लाल बहादुर शास्त्री राष्ट्रीय प्रशासन अकादमी
L.B.S National Academy of Administration
मसूरी
MUSSOORIE
पुस्तकालय
LIBRARY
—
108520
अवाप्ति संख्या
Accession No. 2504
वर्ग संख्या
Class No. 372.83
पुस्तक संख्या
Book No. Hor

AMERICAN HISTORICAL ASSOCIATION

INVESTIGATION OF THE SOCIAL STUDIES IN THE SCHOOLS

• • •

STAFF

A. C. KREY
Chairman, Director of the Investigation

G. S. COUNTS
Research Director

W. G. KIMMEL
Executive Secretary

T. L. KELLEY
Psychologist, Advisor on Tests

COMMISSION ON DIRECTION

FRANK W. BALLOU, Superintendent of Schools, Washington, D. C.

CHARLES A. BEARD, formerly Professor of Politics, Columbia University; author of many books in the fields of history and politics.

ISAIAH BOWMAN, Director, American Geographical Society of New York; President of the International Geographical Union.

ADA COMSTOCK, President of Radcliffe College.

GEORGE S. COUNTS, Professor of Education, Teachers College, Columbia University.

AVERY O. CRAVEN, Professor of History, University of Chicago.

EDMUND E. DAY, formerly Dean of School of Business Administration, University of Michigan; now Director of Social Sciences, Rockefeller Foundation.

GUY STANTON FORD, Professor of History, Dean of the Graduate School, University of Minnesota.

CARLTON J. H. HAYES, Professor of History, Columbia University.

ERNEST HORN, Professor of Education, University of Iowa.

HENRY JOHNSON, Professor of History, Teachers College, Columbia University.

A. C. KREY, Professor of History, University of Minnesota.

LEON C. MARSHALL, Institute for the Study of Law, Johns Hopkins University.

CHARLES E. MERRIAM, Professor of Political Science, University of Chicago.

JESSE H. NEWLON, Professor of Education, Teachers College, Columbia University; Director of Lincoln Experimental School.

JESSE F. STEINER, Professor of Sociology, University of Washington.

METHODS OF INSTRUCTION IN THE SOCIAL STUDIES

REPORT OF THE COMMISSION
ON THE SOCIAL STUDIES
PART XV

METHODS OF INSTRUCTION IN THE SOCIAL STUDIES

BY

ERNEST HORN

Professor of Education and Director of the University Elementary School, State University of Iowa

CHARLES SCRIBNER'S SONS

NEW YORK CHICAGO BOSTON ATLANTA
SAN FRANCISCO DALLAS

COPYRIGHT, 1937, BY
CHARLES SCRIBNER'S SONS

Printed in the United States of America

All rights reserved. No part of this book may be reproduced in any form without the permission of Charles Scribner's Sons

A



PREFACE

To teachers, methods of instruction take rank with the curriculum as matters of most immediate concern. The two are closely related; and though the Commission sought at first to deal with each separately, it soon found it desirable to appoint an advisory committee to consider them together. This committee canvassed the possibility of conducting extensive experiments to determine the relative effectiveness of the various methods of instruction used in the social studies. The complexity of the teaching procedures, the lack of adequate objective measures as well as the difficulties involved in conducting controlled experiments which could be at all convincing deterred the committee from any extensive efforts in this direction. It seemed wise, therefore, at this stage in the development of more objective measures to entrust the appraisal of methods useful in this field to those most familiar with the problems involved.

Ernest Horn, who was a member of this advisory committee as well as of the Commission, was persuaded to undertake the task. He accepted this responsibility reluctantly. Though few scholars in education had carried on more research bearing upon methods in the elementary grades or been more genuinely interested in the social studies, he had not taught these subjects directly in the classroom for many years. His energies had been divided between educational research and the administration of the University of Iowa Elementary School of which he is Director. It was his wish that Henry Johnson, whose work on methods had so long served as the standard text for the training of history teachers, might under-

take the task. When circumstances rendered that impossible, he agreed to undertake it with the assurance that other members of the committee, including Henry Johnson, would help him as much as their conditions would permit.

The author's preface indicates the nature and extent of the help which he received from others. However willing they were to be of assistance, he discovered that he must bear the brunt of the work alone. He planned his work on the most comprehensive scale to include every method and device used in the teaching of this group of subjects. To this end he combed a wide range of literature to insure the inclusion of every book or article which bore on the subject. He found the literature so vast, however, that he was unable to carry his plan through on such an all-embracing scale. This added to his other labors the task of choosing what to eliminate and what to retain. As a result of all these circumstances, the completion of the volume required much longer time than he or other members of the Commission had anticipated and had finally to be achieved against the pressure of his normal duties.

Probably no one regrets more than the author himself the force of circumstances which prevented the full execution of his original plan. This volume, nevertheless, not only contains a full discussion of many phases of the subject but also indicates in somewhat summary form his judgment on most of the other phases as well. The rich store of quotation and the even richer collection of references will afford those who are interested the road to the most significant discussions of nearly all the methods in use. In general, it may be said that he has omitted or abbreviated the aspects of the subject which are treated most satisfactorily in readily available literature.

Those aspects of the subject which he has discussed more fully present material and considerations seldom found in

treatises on the teaching of the social studies. He has brought to bear upon them the fruits of his unusual knowledge of educational psychology and philosophy, his familiarity with research in educational measurement, a rare knowledge of the subject matter of social science as well as his incisive critical ability. This has enabled him to present to supervisors and teachers of social studies much essential material that has hitherto been unavailable or unapplied. In doing so he has made a distinct contribution to the whole subject which the educational world will heartily welcome.

As has already been said, this volume is largely the work of the author alone. He has chosen, as opportunity offered, to express his own personal convictions on problems discussed by the Commission as a whole. He has done this in that same vigorous manner in which he contributed to the oral discussions of that body. The members of the Commission, who enjoyed and profited from those contributions of his even when they could not fully agree with them, will be glad to see this material in this more permanent form and to share it thus with the teaching profession.

