.00
f	24.66	16.67	17.33	14.67	12.00	5.33
o			1.33	.66		.67
29. C	60.67	66.67	68.67	58.66	73.33	82.00
f	39.33	32.66	29.33	40.67	26.67	18.00
o		.67	2.00	.67		

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM B

Item	Grades					
	7	8	9	10	11	12
30. C	72.00	82.66	94.67	86.00	96.67	98.00
f	27.33	16.67	5.33	14.00	3.33	2.00
o	.67	.67				
31. C	30.67	30.01	35.34	29.33	30.67	22.66
f	69.33	69.99	63.33	70.76	69.33	76.67
o			1.33			.67
32. C	86.00	85.33	83.33	88.67	92.67	96.00
f	13.33	14.00	12.67	10.00	7.33	3.33
o	.67	.67	4.00	1.53		.67
33. C	54.00	55.34	49.33	54.67	55.33	58.00
f	45.33	42.66	48.00	45.33	44.67	41.33
o	.67	2.00	2.67			.67
34. C	22.01	20.67	18.67	19.34	21.33	26.00
f	76.66	78.66	81.33	80.00	78.67	72.67
o	1.33	.67		.66		1.33
35. C	50.68	52.00	42.67	40.00	42.00	52.00
f	46.66	43.33	45.33	56.00	54.67	43.33
o	2.66	4.67	12.00	4.00	3.33	4.67
36. C	54.01	54.67	62.00	58.00	71.33	77.33
f	44.66	43.33	36.00	41.33	28.67	22.00
o	1.33	2.00	2.00	.67		.67
37. C	52.01	54.67	55.34	48.67	54.00	69.33
f	46.66	44.66	43.33	51.33	46.00	30.00
o	1.33	.67	1.33			.67
38. C	30.00	40.67	47.33	51.33	64.00	66.66
f	69.33	57.33	48.00	46.67	34.67	30.67
o	.67	2.00	4.67	2.00	1.33	2.67
39. C	22.67	25.34	33.34	22.00	28.67	39.34
f	77.33	73.99	63.33	78.00	71.33	57.33
o		.67	3.33			3.33

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM B

Item	Grades					
	7	8	9	10	11	12
40. C	32.01	28.68	42.67	36.00	44.00	50.00
f	66.66	69.99	56.66	64.00	56.00	50.00
o	1.33	1.33	.67			
41. C	64.00	56.67	64.00	62.00	76.00	69.00
f	34.00	41.33	31.33	34.00	23.33	29.00
o	2.00	2.00	4.67	4.00	.67	2.00
42. C	42.01	54.67	54.01	57.34	60.00	65.34
f	55.33	43.33	36.66	39.33	39.33	33.33
o	2.66	2.00	9.33	3.33	.67	1.33
43. C	26.01	38.67	46.00	49.33	46.00	66.00
f	71.99	60.66	53.33	50.67	53.33	32.00
o	2.00	.67	.67		.67	2.00
44. C	36.01	36.01	49.34	54.00	56.67	68.00
f	63.99	62.66	50.66	45.33	43.33	31.33
o		1.33		.66		.67
45. C	68.67	84.67	93.33	91.33	94.67	96.67
f	30.66	15.33	6.67	8.67	5.33	3.33
o	.67					
46. C	32.00	46.00	62.67	56.66	72.67	84.66
f	67.33	53.33	36.66	42.67	27.33	14.67
o	.67	.67	.67	.66		.66
47. C	52.00	60.00	70.67	84.00	79.33	86.00
f	47.33	39.33	28.66	16.00	20.67	13.33
o	.67	.67	.67			.67
48. C	47.67	51.34	35.34	35.34	35.33	30.00
f	49.33	41.33	51.99	57.33	60.00	66.67
o	3.33	7.33	12.67	7.33	4.67	3.33
49. C	40.00	56.00	72.67	70.00	86.67	89.33
f	59.33	43.33	25.33	30.00	13.33	10.00
o	.67	.67	2.00			.67

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM B

Item	Grades					
	7	8	9	10	11	12
50. C	65.33	65.33	82.17	71.33	74.00	91.33
f	34.00	32.00	17.33	28.67	24.00	8.00
o	.67	2.67			2.00	.67
51. C	61.34	77.33	86.67	89.34	94.00	96.00
f	36.66	22.00	10.00	9.33	6.00	3.33
o	2.00	.67	3.33	1.33		.66
52. C	56.01	68.67	67.34	75.33	91.33	92.00
f	42.66	30.00	31.33	24.00	8.67	7.33
o	1.33	1.33	1.33	.66		.67
53. C	59.34	64.67	70.01	69.34	75.34	83.33
f	38.66	33.33	24.66	27.33	23.33	12.67
o	2.00	2.00	5.33	3.33	1.33	4.00
54. C	61.34	62.00	68.00	58.67	66.67	76.00
f	36.00	36.00	29.33	40.00	32.00	23.33
o	2.66	2.00	2.67	1.33	1.33	.67
55. C	35.34	31.34	42.67	39.33	40.00	52.67
f	63.33	67.33	57.33	60.67	58.67	47.33
o	1.33	1.33			1.33	
56. C	58.01	72.00	76.67	81.33	88.00	87.33
f	39.33	26.00	21.33	18.00	12.00	12.00
o	2.66	2.00	2.00	.67		.67
57. C	91.33	84.67	90.00	90.00	93.33	93.34
f	8.00	13.33	6.67	9.33	6.67	5.33
o	.67	2.00	3.33	.67		1.33
58. C	64.00	66.68	75.34	74.00	82.00	85.33
f	34.00	30.66	21.33	25.33	17.33	12.00
o	2.66	2.66	3.33	.67	.67	2.67
59. C	38.67	45.34	54.67	56.00	70.00	74.66
f	60.66	54.66	44.66	43.33	30.00	22.67
o	.67		.67	.66		2.67

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I
FORM B

Item	Grades					
	7	8	9	10	11	12
60. C-	77.33	77.34	87.33	84.67	90.00	93.34
f	22.00	21.33	12.00	13.33	8.67	5.33
o	.67	1.33	.67	2.00	1.33	1.33
61. C	35.34	40.68	50.67	56.67	60.00	63.34
f	63.99	57.99	48.00	43.33	40.00	35.33
o	.67	1.33	1.33			1.33
62. C	57.34	68.00	62.00	55.33	64.66	75.33
f	40.00	31.33	30.00	22.67	32.67	22.00
o	2.66	.67	8.00	2.00	2.67	2.67
63. C	50.68	58.67	57.33	52.00	79.33	73.33
f	46.66	39.33	36.00	42.67	18.67	20.67
o	2.66	2.00	6.67	5.33	2.00	2.00
64. C	70.67	72.67	76.00	84.00	82.66	83.34
f	28.00	25.33	20.00	13.33	16.67	15.33
o	1.33	2.00	4.00	2.67	.67	1.33
65. C	68.67	83.34	84.00	80.67	87.33	90.66
f	30.66	15.33	14.67	17.33	12.67	8.67
o	.67	1.33	1.33	2.00		.66
66. C	60.01	72.01	84.00	74.00	86.00	91.33
f	37.33	24.66	10.67	19.33	13.33	6.67
o	2.66	3.33	5.33	6.67	.67	2.00
67. C	40.00	57.34	61.33	72.66	79.33	83.33
f	59.33	41.33	38.00	26.67	20.00	16.00
o	.67	1.33	.67	.67	.67	.67
68. C	54.01	75.34	81.34	78.67	88.00	88.67
f	43.33	21.33	17.33	19.33	10.67	10.00
o	2.66	3.33	1.33	2.00	1.33	1.33

TABLE L (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST, PART I

FORM B

Item	Grades					
	7	8	9	10	11	12
69. C	56.01	64.68	73.34	64.66	79.44	80.66
f	41.33	32.66	22.66	32.67	20.00	18.67
o	2.66	2.66	4.00	2.67	.67	.66
70. C	92.01	83.33	85.33	82.00	90.00	90.66
f	6.66	14.67	14.67	17.33	10.00	8.67
o	1.33	2.00		.67		.67
71. C	85.34	62.00	54.67	62.00	66.00	44.00
f	12.00	33.33	40.00	34.67	33.33	53.33
o	2.66	4.67	5.33	3.33	.67	2.67
72. C	42.01	51.34	55.34	58.66	70.66	67.33
f	55.99	45.33	43.33	40.67	28.67	30.00
o	2.00	3.33	1.33	.67	.67	2.67
73. C	73.34	80.67	91.33	75.34	78.66	94.67
f	25.33	18.66	8.67	23.33	20.67	5.33
o	1.33	.67		1.33	.67	
74. C	51.33	62.00	73.34	64.00	71.33	84.67
f	48.00	37.33	26.66	35.33	28.00	14.00
o	.67	.67		.67	.67	1.33
75. C	68.00	78.00	82.00	70.67	70.00	80.00
f	30.00	20.00	17.33	27.33	29.33	19.33
o	2.00	2.00	.67	2.00	.67	.67
76. C	51.34	78.00	81.34	82.00	93.33	91.33
f	46.66	22.00	17.33	16.67	6.67	8.00
o	2.00		1.33	1.33		.67

- T F 39. Our system of laws has become crystalized and is slow in its operation.
- T F 40. Generally speaking, the ablest lawyers seek to become court judges at a fixed salary.
- T F 41. The great businesses of the country determine the economic policies of the government.
- T F 42. Patronage in politics is the power to bestow offices and favors upon friends.
- T F 43. Our public service officials are always adequately paid.
- T F 44. All people in this country can share our political rights.
- T F 45. There are no laws restricting the number of immigrants which may come to this country.
- T F 46. Public offices in this country are always filled by the most intelligent and capable persons.
- T F 47. The president of the United States is nominated directly by the people.
- T F 48. What the politicians advocate constitutes the most important problem on which the American voter must sit in judgment.
- T F 49. American legislative bodies are always prompt in the passing of laws which are needed.
- T F 50. The chief function of the Vice-President of the United States is to preside over the Senate.
- T F 51. The value of economic goods is determined by the scarcity of the article and the demand for it.
- T F 52. A very small part of the business operations in this country is conducted on a credit basis.
- T F 53. The responsibility of officials to the public is always easily determined and controlled.
- T F 54. Local, state, and federal authorities each have taxing powers.
- T F 55. Most governmental officials are appointed to office.
- T F 56. The prices of stocks in American industries remain fairly constant or fixed.
- T F 57. A living wage and the cash wage received by laborers are always the same.
- T F 58. In a democratic government, public officials are responsible to the people for their acts while in office.
- T F 59. Elections in this country are always fair and honest, and safeguard the best interests of the public.
- T F 60. A run on a bank may cause it to close its doors, even though it is being operated on a sound basis.
- T F 61. Most of America's available water power has been developed.
- T F 62. Municipal governments cannot make laws.
- T F 63. Under the spoils system in government, political workers are generally paid by appointment to some office.
- T F 64. State governments make no attempt to regulate and control housing conditions.
- T F 65. The conditions under which women may work are often determined by the state governments.
- T F 66. When political bosses control the officials of the government, this rule is sometimes called "invisible government by unknown bosses or political rings."
- T F 67. Marriage laws are uniform throughout the nation.
- T F 68. The recall is a system whereby citizens may remove undesirable officials from public office.
- T F 69. The national government leaves most of the public safety work to the state and local governments.
- T F 70. The standard of living is largely determined by the wage received.
- T F 71. The government is gradually becoming more socialistic in its policies.
- T F 72. Under our jury system, justice is always meted out to criminals.
- T F 73. The rural population is increasing much faster than our city population.
- T F 74. The number of women working in industry is decreasing.
- T F 75. Cooperative marketing is a method of business which is not used by the farmers.
- T F 76. Industrial companies are steadily increasing the length of the working day.