A. C. KREY, *Chairman.*

ACKNOWLEDGMENTS

In the preparation of this volume, an attempt was made to canvass very thoroughly all of the recent literature, including unpublished theses, bearing on the teaching of the social studies and on the closely related problems of learning. This task, which, in the time available, could not have been accomplished alone, was made possible, first, by a subvention from the funds of the Commission, and later, by supplementary grants from the Graduate College and the College of Education of the State University of Iowa. To all of the staff of assistants who aided in the preparation of the volume I am deeply grateful.

My greatest indebtedness is to three persons: to Dr. Marion Anderson, to Ruth Friedrich, and to Thelma Peterson. For approximately three years, Dr. Anderson assisted in gathering materials and carried on most of the search for unpublished studies. She was responsible for arranging and filing all notes for ready access and gave invaluable assistance in preparing the manuscript and in reading the proof. When Dr. Anderson accepted a position elsewhere, her work was capably taken over by Ruth Friedrich, who also reviewed the German literature in the field of the social studies. During more than four years, Miss Peterson did all the stenographic work involved in the preparation of the volume, and in addition, gave valuable assistance in the canvass of pertinent research, in the preparation of the manuscript, and in the reading of the proof.

Valuable assistance was also given by a number of persons employed for a part of the period during which the volume was in preparation. Dr. Dorothy McMurry gathered a large amount of the material on objectives; on correlation, integration, and fusion; on questioning; on the textbook; and on imaginative literature. She also assisted in the preparation of preliminary drafts of the manuscripts on the last three of these subjects. Dr. T. J. Tormey reviewed much of the material on the administrative aspects of method. Dr. Emma McCloy Layman and Dr. Guy Wagner

were of great assistance in the survey of the literature on certain psychological aspects of method. Dr. Agnella Gunn assisted in gathering the material for the chapters on dramatization and imaginative literature, as well as in preparing the manuscript of these chapters.

I am also deeply obligated to my colleagues in the College of Education, especially to Dr. Howard Anderson, who read all of the manuscript, and to Dr. Charles Robbins, who read the proof.

Members of the Commission gave aid and encouragement in numberless ways. My debt is especially great to the chairman, Dr. A. C. Krey, who read the entire manuscript and made valuable suggestions for co-ordinating the treatment with that of the other volumes of the Commission.

I wish to express my appreciation also for the generous aid given by a large number of persons who read various chapters and made suggestions for their improvement. Acknowledgment to these individuals is made by chapters, as follows:

Chapter II, "The Identification and Classification of Students for the Purpose of Teaching," to Dr. A. E. Brown; Dr. C. L. Cushman; Bess Goodykoontz; Dr. Earl Hudelson; Dr. Manley Irwin; Dr. Helen K. Mackintosh; Dr. Helen R. Messenger; Dr. A. H. Turney; Dr. Carleton Washburne; Dr. Beth Wellman; Dr. Frederick L. Whitney.

Chapter III, "What and How to Think," to Dr. Elmer Ellis; Dean M. E. Haggerty; Dr. W. A. Jessup; Dean P. C. Packer; Dr. C. A. Ruckmick.

Chapter IV, "The Problem of Meaning in the Social Studies," to Dr. John Dewey and Dr. Herbert Feigl.

Chapter V, "Reading in Relation to Learning in the Social Studies," to Prof. Alison E. Aitchison; Dr. Irving Anderson; Dr. B. R. Buckingham; Dr. Donald S. Durrell; Dr. Herbert Feigl; Dr. Arthur I. Gates; Dr. William S. Gray; Maude McBroom; Dr. Paul McKee.

Chapter VI, "The Textbook and Collateral Reading," to Dr. W. G. Kimmel and Dr. R. E. Swindler.

Chapter VII, "The Use of Imaginative Literature," to Dr. Isaiah Bowman; Dr. E. A. Cross; Dr. Norman Foerster; Dean Guy

Stanton Ford; Dr. Thomas Knott; Dr. Charles E. Merriam; Ruth Moscrip; Dr. Winfred T. Root; Prof. Elbert N. S. Thompson.

Chapter VIII, "Oral Instruction," to Dr. C. L. Cushman; Dr. Harl R. Douglass; Barbara Henderson; Dr. Herman H. Horne; Mary G. Kelty; Dr. Paul McKee; Dr. Helen K. Mackintosh; Dr. Helen R. Messenger; Dr. Ralph H. Ojemann; Dr. Bessie L. Pierce; Dr. F. M. Quance; Maurine Rogers; Dr. Guy V. Wagner; Dr. G. M. Whipple.

Chapter IX, "Visual Aids," to Alfred W. Abrams; Prof. Alison E. Aitchison; Dr. Isaiah Bowman; Frances Consitt; Dr. Helen C. Davis; Dr. Fannie W. Dunn; Dean Guy Stanton Ford; Annette Glick; Prof. Henry Johnson; Mary G. Kelty; Dr. Daniel C. Knowlton; Dr. Helen K. Mackintosh; Dr. F. M. Quance; Prof. Zoe A. Thralls; Dr. Rolla M. Tryon; Dr. Ben Wood.

Chapter X, "Sources of Concrete Experience," to Prof. Alison E. Aitchison; Dr. Isaiah Bowman; Elaine Dickinson; Annette Glick; Dr. Paul R. Hanna; Prof. Henry Johnson; Mary G. Kelty; Ella B. Knight; Maude McBroom; Ethel Mabie Falk; Dr. Helen K. Mackintosh; Dr. Lois C. Mossman; Dr. L. V. Newkirk; Dr. Edwin H. Reeder; Dr. Edward H. Reisner; Mabel Snedaker; Prof. Zoe A. Thralls; Dr. Rolla M. Tryon; Dr. Howard E. Wilson.

Chapter XI, "Devices for Stimulating the Imagination," to Dr. Allan Abbott; Prof. Alison E. Aitchison; Dr. Isaiah Bowman; Dr. Ada L. Comstock; Dr. A. O. Craven; Dean Guy Stanton Ford; Dr. Harry A. Greene; Dr. Daniel C. Knowlton; Dr. R. L. Lyman; Dr. Norman C. Meier; Dr. Charles E. Merriam; Dr. Edith Parker; Prof. Zoe A. Thralls; Dr. Rolla M. Tryon; Ruth Mary Weeks; Dr. Howard E. Wilson.

Chapter XII, "Provision for Future Use," to Dr. Frederic B. Knight and Dr. Joseph Tiffin.

The suggestions made by those to whom credit has been given above were invaluable in calling attention to important data or bibliographical items which had been omitted, and even more so, in recommending qualifications or interpretations that would otherwise have been overlooked.

ERNEST HORN.

CONTENTS

		PAGE
PREFACE—A. C. KREY		vii
ACKNOWLEDGMENTS		xi
CHAPTER		
I.	THE PERSPECTIVE IN WHICH METHOD IS TO BE VIEWED	1
	Introduction	1
	Method in Relation to Social Purpose	2
	Method in Relation to Subject Matter	6
	Method as Conditioned by the Organization of the Course of Study	8
	Method as Affected by Grade Arrangement	16
	Method of Teaching in Relation to Fundamental Modes of Inquiry	22
	Method in Relation to Equipment	30
	The Learner and the Learning Process	31
	The Influence of Certain Administrative Factors upon Method	32
	Broad Types of Teaching	33
	The Crucial Influence of the Teacher	34
	The Effect of Supervision	35
	Conclusion	37
II.	THE IDENTIFICATION AND CLASSIFICATION OF STUDENTS FOR THE PURPOSE OF TEACHING	40
	The Nature and Significance of Individual Differences	40
	The Grouping of Students	54
	Class Size	68
	Evidence from Other Subjects	71

CHAPTER PAGE

Evidence in Social Studies 72
Conclusion 76

III. What and How to Think 79
Introduction 79
Indoctrination and Propaganda 80
I. Shall the Schools Have a Social Program? 84
II. Shall Controversial Issues Be Taught? 87
III. Shall Freedom of Teaching Prevail? 96
IV. Shall the Schools Teach Pupils How to Think or What to Think? 104
V. Shall Symbolism, Conditioning, and Emotional Appeal Be Used? 113
Conclusion 118

IV. The Problem of Meaning in the Social Studies 122
The Fundamental Importance of Understanding 122
Understanding as an Active Process 123
Factors Which Influence Understanding 125
The Nature of the Problems in Social Studies 125
The Media Through Which Social Realities Are Approached 126
Limitations Inherent in the Student 129
The Effect upon Understanding 141
Implications for Testing and Teaching 147

V. Reading in Relation to Learning in the Social Studies 151
Prevalence of Verbalism 151
The Nature of Reading 152
The Symbolic Character of Language 154
The Broad Perspective 156

CHAPTER PAGE

Reading Difficulty in Relation to the Difficulty of Ideas 157
Difficulties Pertaining to the Nature of Reading Material 158
Difficulties Inherent in the Limitations of the Reader 171
Differences in General Reading Ability 173
The Relationship of Intelligence to Reading 175
The Relation of Interest to Reading 176
Relation of Experience to Reading 177
The Effect of a Single Reading 180
Examples of Inadequate and Erroneous Concepts 187
Time Required for Reading 199
The Improvement in Reading in the Social Studies 200

VI. The Textbook and Collateral Reading 206
The Prevalence of the Textbook Method 207
The Limitations of Texts 210
Influences Detrimental to the Production of Good Texts 214
The Use of the Text 218
Workbooks 220
Collateral Reading 223
The Development of Collateral Reading 225
Functions of Collateral Reading 229
Source Study 236
The Effects of Collateral Reading upon Learning 239
The Selection of References 244
Practical Problems in the Management of Collateral Readings 247
The Assignment 247
Methods of Appraisal 256

CHAPTER PAGE

The Crisis in Instructional Equipment 257
Policies with Regard to Library Purchases 261

VII. The Use of Imaginative Literature 265
Relationship between History and Literature 266
Contemporary Fiction 269
Historical Fiction 274
Pedagogical Value of Imaginative Literature 281
The Use of Imaginative Literature in Teaching Geography 292
Guides to Fiction for Use in Teaching the Social Studies and Geography 296

VIII. Oral Instruction 300
Introduction 300
Oral Instruction in the Elementary School 300
Oral Instruction at the High School Level 303
Oral Instruction in College 304
Investigations of Oral Teaching 307
The Radio 326
Informal Discussions 334
Other Forms of Oral Presentation 335
Questioning: Prevalence of the Question-and-Answer Recitation 336
The Experimental Study of Questioning 338
The Importance of Questioning as Revealed by Its Functions 342
The Influence of Questioning upon Meaning 344
Problems in the Technique of Questioning 347
The Rapidity of Questioning 349
Distribution of Questions 352

CHAPTER PAGE

The Utilization of Pupils' Questions and Answers 354
Conclusion 357

IX. Visual Aids 359
Introduction 359
Pictures 360
Types of Pictures 364
Methods of Representation 378
Standards for Evaluating Pictures 379
The Use of Pictures 381
Graphs and Charts 386
Maps 388

X. Sources of Concrete Experience 393
The Use of Concrete Experiences 393
1. Objects, Exhibits, Museums 396
2. Excursions 403
3. Constructive Activities 413

XI. Devices for Stimulating the Imagination 441
Introduction 441
1. Making Graphic Aids 446
2. Imaginative Writing 458
3. The Imaginary Journey 464
4. Dramatization 471

XII. Provision for Future Use 481
The Nature and Importance of Memory 481
Implications for Instruction in Social Studies 496

Index 511

CHAPTER I

THE PERSPECTIVE IN WHICH METHOD IS TO BE VIEWED

INTRODUCTION

The methods of social education in the schools, broadly conceived, include all the instrumentalities through which social purpose, knowledge, attitudes, and behavior are effected: the formulation of dynamic and intelligible statements of the ultimate purposes of instruction; the determination of the function of the school as a social institution; the co-ordination of the efforts of the school with those of other educative agencies, such as the home, the church, and the community at large; the selection and sequential arrangement of what is to be taught, *i.e.*, a statement of proximate goals; the planning of buildings and instructional equipment; the creation and maintenance of effective educational leadership; the preparation, selection, and development of qualified teachers; the discovery of the potentialities and limitations of the human material with which the school must deal; the selection and classification of the school population for purposes of instruction; and the development of effective methods of teaching.