PART II. JUDGMENT IN SOCIAL SITUATIONS

Read the paragraphs carefully and put a cross (X) before the answer you think is correct.

- 1.—Several subjects are included in the social studies in the high school, among which are geography, history, civics, economics, and sometimes psychology. The most important reason for studying these subjects is:
-a. to gain information about how to conduct civil government.
 -b. to learn how to get along with our fellow men.
 -c. to prepare us to enter the more advanced studies.
- 2.—Nature has always had a very vital influence upon man. It largely determines his mode of living, his tastes and desires, and what his economic livelihood will be. Nature also often determines the location of cities and the types of industries they will attract. The location of early American cities was principally determined by:
-a. the climate, and natural resources available.
 -b. the methods of transportation used at that time.
 -c. the tastes and desires of the colonial settlers.
- 3.—Many times, citizens are confronted with problems involving judgments which may lead to the loss of friendship, or result in some action which may not be for the best interests of the group or society at large. When a person is confronted with a problem which involves the interests and welfare of others, he should suspend judgment until:
-a. all the facts in the case are known.
 -b. sufficient evidence is presented to make one feel that the opinion formed is just.
 -c. public opinion has formed a judgment by which one is guided.
- 4.—A young man has just started to work for an industrial firm, and his employer wants him to attend a course of lectures dealing with the organization of the industry. To attend these lectures would interfere with his work in the night classes at high school. He has his high school work almost completed for graduation and does not want to miss any classes. The best thing for this young man to do is:
-a. to attend his classes in the night school, and tell his employer about it in case he asked him why he was not at the lectures.
 -b. to explain the situation to his employer, and get his opinion as to the relative importance of the two courses.
 -c. to drop the school classes immediately in the interest of his work.
- 5.—A young man dies and leaves his wife a large amount of insurance. She wishes to invest it safely in stocks and bonds, and to place a part of it in some reliable loan association. In order to get the wisest and safest advice on such matters, she should go:
-a. to a reputable lawyer for advice.
 -b. to the best stock broker in town.
 -c. to the best banker in town.
- 6.—A tariff is a tax levied upon imported and exported goods. Under the constitution, the United States cannot levy on exports. When a tax is placed upon imports, this tax is paid finally by:
-a. the foreign manufacturer.
 -b. the importer.
 -c. the consumer.
- 7.—The United States has become one of the richest nations in the world. Its wealth is equivalent to that of any three nations of Europe. But, with all its wealth, many people do not consider it to be the greatest nation. Probably the best way to judge a nation's greatness is:
-a. by the amount of economic goods it can produce.
 -b. by the number of people in the country, and the amount of land which it possesses.
 -c. by the intelligence, comfort, and welfare of its citizens as indicated by the standards of living and the governmental policies.

TABLE LI

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCES-CIVICS TEST,
PART II, FORM B

Item	Grades					
	7	8	9	10	11	12
1. a	26.00	20.67	42.00	27.33	41.33	30.00
B	30.01	32.00	22.67	48.66	44.00	50.67
c	47.33	47.33	35.33	23.99	14.00	19.33
o	.66				.67	
2. a	36.67	40.00	34.67	30.00	42.00	35.33
B	39.34	40.67	44.00	46.01	44.67	50.67
c	23.33	19.33	21.33	23.99	13.33	13.33
o	.66					.67
3. a	52.67	50.00	48.00	55.99	59.33	45.33
B	33.34	46.00	44.67	38.01	32.67	48.67
c	13.33	14.00	6.00	6.00	7.33	6.00
o	.66		1.33		.67	
4. a	36.00	30.67	20.67	20.00	22.00	12.67
B	60.00	68.00	78.00	79.33	77.33	87.33
c	2.00	1.33	1.33	.67		
o	2.00				.67	
5. a	56.67	51.33	56.67	55.99	53.33	40.00
b	13.33	12.00	8.67	5.33	8.00	10.00
C	29.34	36.67	34.66	38.68	38.67	50.00
o	.66					
6. a	20.00	13.33	15.33	14.67	6.00	4.00
b	38.00	18.67	20.67	20.66	15.33	10.67
C	41.34	68.00	63.34	64.67	78.67	84.66
o	.66		.66			.67
7. a	4.67	5.33	1.33	2.00	2.67	2.00
b	8.67	6.67	1.33	2.00	.67	.67
C	86.00	88.00	97.34	94.67	96.66	97.33
o	.66			1.33		

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,
PART II, FORM B

Item	Grades					
	7	8	9	10	11	12
8. a	24.67	12.00	6.00	4.67	2.67	4.67
B	50.66	64.67	80.67	71.33	82.00	81.99
c	24.67	22.67	12.67	23.33	15.33	12.67
o		.66	.66	.67		.67
9. a	28.00	18.00	16.00	20.00	16.00	14.00
b	31.33	23.33	13.33	14.67	7.33	4.67
C	40.67	58.67	79.34	64.00	76.00	80.66
o			1.33	1.33	.67	.67
10. a	36.67	36.67	28.00	27.33	14.00	13.33
b	4.67	5.33	2.67	8.00	1.33	.67
C	57.33	57.34	69.33	64.00	83.34	85.33
o	1.33	.66		.67	1.33	.67
11. a	27.33	30.00	21.33	22.00	26.66	20.00
B	46.67	40.00	57.34	62.67	59.34	69.34
c	24.67	28.00	20.00	13.33	13.33	9.33
o	1.33	2.00	1.33	2.00	.67	1.33
12. a	39.33	30.00	27.33	18.66	18.66	12.67
B	39.34	53.34	56.67	71.34	74.67	76.00
c	20.67	15.33	13.33	8.67	6.67	10.00
o	.66	1.33	2.67	1.33		1.33
13. A	52.67	62.01	67.33	56.67	67.33	73.33
b	17.33	8.00	8.67	12.67	6.67	4.67
c	26.67	29.33	21.33	28.66	26.00	20.00
o	3.33	.66	2.67	2.00		2.00
14. a	12.00	10.67	6.67	3.33	3.33	
B	80.67	84.66	93.31	92.67	95.34	96.67
c	6.67	4.67	1.33	3.33	1.33	2.00
o	.66		.66	.67		1.33

- 8.—There has been much criticism of our criminal courts. Many criminals are not convicted but are allowed to remain free to commit other crimes. The late Chief Justice Taft said, "The administration of criminal law in the United States is a disgrace to civilization." Such a statement, coming from an authority on law, should be:
-a. kept out of school textbooks, because these books should not teach criticism of our government.
 -b. made known to all, as a challenge to improve American criminal procedure.
 -c. investigated by our officials, but not necessarily by other citizens.
- 9.—American newspapers often criticize political, economic, and social conditions. These items are very often written in criticism of the officials of our government, and social and economic leaders. Articles, which are published about individuals and groups for the purpose of adverse criticism, should be:
-a. encouraged in order to give the public more information about current happenings in society.
 -b. prohibited, because they do harm to people's reputations.
 -c. strongly condemned, unless the writer can prove his criticisms.
- 10.—Some people consider our government to be a form of class government. They claim that the masses have little to do with the determination of the policies of the government, and even less to do with placing these policies into operation. The best way to get an ideal democracy is by:
-a. making laws that grant equality to all individuals.
 -b. reducing the number of laws to a minimum.
 -c. educating citizens to the need of justice and responsibility to the group in all their relations.
- 11.—Foreign diplomats and observers have often thought that our government might be on the verge of reorganization, because of the way it was being criticized by the public. One observer predicted there would be serious trouble over the problem of high tariff. Foreigners, in general, believe that American citizens are very critical of most governmental procedures. A critical attitude of citizens toward their government is:
-a. justified because it is the people's right and duty in a democracy.
 -b. justified only if the criticism is intended to make conditions better.
 -c. unjustified because it is unpatriotic, and breeds disloyalty.
- 12.—American people have had much criticism heaped upon them for not entering the League of Nations and other organizations which are outgrowths of the World War. Foreign nations claim that we have always been self-satisfied, and have had little or no interest in the welfare of the people of other nations. When such accusations are made against us, we should assume an intelligent attitude about the actions of our present society and the actions of our forefathers. Our attitude toward contemporary American society should be:
-a. Self-confident, because everything that exists as an inheritance from the past is right and good.
 -b. critical, because our study of history proves that few things are perfect, and improvement is always possible.
 -c. revolutionary, because a study of history proves that force has always accomplished more than thought.
- 13.—Many local governments are confronted with financial difficulties because of poor organization, bad management, and inefficient employees. To overcome these difficulties and emergencies, taxes must be raised or bonds sold in order to secure money. This, often times, necessitates a special law giving the local government the authority to raise taxes or issue bonds. Public spirited citizens, who strive for good government, and wish to avoid the above difficulties should be most concerned about:
-a. obtaining officials who will conduct the affairs of the government wisely and efficiently.
 -b. the best sources of revenue, and the manner in which these taxes are to be levied and collected.
 -c. how the income of the government can be spent in order to get the greatest benefits from it.
- 14.—In order to prevent contagious diseases from spreading, many state boards of health have secured the passage of quarantine and vaccinations laws. One of the most common contagious diseases is smallpox which can be prevented in nearly all cases by vaccination. Vaccination, to prevent smallpox and other contagious diseases, should be enforced primarily because:
-a. the victim of the disease undergoes terrible suffering.
 -b. other persons are protected from danger of the plague.
 -c. disfiguring scars are left by the disease.