While this volume of the report of the Commission is focused primarily upon the last of these problems—upon methods of instruction—it has been written in full cognizance of the fact that this problem cannot be solved apart from the intimate relationships that exist between it and all of the others. Indeed, a decision on any one of these other matters must of necessity be reflected in methods of teaching.

No claim is made for the newness or originality of this broad conception of social education. The trend in both the theory and practice of teaching has long been definitely in the direction of such a view. Many institutions created for the training of teachers have organized their courses with the express purpose of keeping method in this perspective. Responsible committees of teachers and supervisors have urged this view almost without exception.[1] Nevertheless, method has often been too narrowly conceived and not infrequently has been formal and didactic. These faults are not to be charged to an antagonism toward a comprehensive view of method but should be attributed to the extent and complexity of the various related factors that must be kept in mind, to the pressure of the immediate problems of the classroom, and to the distortion that seems inevitably to accompany the extension of the frontiers of specialized knowledge. But although specialism is probably no more narrowly confined in methods of teaching than in other fields of endeavor, its consequences here are especially disastrous. Unusual precautions should be taken, therefore, to view method steadily in the broad setting that gives it meaning and to keep in mind the goals that constitute the norms for its appraisal.

METHOD IN RELATION TO SOCIAL PURPOSE

"Since purpose gives direction and meaning to every educational undertaking, it follows that method apart from purpose lacks both direction and meaning; that the best method linked to inferior, irrelevant, confused or unsocial purpose, as judged by some accepted frame of reference, can give only

[1]See the yearbooks of The National Society of College Teachers of Education, especially *Yearbook Number XXI*, 1933, "The Educational Frontier," and *Yearbook Number XXIII*, 1935, "The Education of Teachers." The University of Chicago Press, Chicago.

inferior, irrelevant, confused or unsocial results; and that method, like knowledge, must be conceived, applied, and appraised in terms of purpose."[2]

With this forceful admonition, taken from the *Conclusions and Recommendations* of the Commission on the Social Studies, the writer of the present volume is in complete agreement. Yet an examination of the statements of purposes or objectives as commonly set forth in the prefaces of courses of study and in the general literature leads one to suspect that such statements contribute not to understanding and perspective but to confusion. One is impressed by the enormous number and variety of the purposes or objectives that are alleged to guide instruction and to be attained through it. Miller, from a study of periodical literature, committee reports, courses of study, and other sources, found over 1400 different objectives for teaching American history.[3] Kimmel found 135 objectives for one course of study in social studies in a single grade, 85 in the introduction to one unit alone, and 47 mimeographed pages of objectives in one junior high school course of study.[4]

Almost every conceivable purpose that could be claimed for instruction in any field is to be found among the objectives listed for the social studies. The statements fail utterly to recognize the differentiated purposes of the various disciplines within the social studies or the purposes of social studies as a whole as contrasted with those of other fields. The multiplicity and diffuseness of the statements of objectives are matched by their vagueness, inconsistency, and romantic unreality. An

[2]American Historical Association, Commission on the Social Studies, *Conclusions and Recommendations of the Commission.* Charles Scribner's Sons, New York, 1934, p. 69.

[3]Miller, Earl, *A Study of the Objectives in the Teaching of American History.* Master's thesis, University of Wisconsin, Madison, 1928.

[4]Kimmel, W. G., "Observations by a Visitor from Atlantis on Instruction in the Social Studies," *The Social Studies* XXV (April, 1934), p. 183.

unfortunate teacher who attempted to follow such lists would rival Stephen Leacock's hero, who mounted his horse and rode off in all directions. Slogans and stereotypes abound, and there is little evidence that the implications of the statements for instruction are understood. Indeed, the listing of objectives seems to be a formality that must be attended to as a matter of ritual rather than the setting up of clear purposes and points of view by which instruction is to be shaped and appraised. At any rate, it is difficult to discover much connection between the statements of objectives and the statements of curriculum content or the suggestions of methods that they preface. The cost of printing the syllabi of the course of study would be greatly reduced, without loss and perhaps with gain to the teacher, if instead of the typical list of objectives, one should introduce each unit with the Biblical injunction: *Finally, brethren, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things.*

There is, nevertheless, some justification for a multiplicity of aims, if woven into an intelligible pattern. The aims and processes of social life are exceedingly complicated, and if the school is to deal with them in a realistic manner, this complexity must be reflected in the curriculum and in the methods of teaching. But an inordinately extended list of objectives—indefinite, contradictory, full of slogans and stereotypes, and void of emphasis—bewilders rather than orients the teacher in this complex situation. It is possible that if the lists were made more explicit and more consistent, if perspective could be maintained, and if they were set up competently and sincerely, with full view of their implications for content

and methods, some useful purpose might be served. What is really needed, however, if understanding is to be fostered, is not a list but a treatise. The *Charter for the Social Sciences*[5] and *Conclusions and Recommendations*[6] represent the attempt of this Commission to give in perspective the most important goals of instruction and to indicate their implications for education.[7]

The *Charter for the Social Sciences,* although necessarily condensed, develops very clearly the points of view that, in the judgment of the Commission, should guide the thought of American citizens and that, therefore, should be reflected in instruction: the mandate that the truth should be sought, and that reality should be faced; the discipline of the emotions; the organizations of knowledge that are most effective for thinking; the recognition that conditions and norms are evolving; the implications of the principles of democracy; the influence of the climate of public opinion; the right of the individual to resist excessive social pressure; the belief that freedom of thought and teaching are indispensable; the willingness to accord the same freedom to others that is demanded for oneself; the need for openmindedness; and the fundamental place of ethical impulses in the study of all social questions. The importance of these points of view is re-emphasized and elaborated in many supporting volumes.[8] None of

[5]Beard, Charles A., *A Charter for the Social Sciences in the Schools.* Charles Scribner's Sons, New York, 1932.