- 15.—The great structure of modern civilization rests upon the foundation of family life. It is the basic means of training and educating children, of providing religious training, and for providing a place for recreation from toil. Many people believe that the American family is deteriorating, and that the modern home is losing many of the virtues which it provided a century ago. The chief reason for maintaining a high state of perfection of family life in the home is:
-a. to promote and perpetuate religious ideals.
 -b. to perpetuate the race and provide training for the offspring.
 -c. to provide the most economical method of living.
- 16.—Plans were made to rob a hotel porter who had gone to a bank for money to be used at the hotel. The robbers saw the porter take a quantity of money from the bank, but they did not see him give it to the hotel clerk who was waiting outside in a car. When the robbers searched the porter, they found only a few cents. The robbers were tried and sentenced to ten years in prison. The courts should punish such robbers according:
-a. to the amount taken from the person or place robbed.
 -b. to the purpose for which the robbery was committed.
 -c. to the laws which are on the statute books against such an offense.
- 17.—In a large country like the United States there is a wide variation in the rate of interest paid on money. The laws of the individual states recognize this variation. The legal rate in the more populous states is lower than that in the sparsely settled and newer states. Some states restrict the legal rate of interest to 6 per cent, some to 7 per cent, while others permit a rate as high as 10 per cent. There are many causes for this variation in interest rates. The chief cause, probably, is:
-a. the scarcity of capital.
 -b. the cost which must be charged to supervise the loan.
 -c. the lack of information on the part of the lenders about the probable safety of the loan.
- 18.—Sometimes business concerns, which have crowded out their competitors and have created monopolies, sell their goods cheaper than they could be bought when competition was keen. However, the monopolist has the power to fix the prices at whatever point he wishes. From the standpoint of good business procedure, the best reason for a monopoly to reduce prices is:
-a. to prevent new competitors from coming into the field.
 -b. to prevent society from charging it with profiteering.
 -c. to realize more profit from the greater number of sales made when the price is reasonable.
- 19.—A nation's resources are measured by the quantity available, the quality of the materials, and the ability of the nation to produce usable goods during an emergency. Many nations have conservation programs which are planned to save life, both plant and animal, and also the minerals and soil. An agricultural and industrial nation, such as the United States, should place most emphasis upon the conservation of its:
-a. land because poor soils do not produce good food supplies.
 -b. timber because other building materials are very expensive.
 -c. minerals and oils because nature does not replenish them very rapidly.
- 20.—The railroad companies have abused many of the privileges first given them by the government. They have charged excessive rates and have discriminated against places and individuals. They have also assisted great corporations in destroying small competitors by granting special rates to those who shipped large quantities. Where such discriminations are practiced, the public should demand that:
-a. the government take over and operate the railroads.
 -b. the government establish a commission with adequate power to control and regulate railroads for the benefit of the public.
 -c. all the railroads be united under one company in order to eliminate competition and to reduce rates.
- 21.—Since 1870, there has been a continuous migration from the farms to the cities. Poor markets, inadequate schools and churches, and unsatisfactory means of communication have largely been responsible for this migration. The most undesirable feature of this shift in population is:
-a. the lack of social training of farmers for city life.
 -b. the decrease in the production of food supplies while the demands are rapidly increasing.
 -c. the endangering of the rural social structure by the departure of the most industrious and intelligent people from the farm.

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,

PART II, FORM B

Item	Grades						
	7	8	9	10	11	12	
15.	a	21.33	15.33	14.00	10.00	9.33	8.67
	B	21.34	35.34	45.33	63.33	71.34	70.66
	c	55.33	48.67	38.00	26.00	18.66	20.00
	o	2.00	.66	2.67	.67	.67	.67
16.	a	7.33	3.33	2.67	1.33	.67	
	b	26.00	32.00	22.67	30.66	26.00	34.00
	C	65.34	64.01	73.33	68.67	73.33	65.33
	o	1.33	.66	1.33			.67
17.	A	23.34	26.00	27.33	33.34	30.00	37.66
	b	34.67	28.00	38.00	39.33	34.00	34.00
	c	41.33	44.00	32.67	26.66	35.33	27.01
	o	.66	2.00	2.00	.67	.67	1.33
18.	A	26.66	26.01	20.67	26.00	25.34	22.00
	b	14.67	17.33	16.67	10.67	20.66	10.00
	c	56.67	55.33	61.33	61.33	53.33	66.67
	o	2.00	1.33	1.33	2.00	.67	1.33
19.	a	48.67	44.67	53.99	40.00	40.00	40.67
	b	16.67	19.33	12.67	19.33	17.33	12.00
	C	34.00	33.33	32.01	38.67	42.67	46.00
	o	.66	2.67	1.33	2.00		1.33
20.	a	14.67	22.67	12.00	12.67	8.67	4.67
	B	56.00	55.33	64.66	60.01	74.66	83.33
	c	27.33	20.67	20.67	25.33	16.67	10.67
	o	2.00	1.33	2.67	2.00		1.33
21.	a	29.33	21.33	20.00	18.00	15.33	14.00
	b	42.00	50.00	50.00	40.66	47.33	65.33
	C	26.67	27.34	26.67	50.00	37.34	18.67
	o	2.00	1.33	3.33	1.33		2.00

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL
STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,
PART II, FORM B

Item	Grades						
	7	8	9	10	11	12	
22.	a	20.56	27.33	28.67	19.33	17.33	10.00
	b	24.00	13.33	14.67	17.33	14.00	12.00
	c	52.00	58.01	55.33	62.01	68.67	76.67
	o	3.33	1.33	1.33	1.33		1.33
23.	a	25.33	23.33	23.33	22.66	24.66	18.66
	b	22.00	14.00	8.67	10.67	6.00	3.33
	c	49.34	62.01	67.34	66.66	69.34	76.01
	o	3.33	.66	.66			2.00
24.	a	20.67	16.00	10.00	14.00	12.00	4.67
	B	50.00	66.00	78.67	66.66	77.33	88.67
	c	23.33	16.00	10.00	16.67	10.67	5.33
	o	6.00	2.00	1.33	2.67		1.33
25.	a	65.33	62.67	68.00	68.66	67.33	57.33
	B	18.67	25.34	31.90	18.67	24.00	29.33
	c	12.67	11.33	6.67	10.00	6.00	8.67
	o	3.33	.66	3.33	2.67	2.67	4.67
26.	a	16.00	19.33	8.67	6.00	8.00	12.00
	B	56.66	60.01	79.99	84.67	85.33	73.34
	c	22.67	19.33	6.67	6.00	6.00	1.33
	o	4.67	1.33	4.67	3.33	.67	3.33
27.	a	22.00	20.67	13.33	14.66	12.00	13.33
	b	21.33	10.67	5.33	13.33	8.67	2.00
	c	51.34	67.33	76.67	70.68	77.33	80.67
	o	5.33	1.33	4.67	1.33	2.00	4.00
28.	a	9.33	3.33	.66	4.00	.67	2.00
	b	22.67	19.33	9.33	15.33	8.00	6.00
	c	64.67	76.67	87.34	80.67	91.33	90.00
	o	3.33	.67	2.67			2.00

- 22.—Modern industrial concerns encourage workmen to purchase stock in the companies for which they work. Several million dollars worth of stock has been purchased under this plan of joint ownership by the employers and employees. Where such joint ownership exists, laborers, during industrial disputes, will be most likely:
-a. to go on a sympathetic strike when troubles arise in the same kind of industry in another city.
 -b. to complain about the business methods used by their own companies.
 -c. to promote the welfare of other laborers in the company and encourage them to do good work.
- 23.—A group of men built an apartment house on land valued at \$30,000. At that time, the site was in one of the best residential districts in the city. Shortly afterwards, several small stores were built near the apartment house. Then an elevated railroad was erected on the street, and finally a large department store in the city built a warehouse on the adjoining lot. The rent on these apartments and the value of the building probably:
-a. increased because of the amount of building which took place in the immediate vicinity.
 -b. remained the same since the location was one of the best in the city.
 -c. decreased because of the type of buildings constructed nearby.
- 24.—Because of increased costs of labor and materials a street-railway president finds that a seven-cent rate does not bring a fair return on the investment. In order to be able to increase the rates legally, he should go:
-a. to the people with a petition for a change in rates and fares.
 -b. to the public service commission for permission to change rates and fares.
 -c. to the mayor for a permit to change rates and fares.
- 25.—A man can purchase the same type of house, which he now rents for \$40 a month, for \$5,200. He will have to make an initial payment of \$200, and then pay \$40 a month until the balance is paid. He will also have to pay 8% interest on the amount due at the beginning of each year, and because of the nature of the contract he cannot pay more than \$40 a month at any time. Insurance, repairs, and taxes on the house will amount to \$200 a year. This man is considered thrifty, since he saves \$600 a year from his salary of \$2000. He has invested his savings wisely, and draws 7% interest on them. Under such conditions, the above plan for paying for a home is:
-a. a good plan for this man, and should enable him to save money more rapidly than he has in the past.
 -b. a bad investment, because he is increasing the cost of living expenses by paying out more money for a place to live.
 -c. of no importance, because he does not stand a chance to gain or to lose.
- 26.—Most American business is carried on by large corporations. The more usable goods are often produced and marketed by the same corporation. By this system, the cost of production and distribution is decreased, although the actual cost to the consumer has changed very little. Under such conditions, society should try:
-a. to break up these large corporations in order to strengthen competition.
 -b. to secure adequate governmental control of the corporations in order to prevent profiteering and discriminating against the small business man.
 -c. to prevent people from trading with these corporations.
- 27.—Social interests may be defined as the stimuli or forces which cause people to act. Everything which we do has some causal force back of it. Most of these forces have as their basis some physical, economic, social, recreational, aesthetic, and intellectual interest. An adult is supposed to have all these interests well developed in order to be most efficient. In the development of these interests, the high school student's primary concern should be the cultivation:
-a. of economic interests.
 -b. of group interests like those of trade groups.
 -c. of physical, social, and intellectual interests.
- 28.—American cities are becoming crowded with people. Most cities need more places for recreation, where good fresh air may be had. In order to provide such places, many cities are buying whole blocks of valuable property to be used as parks. The best reason for a large city to provide free parks is:
-a. to provide a place for professional athletic games.
 -b. to keep children off the streets.
 -c. to promote the health and happiness of its citizens.

- 29.—Several wealthy people have left large sums of money to establish public libraries, or to endow them. The Carnegie Fund was perhaps the largest gift for this purpose. Many people claim that it would have been better for this great fund to have been made available for the purpose of caring for those living in poverty. It was probably better to establish public libraries because:
-a. good books provide recreation for many people.
 -b. an increased amount of information enables society to improve social and living conditions.
 -c. libraries are permanent, while money spent for the care of the poor may not be a good social investment for the benefit of society.
- 30.—Poverty brings suffering, disease, a high rate of infant mortality, produces irregular workers, and results in general economic and social decline. These conditions can be corrected, with the greatest degree of permanency, by:
-a. providing charity on a co-operative basis, thus making possible scientific administration of social work.
 -b. removing the causes which tend to promote poverty.
 -c. providing a governmental bureau for the supervision of unemployment.
- 31.—It has been estimated that from 25 to 30 per cent of the population in this country live in poverty. This means that about fifteen million paupers are in the United States today, including the five million people dependent upon some form of public relief. These dependents are an economic burden to society. In seeking to improve this situation, the government and society should:
-a. organize a strong public system for the care of the poverty stricken.
 -b. encourage religious organizations to assume most of the responsibility for the care of those living in poverty.
 -c. improve the organization of our industrial and social structure in order to reduce to a minimum the causes of poverty.
- 32.—During the year of 1919, more strikes occurred than had occurred in this country during any one previous year. Almost four million men were either directly or indirectly involved in these strikes. The loss in production alone has been estimated at two billion dollars. The majority of these strikes were considered to be unsuccessful for the laborers. In order for a strike to be most successful, the strikers should have:
-a. the government's permission to strike.
 -b. strong local leaders to promote their interests and welfare.
 -c. public opinion supporting them.
- 33.—Governments, as well as individuals, go into debt whenever there is a piece of work to be done requiring large expenditures beyond those provided for in the present taxing system. Bonds are issued and sold to meet the cost. The government thus goes into debt to the extent of the price of the bonds issued. The government should issue bonds primarily:
-a. to meet the financial emergencies caused by incompetent officials.
 -b. to pay the current expenses of the government.
 -c. to pay for needed improvements which cannot be paid for otherwise.
- 34.—Trial by jury is very expensive to the government. By this system, cases are often tried more than once. The guilty persons are not always punished, and sometimes those who are not guilty are punished. The prejudice of jurymen are played upon by skillful attorneys, and often jurymen are unlawfully influenced. Many people demand that the jury system be reformed or abolished. The best reason for reforming our jury system is:
-a. to make justice quick and sure, thereby causing the courts to be more respected by the citizens.
 -b. to make punishment more severe in order to reduce the crime wave.
 -c. to lessen the power of corrupt lawyers who practice in our courts.
- 35.—The Communists believe that the government or community should own most of the producers' goods for the benefit of society. This method of control would tend to eliminate private ownership of property. The Communists have become so bold in their attempts to promote their ideas that they have attempted to hold mass meetings on the capitol grounds at Washington. The best reason why the government should prohibit these meetings is:
-a. to prevent foreign Communists from sending agents to this country.
 -b. to make secure our present standard of government and living.
 -c. to prevent the unemployed from getting radical ideas of government.

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,
PART II, FORM B

Item	Grades						
	7	8	9	10	11	12	
29.	a	40.00	33.33	10.00	18.66	8.00	6.00
	B	42.67	44.01	65.33	58.01	76.00	80.67
	c	11.33	22.00	20.67	22.00	16.00	12.00
	o	6.00	.66	4.00	1.33		1.33
30.	a	19.33	16.67	10.00	16.67	9.33	12.00
	B	36.67	47.33	52.66	53.33	58.00	60.67
	c	36.00	34.67	30.67	27.33	32.00	26.00
	o	8.00	1.33	6.67	2.67	.67	1.33
31.	a	38.67	27.33	18.00	14.66	12.00	8.67
	b	14.00	18.00	4.67	4.67	5.33	.67
	C	39.33	52.67	71.33	78.00	82.00	87.99
	o	8.00	2.00	6.00	2.67	.67	2.67
32.	a	30.00	21.33	15.33	15.33	16.67	12.67
	b	29.33	25.33	19.33	26.66	22.00	22.67
	C	32.67	49.34	60.67	56.01	60.00	61.99
	o	8.00	4.00	4.67	2.00	1.33	2.67
33.	a	16.67	8.00	15.33	13.33	10.67	6.67
	b	26.67	26.67	16.67	18.00	16.67	14.00
	C	47.99	60.66	61.33	64.00	70.66	75.32
	o	8.67	4.67	6.67	4.67	2.00	4.00
34.	A	36.66	40.67	43.33	45.33	44.00	56.67
	b	32.00	29.33	30.67	22.66	20.66	15.33
	c	20.67	23.33	20.00	28.66	32.67	24.00
	o	10.67	6.67	6.00	3.33	2.67	4.00
35.	a	24.67	21.33	11.33	18.00	6.67	8.67
	B	38.00	30.67	43.34	40.01	48.66	45.99
	c	27.33	38.00	38.00	38.66	42.00	42.67
	o	10.00	10.00	7.33	3.33	2.67	2.67

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,

PART II, FORM B

Item	Grades						
	7	8	9	10	11	12	
36.	a	32.00	30.67	24.67	22.66	26.67	18.00
	B	28.67	36.33	52.66	66.68	66.00	74.66
	c	27.33	22.00	12.00	9.33	6.00	2.67
	o	12.00	10.00	10.67	1.33	1.33	4.67
37.	a	24.67	14.67	12.67	10.67	10.00	14.00
	b	31.33	26.67	32.67	32.00	37.33	32.00
	C	33.00	46.66	41.99	53.33	49.34	47.33
	o	12.00	12.00	12.67	4.00	3.33	6.67
38.	a	38.00	28.00	29.33	30.00	38.67	26.67
	B	32.67	38.67	47.34	54.00	50.00	58.66
	c	18.00	21.33	12.00	8.00	8.67	8.67
	o	11.33	12.33	11.33	8.00	2.67	6.00
39.	a	32.00	26.67	16.00	17.33	16.00	6.67
	B	24.67	36.00	39.34	41.34	57.33	65.34
	c	27.33	21.33	31.33	34.00	24.00	20.66
	o	16.00	16.00	13.33	7.33	2.67	7.33
40.	a	38.67	30.00	22.67	12.67	16.00	6.67
	b	14.00	9.33	7.33	7.33	5.33	3.33
	C	30.00	46.00	56.67	72.67	74.67	83.33
	o	17.33	14.67	13.33	7.33	4.00	6.67
41.	A	17.33	16.00	8.01	15.34	11.34	10.02
	b	32.67	26.00	31.33	34.66	37.33	28.66
	c	32.67	42.00	47.33	43.33	47.33	53.99
	o	17.33	16.00	13.33	6.67	4.00	7.33

36.—Society is considering the problems of heredity more seriously than ever before. In order to improve social conditions, we must improve the economic status, religious life, moral and ethical standards, and the political ideals of the future citizens. This problem is made more acute because of the condition of various groups and nationalities living in our country. The chief reason why we should be concerned with the heredity of future citizens is:

-a. to prevent the rapidly increasing immigrant population from gaining control of the government.
-b. to decrease the burden upon society caused by criminals, moral degenerates, and physical defectives.
-c. to make our nation more capable as a military power.

37.—Under the Merchant Marine Act of 1929, most government-owned steamship lines passed into the hands of private companies. The government loaned the companies \$75,000,000 at a low rate of interest for construction and operating purposes. These companies carry on business for private gains, and pay the government a very low tax rate upon the equipment. In this case, the government should loan the steamship companies the money mainly because:

-a. they took over the expensive business which was being conducted by the government.
-b. it would assure an adequate means of transportation for our foreign trade.
-c. it would make our shippers more independent of foreign steamship companies who largely determine the rates to be charged.

38.—The marketing of farm products is a problem which vitally affects not only the farmer but the urban and city consumer as well. The price of farm produce often doubles or trebles between the farm and the ultimate consumer. It is desirable for the farmer to receive a better price than he now receives for what he has to sell; and, at the same time, permit the consumer to purchase goods more cheaply than he now does. The best way to decrease prices to the consumer and at the same time increase them for the producer of farm products is:

-a. for the government to control the system of marketing of farm products.
-b. for the consumers to buy directly from the farm bureaus and their agencies.
-c. for the consumer to buy from the commission merchant.

39.—When prices on farm products show a noticeable decline over a period of time, there is also a decline in the prices of manufactured products. If the fluctuation in prices is very great, we usually have a period of unemployment and social unrest. Re-adjustment in one industry is gradually followed by re-adjustment in the other. The cause of this variation in prices in one industry when business is bad in another is:

-a. the lack of laws to control labor problems.
-b. the interdependence of industry upon other phases of social and economic organization.
-c. the attitude of laborers toward employers and the government during business depressions.

40.—The growing cost of national defense is becoming a problem of grave concern. At the present rate of increase, the government will be paying within this decade a billion dollars a year for its upkeep. Many citizens are not in favor of this expense since it increases the taxes. It probably is not wise to discard our system of national defense as long as other nations have large military programs. Under the present conditions, a nation should provide a system of defense which would be:

-a. larger and better than that of other nations of the same size.
-b. in keeping with the demands by some of our large newspapers.
-c. adequate to preserve internal order and freedom from encroachment.

41.—There have been many attempts to form labor parties in order to secure better representation in our national government for people doing physical labor. These attempts have been followed by the organization in Congress of industrial labor groups and farm blocs. The groups were formed for the purpose of securing greater recognition of the problems of laborers. Laboring people should be better represented in our law-making bodies principally because:

-a. they are dissatisfied with their economic condition.
-b. they pay a large share of the national taxes.
-c. these classes represent those who do most of the physical work in this country.

42.—Many people have become discontented with our representative form of government. They believe that it is controlled by the minority rather than the majority. The initiative and referendum have been advocated to make our governmental system more democratic. Under the Initiative plan, a bill is drawn up by the citizens, and a certain number of names secured by petition before the bill can be submitted for popular vote. Under the referendum plan, a small percentage of the voters may demand that practically any law passed by the legislature be submitted to the voters for approval by the majority. Probably, the most desirable feature of such plan is:

-a. to prevent law-making bodies from being dominated by a small group of politicians.
-b. to stimulate political competition.
-c. to make government more truly responsive to public opinion by placing more power in the hands of the people.