[6]*Conclusions and Recommendations.*

[7]For another attempt of a similar nature, see *The Social Economic Goals for America,* Report of the Committee on Social-Economic Goals of America. National Education Association, Washington, D. C., 1934. See also "The Social Studies Curriculum," *Fourteenth Yearbook,* Department of Superintendence, Washington, D. C., 1936; *The Unique Function of Education in American Democracy.* Educational Policies Commission, National Education Association and Department of Superintendence, Washington, D. C., 1937.

[8]Beale, Howard K., *Are American Teachers Free?* Charles Scribner's Sons, New York, 1936; Bowman, Isaiah, *Geography in Relation to the Social Sci-*

these volumes, however, attempts to trace in an explicit and thoroughgoing manner the implications of these points of view for the curriculum and for methods of teaching. In its *Conclusions and Recommendations,* the Commission does present in broad outlines what it believes to be the implications of "the frame of reference" for materials of instruction, for methods of teaching, for testing, for the training of teachers, and for the administration of schools. No teacher who reads critically the *Conclusions and Recommendations* and the supporting volumes can fail to find valuable guidance in formulating his methods of teaching.

Statements of general implications for content and methods, no matter how skillfully formulated, are not sufficient, however. What is needed is a clear and unequivocal exposition of the way in which these guiding principles may be embodied in the selection, emphasis, and organization of each unit in the course of study and in the methods suggested for its teaching. Until this is done, the gap between objectives and teaching is likely to remain.

METHOD IN RELATION TO SUBJECT MATTER

The particular method or methods to be used in any teaching situation must be determined partly by the nature of the students and partly by the nature of the subject matter to be taught. "In the measure that method is dissociated from appropriate content or knowledge of pupil growth," concludes

ences. Charles Scribner's Sons, New York, 1934; Counts, George S., *The Social Foundations of Education.* Charles Scribner's Sons, New York, 1934; Marshall, Leon C., and Goetz, Rachel Marshall, *Curriculum Making in the Social Studies,* Charles Scribner's Sons, New York, 1936; Merriam, Charles E., *Civic Education in the United States.* Charles Scribner's Sons, New York, 1934; Newlon, Jesse H., *Educational Administration as Social Policy.* Charles Scribner's Sons, New York, 1934; Pierce, Bessie Louise, *Citizens' Organizations and the Civic Training of Youth.* Charles Scribner's Sons, New York, 1933.

the Commission on Social Studies, "education becomes shallow, formal or capricious, or all three."[9] Consider first the dependence of method upon subject matter. That method is a function of the thing to be taught is shown in every aspect of learning: in interest, in understanding, in thinking, and in providing for retention and growth. The methods of teaching students to understand how the tepee was adapted to the needs of the Plains Indians are essentially different from the methods of teaching the problem of old-age pensions. The effectiveness of the learning of students in either case will be dependent upon the adequacy of the teacher's knowledge, his sense of the significance of the problem, his understanding of the students who are to do the learning, and his command of the specific methods that are appropriate to that unit. There are three factors in the subject matter of typical curricula in the social studies that in themselves create very serious problems of method: First, many of the topics or problems are inherently difficult, and especially so at the grade levels where they are studied. For example, there is no method by which the teacher, in the time at his disposal, can, as required in one text, teach eighth-grade students the Federal Reserve Act, the reasons for its enactment, its chief provisions, and the benefits to the country. Second, there is too much to be taught; more than a thousand difficult topics are sometimes studied in a single year and, not uncommonly, five or more are assigned for a single class period. This requires the student to attempt the impossible. Third, many of the topics bear little relation to the needs and purposes of either the student or the average intelligent adult. Under the circumstances, it is not strange that interest should lag and that students, unable to understand the topics or to see their significance, should

[9] *Conclusions and Recommendations*, p. 71.

make half-hearted efforts or resort to formal and verbal methods of learning.[10]

METHOD AS CONDITIONED BY THE ORGANIZATION OF THE COURSE OF STUDY

Although it is difficult to distinguish between the content of a course and its organization, these two aspects must be differentiated for practical purposes. A course can scarcely be good in organization and poor in content, but it may well be good in content and poor in organization. Some of the textbooks and courses of study that have been popular in recent years may owe their success to the vitality of their content rather than to their organization.

While it is not the purpose of this volume to describe in detail or to evaluate the various organizations of curricula in the social studies, their significance for methods of teaching should be pointed out. A decision as to organization is a decision in the grand strategy of method. Tryon classifies plans of organizing the course of study into four main types[11]: (*a*) Isolation, in which the integrity of individual subjects, such as history and geography, is maintained without any special effort to relate them to the other social studies. (*b*) Correlation, in which the subjects still retain their integrity but are related one to the other to some degree. Under this plan two or more subjects may run parallel in the same grade. For example, the European background in history may parallel the study of the geography of Europe. (*c*) Concentration, in which

[10]This statement of the relation between content and method is intentionally brief, since this relationship is treated in detail in later chapters, especially Chaps. IV to VI.