43.—With the establishment of a protective tariff system has come an increase in the wage of the American laborer. Industry has expanded to such an extent that this country is one of the greatest producers of goods in the world, while the American laborer is one of the best paid workmen in the world. Many people are in favor of reducing the tariff, or placing most goods on the free trade list. The best reason for continuing our present high protective tariff is:

-a. to prevent American gold from being sent to other countries.
-b. to keep most foreign goods from being bought and used in this country.
-c. to keep from placing the American laborer in competition with the cheap labor of other countries.

44.—The expenses of the government have increased more than 1200 per cent since 1860, while the national wealth has increased about 1000 per cent. It has been found that many farmers are paying more than eight per cent of their income for taxes. Many tax payers are complaining because of the heavy tax burdens. Citizens should complain about the burden of taxes and the cost of government when:

-a. the governmental services are not in keeping with the amount of money being spent by the government.
-b. money is being used to build public buildings, and to make other improvements which some people think are not needed.
-c. local improvements are not as good as the citizens expected them to be.

45.—Harry Smith's father was arrested, charged with robbery. He was tried and found "not guilty." A year later he moved with his family to a neighboring city. The fact that he had been accused of robbery was known by a number of pupils when Harry entered the city high school. Three pupils asked to have their seats in the study-hall changed in order to sit as far from Harry as possible. Later, when some books disappeared, Harry was accused of taking them. Many weeks later it was discovered that he was innocent. Under such circumstances, the best attitude for a good citizen to assume is:

-a. to refuse to associate with anyone whose father has been accused of robbery or similar crimes.
-b. to treat all individuals as innocent until they are proved guilty.
-c. to shun a character whom we suspect of crime until he proves himself innocent.

46.—All scientific studies of the distribution of wealth and income in the United States show that the wealth of the country is being concentrated in the hands of a few people. As a result of this condition, many people are not in favor of our present form of government. Thus it seems that our government is actually being challenged. Probably the best and safest way to check this centralization of wealth under our present system of government is:

-a. to abolish our capitalistic system of production.
-b. for the government to take over all factors of production and carry them on for the benefit of the public.
-c. to increase the income and inheritance taxes.

47.—A number of co-operative organizations have been organized during the past century. There are now about 2,000 organizations in this country. These organizations are formed for the purpose of deriving mutual benefits from various kinds of business, such as are operated by cotton, fruit, grain, vegetable, and stock growers associations. Co-operative organizations are most likely to be put in operation by those who are:

-a. succeeding best in their business.
-b. just starting a new business in one of the above fields.
-c. not succeeding so well, but feel that by planning and organizing they can be more successful.

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,

PART II, FORM B

Item	Grades						
	7	8	9	10	11	12	
42.	a	30.67	32.00	28.00	28.00	47.33	17.33
	b	14.67	12.00	8.00	11.33	6.00	4.67
	C	33.33	46.67	46.67	54.00	39.34	68.67
	o	21.33	19.33	17.33	6.67	7.33	9.33
43.	a	18.00	8.00	7.33	6.67	6.67	7.33
	b	20.00	31.33	19.33	23.33	20.00	20.00
	C	39.33	40.67	56.67	62.00	66.66	64.00
	o	22.67	20.00	16.67	8.00	6.67	8.67
44.	A	25.33	33.33	42.01	54.67	64.66	72.67
	b	28.00	26.67	21.33	18.66	10.67	8.00
	c	22.67	20.67	17.33	20.00	16.00	9.33
	o	24.00	19.33	19.33	6.67	8.67	10.00
45.	a	8.67	9.33	2.00	4.67	2.67	1.33
	B	55.99	61.33	73.33	82.66	83.33	86.67
	c	12.67	6.67	6.00	4.00	2.67	2.00
	o	22.67	22.67	18.67	8.67	11.33	10.00
46.	a	13.33	18.00	18.67	22.00	27.33	22.00
	b	47.33	35.33	42.00	33.33	32.66	23.33
	C	12.67	22.67	19.33	32.00	23.34	40.67
	o	26.67	24.00	20.00	12.67	16.67	14.00
47.	a	28.00	29.33	28.00	22.00	24.00	17.33
	b	16.00	15.33	12.00	12.67	10.00	4.67
	C	30.67	43.34	38.67	54.66	51.33	62.67
	o	25.33	22.00	21.33	10.67	14.67	15.33

TABLE LI (Cont.)

PERCENTAGE OF CORRECT, INCORRECT, AND OMITTED RESPONSES OF HIGH SCHOOL STUDENTS TAKING THE BURTON EXPERIMENTAL SOCIAL-SCIENCE-CIVICS TEST,

PART II, FORM B

		Grades					
Item		7	8	9	10	11	12
48.	a	19.33	22.67	11.33	14.00	10.67	11.33
	B	28.67	28.66	50.00	67.33	66.00	70.67
	c	26.67	24.00	16.00	8.67	8.00	3.33
	o	25.33	24.67	22.67	10.00	15.33	14.67
49.	A	27.99	33.33	52.67	64.00	62.67	70.00
	b	14.67	11.33	7.33	6.00	4.00	4.67
	c	30.67	28.67	14.67	21.33	14.67	10.67
	o	26.67	26.67	25.33	8.67	18.66	14.67
50.	a	12.00	8.00	8.00	11.33	4.67	7.33
	B	38.66	49.33	54.67	66.00	69.33	73.34
	c	20.67	16.00	11.33	10.67	10.00	2.00
	o	28.67	26.67	26.00	12.00	16.00	17.33
51.	A	27.33	31.33	34.01	38.66	44.01	44.01
	b	19.33	32.00	21.33	32.00	23.33	25.33
	c	24.67	16.67	13.33	12.67	14.00	12.00
	o	28.67	30.00	31.33	16.67	18.66	18.66
52.	a	16.00	19.33	8.66	8.00	3.33	2.00
	b	34.00	24.67	24.00	27.33	32.66	15.33
	C	20.00	26.67	36.11	50.00	44.01	62.67
	o	30.00	29.33	31.33	14.67	20.00	20.00
53.	a	12.00	10.67	9.33	4.67	2.00	1.33
	b	18.67	11.33	7.33	6.00	6.67	2.00
	C	39.33	46.00	52.01	74.66	71.33	76.01
	o	30.00	32.00	31.33	14.67	20.00	20.66
54.	A	42.67	46.67	57.33	72.66	69.33	74.67
	b	18.00	16.00	6.00	8.67	6.00	3.33
	c	9.33	6.00	6.00	2.67	4.67	2.00
	o	30.00	31.33	30.67	16.00	20.00	20.00

- 48.—A bank cashier, upon instructions from the bank president, made false entries in his books. Strict compliance with the law would have ruined the bank by making known its condition to the public. The president of the bank had made excessive loans to stockholders who were dealing with a declining stock market. The bank examiner found the false entries and had the cashier prosecuted after the money had been returned. Aside from the legal reasons for prosecuting the cashier, the best social reason for doing so is:
-a. to keep other bank clerks from doing the same thing.
 -b. to provide more adequate protection for honest depositors who do business with the bank.
 -c. to provide employment for some honest person in the bank.
- 49.—There are many social organizations and institutions which strive to promote loyalty among the citizens of this country. They publish materials and distribute them in the schools and elsewhere, and hold public meetings on holidays in order to remind people that they should be patriotic. Many times the question arises as to just what national loyalty means. Loyalty to one's country demands that:
-a. we respect the good that she has achieved in the past, recognize honestly her mistakes and faults, and strive to aid her to reach finer ideals of thought and action.
 -b. we should always criticize faults, both past and present.
 -c. we accept as our motto, "Our country! In her intercourse with foreign nations may she always be in the right; but our country, right or wrong."
- 50.—Child labor tends to decrease wages of adult workers, to cause adult workers to be thrown out of employment, and to cause an unequal distribution of labor. Some people believe that the general reduction of wages, wherever child labor is used, is the most serious effect of child labor. The best reason for not using child labor in industry is:
-a. to prevent unemployment and the reduction of wages.
 -b. to prevent mental and physical conditions which are detrimental to child life.
 -c. to prevent adult labor from being driven to other sections to seek employment where child labor is not used.
- 51.—The present system of production, which is carried on under private ownership, is known as the capitalistic system. This system involves the use of vast amounts of capital in the form of engines, machines, buildings, and other expensive items of equipment. Many people do not believe this system is just. They think that the employer receives too much of the profit earned by the employees, thereby reducing the workmen to poverty. The best reason for continuing this system of production is that:
-a. it has produced a better standard of living than has been found under other economic systems of production.
 -b. it produces great quantities of goods which can be sold very reasonably.
 -c. it provides a competitive system for carrying on trade.
- 52.—It has been shown that trusts benefit society by providing many essential material things at a reasonable cost to the consumer. Trusts are able to produce and sell goods much cheaper than small industries. Because of the competition of the trusts, the small business man is often compelled to go out of business. When such conditions exist, the public should demand that:
-a. the government abolish all trusts.
 -b. the government control and regulate the trusts in the interest of the small business man.
 -c. the government regulate and control trusts for the benefit of society.
- 53.—The farmers of this country have not been very successful during the last few years. Agriculture has not kept pace with other industries. The number of mortgages on farms has steadily increased for several years. The value of land and the price of products grown by farmers have declined from year to year. The government has taken steps to provide farmers with loans upon which a low rate of interest is paid. The best reason for making these loans to farmers is because:
-a. the politicians think the farmers should be helped.
 -b. the government obtains most of its revenue from taxes on farm products.
 -c. the welfare of the farmer is essential to the welfare of the nation.
- 54.—The government has, in recent years, attempted to control and regulate certain labor and industrial problems. The proper field for state inspection and control is:
-a. the hours of labor and working conditions such as sanitation, safety, and the morals about the factory or workshops.
 -b. the wages to be paid employees.
 -c. the hiring and discharging of employees.

The Reasoning Ability of High School Students as Indicated by Their Ability to Render Correct Judgments with Regard to Social Situations. - We have already defined the larger meaning of judgment which is to be used in the discussion of the present data. To render good judgments about a particular problem, one, usually, has to know the facts about certain phases of the problem. In teaching the social subjects, it is generally assumed that if one has acquired the facts, the solution of the various problems will be easily and readily found. If this be true, the person with the most facts ought to be more able to render correct judgments with regard to most social situations with which he is confronted. In discussing this phase of reasoning, Buckingham says, "Reasoning without something to reason about is an empty process, if indeed it can be called a process. I have thought that the case against memory has been overstated in modern pedagogical literature."¹⁸ Thorndike states, "Reasoning is essentially the organization and control of habits of thought. We know that training depends largely on the particular data used, so that efficient discipline in reasoning requires that the pupil reason about matters of real importance."¹⁹ The facts given in Part I of the tests were facts of importance, according to the correct responses made in interpreting them by the students. If they had not been stressed by the

18

B.R. Buckingham, "The Correlation between Ability to Think and Ability to Remember, with Special Reference to United States History." School and Society, Vol. V, No. 120, pp. 443 - 449.

19

E.L. Thorndike, Psychology of Arithmetic, p. 20.
New York: The Macmillan Co. (1922).

teachers, it is hardly probable that the number of correct answers would have been so large. The average of correct answers for fact questions was 68 per cent. If we accept the average as a criterion of success, the ability to render correct judgments with regard to the type of situations used is noticeably behind, with an average for all grades of about 63 per cent of the situations answered correctly.

Since it is impossible to know precisely what facts were used in reacting to given situations, it is not thought necessary to discuss the facts in which the children were strong and weak. However, the judgments rendered deserve more attention since it was stated that some of the mind sets or attitudes would be pointed out. Attitudes, as used in this study, are used in the sense that positive answers, in agreement with the answers indicated by the keys to the tests, are positive attitudes, and answers, not in agreement with the keys, are negative attitudes. There are various definitions of attitudes. Thurstone defines attitude as, "The sum total of man's inclinations and feelings, prejudices, or bias, preconceived notions, ideas, fears, threats, and connections about a specific topic. Thus man's attitude about pacifism means all that he feels and thinks about peace and war. It is admittedly a subjective and personal affair."²⁰ Hart takes the positive-negative position, as indicated by his test of social attitudes and interests.²¹ Hendrickson takes a similar position,

20

L.L. Thurstone, "Attitudes Can Be Measured." The American Journal of Sociology, Vol. 33, (Jan. 1928). Pp. 529 - 554.

21

H.H. Hart. A Test of Social Attitudes and Interest. Iowa City: The Iowa Child Welfare Research Station, (1928).

as indicated by the following:

The term attitude is used to refer to any positive or negative tendency with reference to an object, a person, an activity, an idea, etc. By positive and negative tendencies are meant those responses which the structuralist calls pleasantness and unpleasantness, which Thorndike discusses in terms of satisfaction and annoyance, which a behaviorist might label approach and withdrawal, acceptance and rejection, repetition and elimination, etc. ²²

Symonds also places the positive emphasis on his Social Attitudes Questionnaire. ²³ A student must either answer positively or negatively. Bernard takes a somewhat broader viewpoint. He says,

Attitudes are incomplete or potential adjustment behavior involving the set of the organism toward the situation calling for the adjustment. Attitude is thus a term to designate a more or less thorough integration or complex behavior toward an object or situation. Attitude generally implies some sort of reflective or anticipatory behavior. There is a mobilization or organization around some object of social value, or motif, in which reflective or anticipatory behavior is involved. ²⁴

Lundberg defines attitudes as follows:

Attitudes may be regarded as behavior integrations ordinarily around social situations, social objects, or social motifs, and values. -- They have in them, in general, some reflective or anticipatory processes. They are complexes of "behavior" which in humans may include tendencies, habits, experiences, desires, motives, ideas, associated or organized around the object of the attitude. Our behavior toward an object is the attitude in expression, in action.

22

G. Hendrickson, "The Attitudes and Interests of Teachers and Prospective Teachers," pp. 10 - 11. Unpublished Ph.D. dissertation, University of Cincinnati, June, 1927.

23

P. Symonds, "A Social Attitudes Questionnaire," pp. 316-22. Journal of Educational Psychology, Vol. 16. (May, 1925).

24

L.L. Bernard. An Introduction to Social Psychology, p. 246. New York: Henry Holt Co., 1926.

The more fully we get into action, the more completely is the attitude disclosed. ²⁵

In general, these definitions are all in agreement as to the mental organization of attitudes. Not all of the situations in the experimental test have been so constructed that an answer of absolute positiveness in terms of agreeableness or disagreeableness is warranted. Nevertheless, the answers given were individually determined and may be interpreted as being positive when in agreement with the position taken by those who constructed the key, and likewise, negative when in disagreement with the key.

Those attitudes that are not directly noticeable as to excessive, positive or negative results will not be discussed. The reader may examine the outcome for any particular situation by merely examining the tables which are given for each item and grade, hence showing any noticeable change from grade to grade for any given situation.

Situations 3, 7, 13, 19, 26, 31, 33, 36, 43, 46, 48, 49, and 54 in Form A show noticeable negative results, while situations 5, 6, 17, 18, and 22 show high positive results. Situations 1, 2, 3, 5, 17, 18, 19, 21, 25, 37, 38, 39, 41, 42, 46, 47, 51, and 52 in Form B show negative results, while only 7 and 14 show high results. Consequently, we see that Form B is more difficult than Form A, or that it includes more situations about which students have developed negative or different

attitudes from those indicated by the key to the test.

A few of the most noticeable attitudes will be discussed briefly by number and form as, Form A, situation 1. Form A will be treated first, and, to simplify the treatment, each situation will be numbered so that the reader may go to Form A for the situation, or to Table XL for the results until referred to Form B. Percentages are taken according to grade sequence and not according to numerical sequence in the following discussions.

Situations Form A:

3. This situation involves the reasons for immigration laws. Pupils in the early grades would protect our workmen and prevent our country becoming over-populated by keeping immigrants out. Students in the eleventh and twelfth grades would exclude immigrants because of their inability to reach our economic, moral, and social standards.

7. This situation involves justice in making reward for injuries by the court in the case of two men of unequal standing; it involves democracy with justice. A majority of the students in all grades would award the men an equal amount of damages regardless of social status. Thus, we see that young Americans have an attitude of democracy that is not directed by intelligence. Only those in the upper ten percentile answered it according to the key; however, the writer is not so sure of the absolute justice in giving one man more than the other.

13. The situation calls for a decision as to why a thief

should be punished for stealing a car. The pupils in junior high school would punish him for setting a bad example for young citizens, while 4 to 8 per cent would punish him for harming the owner of the car. The more mature students would punish him for injuring society.

19. The reasons for obeying laws are involved in this situation. Seventh grade pupils think we should obey the laws because we are setting bad examples to young people if we do not. Many of the eighth grade pupils would obey them to gain the respect of other people, and a majority of those in the last two years of high school would obey them in order not to interfere with the rights and privileges of others. Hence, we have a change of attitude towards obedience to the law during the high school career.

26. The object is to determine the essential reasons for the formation of trusts or big businesses. More than one-fourth of the pupils throughout all the grades seem to believe that big business is organized to benefit the public by selling goods more cheaply. About one-fourth of the pupils in the first two grades think big business is organized to give more people work.

31. This situation is intended to show the student's general knowledge of the ability of our country to become self-supporting during a crisis. Almost one-third of the pupils of the first five grades think that we would suffer from a lack of labor to carry on our daily work. About one-fifth think we would suffer from the need of scientific tools and supplies of that type, while 40 to 50 per cent think we would suffer most from need of food and clothing. It seems

that this situation shows one of the weakest points found in the student's reasoning. The fact that this country is one of the leading industrial nations of the world seems to be sufficient to cause high school students to reason differently about our needs.

36. The problem involves the control and operation of open shops, and also a knowledge of labor unions and their principles. This knowledge was available in most cases where pupils were attending schools in industrial villages. The number of pupils, who thought the open shop system would be more democratic, increased throughout all grades. The relationship between the employer and employee was not understood at all by the majority of girls.

43. The problem sought to determine the attitude of students toward centralization of educational control. More than one-third of the first five grades gave the control to the local community, while about one-eighth omitted the topic in these grades. The high percentage of omissions beyond item 40 is probably due to a lack of time to complete the test. A majority was not in favor of centralization or state control until the twelfth grade was reached.

46. The situation deals with reasons for having civil service laws. From one-fourth to one-eighth of the pupils omitted the question in the first four grades, and more than half looked upon the laws as means of avoiding political favors, or giving persons, belonging to other parties, an opportunity for employment. A large percentage of correct responses was not found until the twelfth grade

was reached.

48. The purpose of this problem was to determine the pupils' reasoning abilities with reference to the chief advantages or principles for having local government. One-fourth of the junior high school pupils think the chief advantage of local government is to remove the burden of responsibility from the central government, while one-fifth of them omitted the question. Correct responses were not found above 50 per cent until the eleventh grade was reached.

49. The situation involves economic reasonableness of purchasing a car under certain economic conditions. The situation necessitated the use of a little practical arithmetic in rendering a decision. This situation seems to be exceptional in that the greatest percentage of correct answers was given in the seventh and ninth grades. There were evidences of very poor thinking and little or no use of the figures given in rendering judgments. The number of responses indicating the idea of delaying the purchase increased throughout all the grades, and the thought of it not being wise to purchase a car under those conditions did not appear to strike any grades forcefully except the seventh and ninth.

54. This situation attempted to determine the student's knowledge of bolshevism and the reasons for our government not allowing the bolshevists complete freedom in spreading their

propaganda. From 17 to 33 per cent omitted the question. This high percentage of omissions is possibly due to the fact that many pupils in the junior high school did not complete the test, but this reason is not as applicable to the high school grades. Here again the correct responses were highest in the seventh grade, with percentage of correct responses running about the same for the rest of the grades. The per cent of answers was so evenly divided that no valid decision could be rendered with regard to this situation.

The high positive responses on Form A will be reviewed:

5. This situation deals with the problem of begging and a citizen's treatment of a beggar in a community where there is a community chest fund. From 75 to 95 per cent of the students would refer the beggar to the proper social agency. One-fifth of the seventh grade pupils would give the beggar money, while a much smaller number of sympathetic pupils were found in the other grades. We can say, positively, that the pupils were in favor of organized charity, as was indicated by their responses.

6. The problem was to ascertain what persons might take dishonest advantage of social insurance policies. The answer was correct in more than 75 per cent of responses in all grades. A small per cent of those who ranked very low on the tests gave incorrect answers, which showed little indication of any real thinking.