[11]Tryon, Rolla M., *The Social Sciences as School Subjects*. Charles Scribner's Sons, New York, 1935. For another classification of types of organization, with evaluations, see *Fourteenth Yearbook*, Department of Superintendence, Chap. IX.

some one subject, such as history, becomes the center and other subjects are integrated with it. (*d*) Unification, in which all traditional subjects lose their identity. In this classification Tryon is chiefly concerned with interrelations among the various social studies, including geography, but each plan may be expanded to pertain not only to social studies but to all the subjects of the curriculum. Each type is found in a variety of forms, and the term used in any school does not necessarily indicate what the organization really is. Any form of organization may be adopted for a number of reasons. For example, either concentration or correlation may be decided upon (*a*) because it is thought to be a better integration of knowledge for use in life, (*b*) because it is believed to facilitate learning, or (*c*) because it is held to save time and to simplify the school program.

Before the influence of these various forms of organization upon methods of teaching is briefly traced, attention should be called to the importance of organized knowledge as a basis for all thinking and learning. Its value is unmistakable at all stages of instruction: in giving perspective in the early stages of learning, in maintaining the perspective as ideas develop, and in providing for the retention, growth, and use of knowledge in the future. Mere organization is not sufficient for thinking and for learning, moreover; effective organization is required. The criteria for judging effectiveness may be set up either in terms of the organization most useful for thought and action in life outside the school, or in terms of that which best facilitates learning in the school. Generally speaking, however, the organization that is most useful in life outside the school is likely to be the one that best facilitates learning in the school. This conclusion seems inevitable in view of the fact that the problems making up the course of study should

be of greatest importance in life, and the further fact that the requirements for understanding these problems in the school differ in degree rather than kind from those in life outside the school. The practical question then is, what organization or organizations of knowledges, attitudes, and habits of thinking best facilitate understanding and thought in the field of the social studies? It seems certain that not one but many organizations are required. One doubtless needs organizations that focus directly upon social conditions, problems, and processes of modern life. One also needs those that furnish the point of view for thought about these conditions, problems, and processes. The most important of these organized backgrounds appear to be history and geography, but others, such as political science, economics, and sociology, are also needed.

The Effect of Isolation—The isolation of any of the subjects usually classified under social studies does violence to the requirements of thought, and hence creates an artificiality in method. Its effects may be illustrated in the case of history. For example, historical movements or problems cannot be understood apart from their geographical setting or their relations to other social disciplines. Yet many textbooks and courses of study fail to present history in this perspective. The narrowness and artificiality resulting from such isolation are further increased, in some instances, by an overemphasis on war and politics to the neglect of social, economic, and cultural aspects. If the relationships essential to the study of history as history are developed, however, there is little need for special pedagogical arrangements for relating this subject to others. Under these conditions, isolation would merge into concentration as described below.

Correlation—Attempts at correlation have always opened up serious problems, both in practice and in theory. It is very

difficult to co-ordinate the work of teachers in the various related subjects. There is often a good deal of unnecessary duplication. It is by no means clear, moreover, that it is more efficacious to correlate within any given period of time than to correlate at some later time. Good results, for example, may be achieved by teaching the geography of the United States in one grade and the history of the United States in a later grade, since, by this means, interest may be kept up and growth facilitated. Where neither the plan of concentration nor of unification is followed, however, there are undoubtedly sound reasons for practicing, within limits, both simultaneous and sequential correlation.

Concentration—The plan of teaching, at any grade level, only one of the social disciplines and integrating other social studies with it provides for a much more intensive study of each problem than is possible if two or more subjects parallel each other. In achieving this benefit, the plan of concentration need not be regarded as a mere pedagogical device if the integration of other subjects is determined by the needs of the core subject. Frederick Jackson Turner's courses in history, for example, were almost as valuable from the point of view of geography or economics as from the point of view of history. Both history and geography have unusual advantages as centers around which the social studies may be grouped, not because of their adaptability to pedagogical manipulation but because of the essential nature of the subjects themselves. It is Beard's judgment that, when its content is properly selected and arranged, ". . . history can furnish cement to bind all other social disciplines into a workable unity, giving to them a patterned background and, by virtue of its basic time element, a dynamic which pertains to the future."[12]

[12]Beard, *Charter for the Social Sciences*, p. 20.

An equally strong case can be made for geography, especially if the point of view is that of historical geography. But if we are to profit from past experience with plans of concentration, we must avoid like the plague any attempts to introduce materials foreign to the requirements of thought in the subject that is made the center. It is to a violation of this principle of essential pertinence that many failures in the past are to be largely attributed. To make any one subject, such as history, the core at all levels, moreover, is unwise. The concentration should be now upon one and now upon another of the basic disciplines.

Unification—The fundamental assumption in plans of unification, or, as they are sometimes called, of fusion or integration, is that subjects should lose their identity in the curriculum. This assumption is justified only (*a*) if the organized bodies of knowledge are held to be of little value in the mental equipment of the intelligent citizen, or (*b*) if these organizations are shown to result from such incidental learning as takes place in the fusion plan. Neither of these assumptions would seem to be justified. Whether a student can gain a better understanding of modern problems through unification than through an improved selection and arrangement of the content of such subjects as history, geography, sociology, civics, and economics is a matter upon which there is conflicting opinion.[18] Nevertheless, as has already been indicated, a student does need to have his ideas organized in terms of the basic processes and problems of modern life, and there is need for a better selection

[18]Wilson, Howard E., *The Fusion of Social Studies in Junior High Schools.* Harvard Studies in Education, Vol. XXI, Harvard University Press, Cambridge, 1933; Rugg, Harold, "A Preface to the Reconstruction of the American School Curriculum," *Teachers College Record* XXVII (March, 1926), pp. 606–7. See also, by the same author, pertinent selections in the *Twenty-second Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1923.

and synthesis of knowledge than is now available. When such an organization has been accomplished, it may well be made the center for selecting and arranging the content of the curriculum at certain levels. The degree to which any such organization will facilitate thought and, by implication, methods of learning, will depend upon the character of the guiding principles and the soundness of the selection and arrangement of the content. It must be admitted that both the organization and content of much of what goes under the name of "social studies" does not command the respect of scholars in the social sciences.

The Relation of the Social Studies to the Curriculum as a Whole—The theories of isolation, correlation, concentration, and fusion have been applied not only to establishing relationships between the various social studies but between these subjects and the other subjects of the curriculum. At the present time, there are a good many who advocate making the social studies the core of the entire course of study.[14] The advantages claimed for such a plan are, on the one hand, that it motivates and vitalizes the work in other fields, saves time, and simplifies the curriculum; and, on the other hand, that it enriches and deepens instruction in the social studies themselves. The objections urged against it are that citizenship is but one of the important phases of the life of a normal person, that other values cannot be left to mere incidental development around any single core, and that forced and artificial fusion, correlation, or integration is, under such a plan, inevitable.

Integration, within certain limits, undoubtedly facilitates learning both in the social studies and in the subjects that are

[14]For a discussion see Wilson, *Fusion of Social Studies;* Rugg, "Preface to Reconstruction of the American School Curriculum."

integrated with them. The limits must be carefully drawn, however. There must be no overloading of the social studies, no breaking down of the incisiveness of thought, no blurring of the focus upon the social studies themselves in order to facilitate learning in some other field. The question that each teacher should ask is not, "How can I correlate social studies with other subjects?" but "What skills, knowledge, or points of view from these subjects are indispensable in the learning of the problem at hand?" There must, moreover, be a place in the program for all essential subjects.

An illustration in the case of mathematics will make this principle clear. It is not possible to get far into social studies without attention to their quantitative aspects. Nothing contributes more to clear, accurate, and well-organized ideas about a social problem than does an adequate grasp of the quantitative data that bear upon it. The summary and general character of textbooks in the social studies has been criticized repeatedly, and it is particularly objectionable in the treatment of quantitative matters. When these books substitute indefinite terms for precise numerical statements, they make the text not simple, as the authors probably intend, but vague and obtuse. To say *many, many years ago* instead of stating the exact or the approximate number of years is to invite misconceptions and confusion. Experiments with elementary school children show that *many, many years,* in a given context, may mean anything from *three years* to *a thousand.* No one can think incisively about *many, many years.* It should be clear, therefore, that the quantitative aspects of social studies are not studied primarily in order to motivate, illuminate, or practice arithmetic, but rather because reasonable exactness is essential to understanding and thought in the social studies themselves.

The learning of mathematics would be greatly facilitated, however, if exact quantitative data were included and utilized in textbooks and in courses of study. But the moment one computation unnecessary to the thought of the social studies is introduced in order to "correlate" or "integrate" arithmetic, the attention of the students is diverted, and the motivating influence of a real need is lost. The rule should be, integrate not when you *can* but when you *must*.

To summarize, no matter what the plan of organization may be, the primary justification for relating the social studies one to another or to other subjects, in any manner or in any degree, must be found in the thought required for the problems being studied. To do more is to block understanding, to destroy fundamental motivation, and to inculcate diffuse and ineffective methods of thinking.

Organization within the Subject—The plan of organization in the course of study as a whole, however, exerts no greater influence on method than the plan of organization within the subject itself, whether the subject be history, geography, or a general course under the name of social studies. For example, the emphasis upon the topic in the Report of the Committee of Ten was as much an emphasis on methods of teaching as upon the organization of subject matter.[15] In a similar way units, problems, projects, activities, and type studies relate to method as well as to the curriculum. Many so-called problems, projects, and activities found in modern texts and curricula, however, are little more than topics stated in problem form. If, on the contrary, the problem grows out of a recognized need in some social situation, is clearly seen, and sin-

[15] *Report of the Committee of Ten on Secondary School Studies.* Published for the National Education Association by the American Book Company, New York, 1894.

cerely felt by the students, the benefits to method are incalculable. Less reference is made to type studies than in the time of the Herbartians, although many of the principles appear to be used in the selection and organization of units.[16] The organization of any curriculum according to the theory of type studies exerts a tremendous influence upon methods of teaching.[17]

There is no better illustration of the way in which the internal organization of the subject affects method than that afforded by the biographical method. Teachers and students floundered for years because of the erroneous theory that great characters are easier to understand and more interesting than social problems. Fortunately, the trend is now away from this plan of organization to that which is determined by the problems of the social group.[18]

METHOD AS AFFECTED BY GRADE ARRANGEMENT

The grade arrangement of the course of study affects method in three ways: first, by the closeness with which the instructional materials in any grade are related to the special needs, abilities, and interests of the students in that grade; second, by the manner in which the sequential arrangement provides for the maintenance of what has been learned and for

[16]McMurry, Charles A., *Teaching by Projects.* The Macmillan Company, New York, 1920; Hill, Howard C., and Weaver, Robert B., "A Unitary Course in United States History for the Junior High School," *The School Review* XXXVII (April, 1929), pp. 257 ff.

[17]Mitchell, Morris Randolph, *A Critical Evaluation of the Type-Study Plan as an Organizing Principle for Texts in American History.* George Peabody College for Teachers Contribution to Education, No. 33, Nashville, Tennessee, 1926; McMurry, Donald L., "Type-Study Units in the Social Studies," *The Historical Outlook* XXIV (December, 1933), pp. 431–41.

[18]Johnson, Henry, *Teaching of History in Elementary and Secondary Schools.* The Macmillan Company, New York, 1928, pp. 178–201.

the facilitation of new learning; and third, by the assumptions that are made as to the nature of growth and development. The second and third points are obviously closely related.

Some of the most difficult problems in teaching the social studies grow out of the fact that many of the topics or units are far removed from the student's experience and unrelated to his interests and needs.[19] Closely associated with these difficulties are those that arise from the failure to relate each unit to what has gone before and to what is to come after, so as to afford a constantly expanding hierarchy of interests, ideas, and ways of thinking. Of great significance also are the theories as to the way growth is best facilitated. Some educators, for example, emphasize growth through the mastery of increments that have been arranged sequentially so that the mastery of each facilitates the learning of those that are to follow. This is sometimes termed the instructional theory of learning. Others believe that growth proceeds not by the mastery of increments but by organic development. This is sometimes called the developmental theory of learning. While both theories are untenable in their extreme forms, and although they are really not so far apart, at least in practice, as their proponents seem to assume, it unquestionably makes a great difference which predominates in the teacher's thinking.