17. This problem was developed to ascertain the attitude

of high school pupils toward foreign or immigrant laborers in industry. Here a democratic attitude prevailed in all grades. The pupils of the coal mining village in Alabama gave evidence of undemocratic attitude on the part of most of the boys, and practically all of those desiring the discharge of the foreigners first during a crisis were boys.

18. The situation deals with the formation of opinions about persons and problems. Students, in general, would be influenced most in forming their opinions by what the facts show about a problem or person, the per cent ranging from 67 to 95. Nineteen per cent of those in the seventh grade would accept what the general public thought about the problem, while only 2 per cent of those in the twelfth grade would depend on the public for their opinions. Eight per cent of the seventh grade and .66 per cent of the twelfth grade would rely upon their friends' opinions.

22. This topic deals with the problems involved in the overcrowding of population in our cities. From 75 to 90 per cent indicated that problems would become greater and harder to manage, as a result of overcrowding, and from 12 to 2 per cent thought problems would be smaller in number and easier to manage, while from 14 to 6 per cent thought the problems would become static or remain unchanged.

24. This problem deals with the kind of article which may be produced as a result of machine production, and the price for which the article should sell. The responses show that 75 to 92 per cent think that a better article would be produced and sold at a cheaper price as a result of machine production, and from 3 to 26 per cent think

a better article would be produced at a higher price. A small number in all grades, except the twelfth, think a poorer article would be produced at the same cost as those which are hand made.

Situations Form B:

1. This situation deals with the reasons for studying the social subjects. The earlier grades think the most important reason for studying these subjects is to make preparation for the more advanced studies, or to get information about civil government. Less than 30 per cent of the junior high school pupils think they study the social subjects to learn how to get along with their fellow men. Nearly fifty per cent of the high school pupils gave the last mentioned reason.

2. This problem deals with the location of our early American cities. A large number of students in all grades thought they were located because of climate and natural resources; a smaller number thought they were located because of the tastes and desires of the settlers. The concept of transportation was accepted by about 50 per cent in the twelfth grade. As essential as the factor of transportation was in the early development of our country, it had not become fixed in the minds of the majority of the pupils tested.

5. This problem is to determine where pupils would go for sound financial advice. A majority in all grades, except the twelfth, would go to a reputable lawyer for advice. From 13 to 18 per cent would go to a stock broker, and 2 to 50 per cent to the best banker in town.

This situation, probably, shows what children have been accustomed to hearing, and they, probably, have not had to consider such problems seriously.

17. This topic treats the causes of high interest rates in sparsely settled states. A large per cent of the junior high school pupils think high interest rates exist chiefly because of a lack of information about the persons desiring to borrow. The other grades are about equally divided among reasons of scarcity of capital, cost of supervision of loan, and lack of information.

18. The problem raised the question as to which was the best business reason for a monopoly to reduce prices. The majority throughout all grades thought monopoly should do so to increase sales, thereby increasing profits. From 10 to 20 per cent thought it should do so to avoid criticism, and from 20 to 26 per cent to prevent competitors from coming into the field. The concepts were, probably, inadequate for these grades to deal with the situation.

19. The question was raised as to where our country should place the most emphasis in its conservation program. From 40 to 53 per cent would place most emphasis on the conservation of soil, 12 to 19 per cent upon timber, and from 32 to 46 per cent upon oils and minerals. The reasoning power of the group did not enable them to see that the soil might be improved but that essential minerals and oils could not be replaced.

21. This topic treated the undesirable features of the migration of the rural population to the cities. A majority of the

answers indicated the possible decrease in food supply as being the most undesirable feature. From 15 to 29 per cent thought the lack of social training on the part of the farmers was the most undesirable feature; and from 18 to 50 per cent thought the danger to the rural social structure was the outstanding feature.

25. The situation involves the application of simple arithmetic in the reasoning process in order to determine whether a person should purchase a home under certain economic conditions. A majority of the pupils in all grades concluded that it would be a good plan to increase one's savings, without even figuring the results. About one per cent of the pupils actually did any figuring on the paper; probably, a small number figured the problem out mentally. Very few considered the plan a bad business proposition. From 18 to 29 per cent gave the correct answer. Problems or situations involving mathematical reasoning have shown very inaccurate thinking on both forms of the test. The idea of cumulative interest played no part in the thinking of the majority of pupils.

35. The problem sought to ascertain the best reason for prohibiting Communistic meetings. From 30 to 48 per cent thought they should be prevented in order to preserve our present standard of living and to make our government secure; while 27 to 40 per cent thought the unemployed should not get radical ideas of government from the meetings; and 6 to 24 per cent thought the prevention of meetings would keep the Communistic agents out of this country.

37. This topic raises the question as to whether the

government should subsidize steamship companies which have taken over the merchant marine fleet of the government. From 24 to 10 per cent of the pupils think the government should subsidize these companies, because the companies took this expensive business off the government's hands; and, from 37 to 26 per cent think it should do so in order to guarantee sufficient transportation for our foreign trade. Thirty-three to 53 per cent would subsidize them in order to make shippers independent of foreign companies who largely determine present shipping rates. These answers show a lack of adequate information with which to carry on the reasoning process.

38. This situation treats the problem of increased costs between the producer and the consumer. Thirty-eight to 26 per cent of the students would have the government attempt to control the prices; 32 to 58 per cent would decrease costs by buying direct from the producers through the bureaus or cooperative agencies; and 21 to 8 per cent would purchase through commission merchants.

39. This problem deals with economic crises, and attempts to place the responsibility for such crises upon laborers who have the wrong attitude toward the government and employers, the insufficiency of our laws, or the interdependence of our system of social and economic organization. Thirty-two to 7 per cent would place the causes upon insufficiency of laws; 24 to 65 per cent upon interdependence of the organization; and 34 to 20 per cent would blame the crises upon labor. About one-eighth omitted the question, thus indicating their lack of information about it, or the time might have been up.

41. This topic deals with reasons for a labor party and better representation of labor in Congress. From 17 to 10 per cent think that labor should be better represented because of their dissatisfaction with economic conditions. Thirty-four to 26 per cent believe labor should be better represented because it pays a large share of taxes; and, 32 to 54 per cent think labor should be better represented because laborers do physical work. The consistency of the last answer indicates an attitude of democracy and sympathy. The answers to this particular problem almost indicated the types of homes from which the children came. There were very distinctive trends indicated by schools in industrial centers.

42. The situation dealt with the initiative and referendum plan of government. The responses showed many fluctuations from grade to grade. The number giving correct responses increased to the tenth grade, dropped 15 per cent in the eleventh, and then rose about 20 per cent in the twelfth. From 47 to 17 per cent thought the most desirable feature of these plans was to prevent our law-making bodies being dominated by politicians, whereas 14 to 4 per cent thought these plans would stimulate political competition. This situation clearly indicated by the responses that either the concepts were not adequate, or that guessing was operating in many cases. Although, guessing does not seem to have caused the percentage to vary in the junior high school grades for approximately one-fifth of these grades omitted the question, most of the omissions being due to the lack of time.

46. This situation dealt with the problem of concentration of wealth in this country. The percentage that would abolish our present capitalistic system ranged from 13 per cent in the seventh grade to 27 per cent in the eleventh grade. Therefore, it seems that some students acquire an attitude against our capitalistic system in high school. However, those, who would have the government take over all factories and carry them on for the benefit of the public, range from 47 per cent in the seventh grade to 23 per cent in the twelfth, thus showing a decline in number of those favoring socialistic theories. Nearly a fourth omitted the question in the junior high school and about an eighth in the senior high school, the omissions probably being due to a lack of time.

47. This situation raises the question as to when persons would be most likely to enter a cooperative business. Approximately one-fifth of all grades except the twelfth thought that those who were succeeding best would form a cooperative business. Sixteen to 5 per cent thought people just entering business would be most likely to enter, while one-fifth of the junior high and one-twelfth of the senior high school pupils omitted the question, possibly because of lack of time.

51. This situation treated the reasons for continuing our present system of production. Twenty-seven to 44 per cent thought the present system should be continued because it has produced a standard of living which has not been equalled in the past. One-third to one-fifth in the various grades thought the system should be retained because goods can be produced and sold more cheaply. The number who thought it should be retained to furnish

a competitive system for carrying on trade, ranged from 24 per cent in the seventh grade to 12 per cent in the twelfth grade, while the number omitting the question ranged from 30 to 14 per cent, the lowest percentage of omissions being in the tenth grade. Many of these omissions may have been due to a lack of time.

52. This situation dealt with the problem of controlling trusts for the protection of the public. Sixteen to 2 per cent would have the government abolish all trusts; 34 to 15 per cent would control and regulate trusts in the interest of the small business man; and 20 to 62 per cent would control and regulate them for the benefit of society. A large number in all grades omitted the question because of lack of time.

The high positive results of Form B:

7. This situation attempted to show the best criteria or reasons for a nation's greatness. Eighty to 97 per cent thought the best criteria were the intelligence, comfort, and welfare of the citizens, as indicated by the standards of living and governmental policies. Eight to .67 per cent thought the amount of land and the number of people were the best criteria, while 4 to 2 per cent thought the quantity of economic goods that a country could produce was the best criteria.

14. This situation treated the control of contagious diseases through preventive measures. Eighty to 96 per cent thought the laws should be enforced to protect society; 12 to 0 per cent thought they should be enforced to prevent personal suffering; and a small percentage in each grade thought they should be enforced because of the after effects of the disease.

The data, with few exceptions, show positive, or an

increasing tendency toward positive attitudes. A lack of positive attitudes may be caused by a lack of adequate concepts with which to render correct judgments about the various situations.

The senior high school grades, in general, showed the majority of the attitudes to be positive. The lack of adequate concepts was clearly in evidence in all grades in the junior high school.

The situations, which have just been reviewed, show some of the complexities involved. From a comparison of the grades, with the number of facts available and the judgments rendered, the writer feels that on the part of many students there probably was (1) a lack of information, (2) a lack of a method of mental attack, and (3) a lack of the power to criticize the decisions made.

Evaluation of the Responses. - The data given in Tables XLVIII to L show:

1. The number of fact questions answered correctly to be greater in proportion than the number of judgment questions.
2. That the junior high school pupils answered a large number of questions of both parts of the tests incorrectly, but the number of correct answers for each succeeding grade was proportionally higher, although there were exceptions in both the junior and senior high school.
3. The omissions which indicated the questions that the pupils did not know, or were not answered because of lack of time.
4. That there were many topics which beginning high school students have already acquired a general knowledge.

41

5. That when a fairly large percentage of correct answers are given, the percentage, generally, increases throughout all grades. Nevertheless, there are exceptions to the above statement, for a few questions show little or no change in the percentages from grade to grade.

6. Many fact questions are acquired in one grade, while the number answering those questions correctly in the next higher grade is considerably lower. This is probably from a lack of use of these specific facts.

The mean percentages of correct responses on Forms A and B were 67.18, 68.68, and 62.98, 54.71, respectively, for Parts I and II. Although these percentages do not seem high, they, probably, are about as high as might be expected from a sampling which involves a range in chronological ages from 11 to 20 years, and the total range of mental ability found in the schools from which the data were taken. Many of the questions, showing a large percentage of incorrect answers, might be due to faulty construction and possibly should be simplified or eliminated; however, a majority of the questions show an increase in the number of correct responses from grade to grade. Furthermore, statistical validity does not warrant the answering of any question by 100% of the pupils, nor does it warrant the failure of any question by 100% of the pupils.

Finally, the study was an attempt to measure the intelligence of high school pupils by determining the number of miscellaneous facts which they had available, and by determining to what extent the pupils were able to use the available facts in interpreting

social situations and rendering judgments.

The writer makes no claim to have measured the whole range of social intelligence. The study has been intentionally limited very largely to content material in the social studies, as was shown by the efforts to validate the various items used in developing the test. No attempt was made to devise a social intelligence test, such as that developed by Moss and his associates of George Washington University.

Summary

The data, as assembled and treated, indicated that the tests really tested the ability of students as to the number of facts acquired as well as the ability to apply them in problem situations.

The medians for the tests, according to chronological ages, rose on both forms and on both parts of the tests up to the eighteenth year and then showed a decline. The medians by grades indicated a gradual rise from the seventh grade to the twelfth. The rise from the eighth to the ninth grade was not as great as in other grades.

The distribution of the scores by grades showed that each succeeding grade had acquired considerably more facts, and had also acquired the ability to apply them as was shown in the increase in the number of correct responses to the problem situations.

The accumulation of frequencies about the median was greater for the parts of the tests involving situations which required judgments than for the parts of the tests involving facts.

The several measures of variability showed a higher degree of variability on Part II of the tests than on Part I. This is, probably, proof that a large number of facts are not adequate to carry on the reasoning process without due consideration of other factors, such as specific training, interests, and motives for the action.

The coefficients of variability showed little variation when the same grades were compared by the two forms, thus showing that, whatever the tests measured, they were fairly consistent in doing so.

Correlations between teachers' estimates of students' ability and the test scores were considerably higher than those correlations between teachers' marks and the tests.

Reliability coefficients, as indicated by the correlations between the two forms of the test and by self-correlation, are sufficiently reliable for group testing and comparison, but are not considered sufficiently high to be of value in dealing with individual measures, particularly in the first year of the high school.

The standard and probable errors of the measures of variability are fairly high, but not in excess of those of other tests in the social sciences.¹

The probable errors of the obtained medians are rather large for the entire test, but reasonably low for the parts of the tests. However, they are quite reliable when the number of pupils taking the test is considered.

Correlations between the forms of the test gave a marked degree of reliability. The correlations between the parts

¹C.W. Odell, Educational Measurement in High School. pp. 276-300. New York: Century Co. 1930.

of the test were not as reliable as the correlations between the entire tests. The reliability of the tests tended to increase with an increase in knowledge and maturity.

The correlations between the grades and the test scores showed considerable relationship between ability to make good grades and the ability to make good judgments. The relationship between the ability to acquire facts and the ability to make good grades was not so consistent or marked as the relationship between judgment and grades.

A majority of the situations were sufficiently easy for most of the students. There are indications either that those situations not yielding positive answers were too difficult, or that the pupils did not have sufficient reasoning ability to render correct decisions. The negative responses in some cases were sufficiently large to justify the conclusion that these situations involved negative attitudes.

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CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Each chapter has been briefly summarized and it is hardly necessary to repeat these summaries. However, it might be well to review the aims of the study and review the findings in each case. These were as follows:

1. What are the outstanding problems and issues, as indicated by the research workers in the social sciences?

(1) It was found that there were hundreds of problems which, according to the criteria used to judge their values, varied in rank as to importance.

(2) These problems were found in various subjects and were treated in various source materials showing that there is considerable over-lapping in subject matter content.

(3) The consistency of these problems was shown through the analysis of periodicals, magazines, encyclopedias, text and reference books, and political platforms.

2. a. The outstanding aims found in the state courses of study were:

- (1) Good citizenship
- (2) The development of civic virtues and attitudes

- (3) Intelligent loyalty and patriotism
- (4) Worthy civic and social ideals
- (5) A sense of social and civic responsibility
- (6) An understanding of social and civic problems
- (7) Social efficiency
- (8) Development of qualities of good citizenship
- (9) A desire for and a willingness to render

service on the part of the pupil

- (10) To develop social and civic habits

b. The outstanding aims indicated by the experts in the social studies were:

- (1) To develop scientific habits of thinking
- (2) To develop social concepts, ideals and attitudes
- (3) To train for practical citizenship
- (4) To impart knowledge of a practical nature on where, how to find, and when to use materials
- (5) To train for intelligent patriotism
- (6) To develop a knowledge and appreciation of the organization of society and its problems
- (7) To develop character as implied by honesty, morality, and sense of obligation to society
- (8) To give an understanding of social institutions and their problems
- (9) To develop civic habits such as courtesy, thrift, cooperation, et cetera.

(10) To develop a practical knowledge of governmental agencies that promote public welfare.

3. The most important aims of the present tests in social studies are:

- (1) To test for facts
- (2) To test ability to think
- (3) To test ability to see causal relations
- (4) To test ability to explain situations
- (5) To test ability to locate places, names, and dates, et cetera.

4. The distribution of the scores shows a wide range of achievement, the scores ranging from 20 to 119 on Form A, and from 20 to 124 on Form B of the tests. The total possible range was from 0 to 130. The scores on Part I, dealing with information, ranged from 10 to 74 on Forms A and B. The possible range on this part of the test was from 0 to 76. The scores on Part II, dealing with the interpretation of situations requiring judgments, ranged from 4 to 49 on Forms A and B. The total range on this part of the tests was from 0 to 54. The distribution indicates that a very small percentage of the total number approached the upper limits of the tests, and also a very small percentage was found to be near the lower limits of the tests.

5. The coefficients of variability show the scores of the senior high school grades to be less variable than those of the junior high school grades.

6. The relationship between the facts available and the ability to make good judgments was found to be positive in this study. The relationship, as indicated by the coefficients of correlation, was positive and significant, the coefficients ranging in size from .38 to .64 with a reasonable degree of reliability.

7. The relationship between the facts in the two tests was, in general, considerably higher than the relationship between the facts available and the ability to apply them. The coefficients of correlation ranged from .22 to .88 with a very small probable error in most grades.

8. The criteria used to validate the tests show what may be considered a reasonable degree of validity. The grades made in the social studies, when correlated with tests, gave coefficients ranging from .26 to .58. Teachers' estimates of the ability of pupils gave correlations which ranged from .42 to .76.

9. It was evident that some of the low scores were due to lack of knowledge; some to inability to weigh the factors or elements and to attach the correct importance to each; and other low scores were due to the inability to place the necessary elements in their proper relationship. The findings justify the conclusion that, although information is necessary for reasoning, it is not in itself sufficient to insure reasoning. This seems to be true of the majority of the poor students, many of the average students, and, in some instances, of the best students.

10. The gradual rise in the average of correct responses from grade to grade might be taken as evidence of the development of reasoning power, although this development appears to be slow, and is, generally, the result of the achievement of the more intelligent pupils, the poorer students seemingly being too busy in the mastery of detailed facts to acquire an intelligent method of applying them.

11. Skill in the memorization of facts does not necessarily mean habits of skill in their application. Many students, below the median in rendering correct judgments, were in the upper quartile in the distribution table dealing with the acquisition of facts; while a large number, who had not acquired so many facts, ranked high in the number of correct judgments rendered. This condition was found to exist throughout all grades, and seems to justify the statement that there should be developed a method of application of social-civic facts along with the process of their acquisition.

12. It is rather doubtful that correct attitudes will be formed from the mere memorization of vast numbers of facts to be used for examination purposes alone. Facts about the history of economic problems may be assumed to be of no value today unless they contribute something to the solution of the present acute economic problems. Our present attitudes towards these problems probably were not produced by historical facts but by the immediate vital problems.

Recommendations

The study has been made primarily for the purpose of testing the intellectual achievement of adolescent boys and girls, as indicated by their ability to perceive and interpret social situations. It has resulted in the development of a new test which purports to measure the range of acquired information and the ability to apply this information along with other available knowledge in the interpretation of a group of social and civic situations. This attempt merely marks a beginning in this direction; it is by no means an adequate treatment of this broad problem. The writer realizes the need of extensive effort along the lines he has attempted. The success of such an effort will largely be determined by extensive and intensive experimentation, such as is being done by Harold Rugg and his associates.

It does not seem logical to make a long list of recommendations; nevertheless, the basic findings seem to justify a few which are as follows:

1. The content of the social studies should be revised in order to provide unity, coherence, and vital content, and also for the purpose of eliminating duplication.
2. There seems to be a vital need in the improvement of methods of instruction in order to arouse interest and promote activities that will make for greater intellectual development among the citizens of tomorrow.

3. Regardless of the method used in the instructional process in the social studies, a definite testing program should be formulated which will enable the school, the teacher, and the pupil to know what information is being gained, how it is used, and what the resultant attitudes, habits, skills, and ideals will be.

4. There should be some unified attempt to determine the psychological objectives of the social studies, and to revise and organize the subject matter content in keeping with these objectives. This may mean that the subject-matter lines should largely be abandoned in the social studies.

5. The present aims should be condensed into practical workable units which could be intelligently understood by the teachers. The question of aims is not answered in terms of "where" the pupil is to go, but in "how and what" he is to do after he gets there. The aims cannot fix the process, but the process will largely determine the aims which become immediate and to a degree those that are remote; on the other hand, the remote aims become immediate as we approach their realization.

6. It should be of considerable value to obtain a knowledge of the prejudices, propaganda, and misinformation of the teachers in the social studies and other fields. Such information might show why students develop wrong or right attitudes toward particular problems.

Finally, may we say that teaching is not telling the learner what must be learned or how well it must be learned; but, rather, it is providing the situation which results in satisfaction to the learner, leaving him better qualified to attack future problems.