To show how the course of study is or should be graded is not, however, the purpose of this volume. The history and present status of the theory and practice pertaining to this problem are discussed by Tryon,[20] theories on grading history

[19]These problems are discussed in detail in Chaps. IV and V.
[20]Tryon, *Social Sciences as School Subjects*, pp. 429–529.

are critically reviewed by Johnson,[21] and a committee of the National Council of Geography Teachers has made proposals as to sequence in the course of study in geography.[22] It must suffice here to point out that until the course of study has been planned by grades, only to a limited extent can equipment be provided, method determined, or teachers adequately trained.

Teaching and learning in a given grade are influenced by two groups of factors: first, the nature (content, sequence, and organization) of the course of study; and second, the nature (abilities, interests, and needs) of the children. In practice, as well as in theory, these two groups of factors are made to depend upon each other in a manner that creates a logical confusion. For example, children are placed in the third grade when they are assumed to be equipped to learn, or at least to profit from, the course of study in that grade, but the selection, organization, and sequence of this course of study are assumed to be appropriate for third-grade children. The confusion resulting from this logical difficulty is heightened by the fact that there is, on the one hand, no such thing as third-grade ability, or third-grade needs, or third-grade interests; and on the other, that there is no such thing as a third-grade course of study. The abilities, needs, and interests of students at a given grade level are distributed over a wide range, with no narrowly limited central tendency, and are much more like than unlike the abilities, interests, and needs of students in adjacent grades.[23] Many absurdities in grade placement and many blunders in method are traceable to the

[21]Johnson, *Teaching of History*, Chap. II. See also, by the same author, "The Problem of Adapting History to Children in the Elementary School," *Teachers College Record* IX (November, 1908), pp. 1–60.

[22]"The Teaching of Geography," *Thirty-second Yearbook*, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, Sections II and IV.

[23]See Chap. II.

myth of the third-grade, the sixth-grade, or the ninth-grade student.

The existing courses of study for any grade exhibit an almost endless variety of contents, organizations, and sequences and show no clearly discernible central trends until the beginning of the junior high school. Indeed, Wilson and Erb found little agreement among the courses of study even at that level.[24] Marked differences are found also in the senior high school.

The present divergent practices in grade placement in the social studies are the result of a wide variety of theories and procedures, often conflicting, that have been advocated during the last thirty-five years. Among the most important of these are: pertinence to the student's present experience, needs, and interests; the difficulty of the subject matter in relation to the abilities of students; the necessities of logical sequence within the subject; alleged psychological stages of development, including the culture-epoch theory; administrative influences, including the time when pupils are admitted to and eliminated from school, relationships with other subjects, and the availability of instructional equipment; and certain assumptions regarding the most favorable conditions for learning, such as that one should proceed from the simple to the complex, from the concrete to the abstract, from the near to the remote, and from the psychological to the logical. Each of these theories relates to methods of teaching as well as to grade placement.

It is not possible to discuss here the merits and defects of all of these theories. No one of them should be used exclusively; but most of them should be given consideration in

[24]Wilson, Howard E., and Erb, B. P., "A Survey of Social-Studies Courses in 301 Junior High Schools," *The School Review* XXXIX (September, 1931), pp. 497–507.

an eclectic procedure. At the present time, the problem of the sequential pattern of the course of study is being approached from two principal points of view, which, in many particulars, are in marked opposition. In their extreme forms, they may be described as follows: (*a*) The first begins with an analysis of the needs of intelligent citizenship, decides upon the knowledge, skills, insight, and ideals that are essential to the satisfaction of these needs, and then either distributes these items among the various grades or attempts to plan the work so that it culminates in the ends desired. What is taught in any grade is determined by a number of factors, including the difficulty of learning, the demands of logical sequence in the subject, and pertinence of the subject matter to the needs, interests, and experiences of students. While such a plan recognizes that the needs, interests, experiences, and abilities of students at any level are of great importance, all these resources or limitations are made subservient to the subject matter to be taught. There is a danger that somewhat formal methods will result.

(*b*) At the other extreme is found the assumption that, if the curriculum in any grade grows out of the present needs and interests of children, future needs will take care of themselves. Regardless of its validity, this hypothesis, if sincerely and competently carried out, would exert a far-reaching influence on method. The problems in each grade would doubtless be more highly motivated, more closely related to the students' experiences, and considerably less difficult than those of the conventional course of study. The theory has not had, so far, an adequate test in practice. There are schools, to be sure, calling themselves "child-centered," that profess to be organized on this basis, but their curricula, at the various levels, show little evidence of knowledge of or interest in what

the needs and problems of children really are. The units are often shallow, are unrelated to the fundamental needs and interests of the students, and lack the sequential development so clearly essential to growth. In addition to these defects, and partly as a result of them, the units are usually more intrinsically difficult than those of traditional subjects. These "child-centered" curricula appear to be less serviceable, either in helping the student to meet his present problems or in developing the ability to meet problems in the future, than are the best of the so-called subject-matter curricula.

In spite of glaring shortcomings in carrying it out in practice, however, the hypothesis that social education proceeds best by helping children to solve their immediate problems constitutes a real challenge to teachers of the social studies. The effects upon method would be especially revolutionary if a greater emphasis were put upon the immediate problems about which students could do something: upon guarding against the dissemination of disease, upon the safe use of roads and streets, upon the responsibilities that children should assume at home, upon avoiding trespass, upon returning found articles to the owner, upon refraining from careless or malicious gossip, and upon hundreds of other types of conduct necessary to "living together well." Children, however, desire to understand as well as to do, and their interests in this respect become, with increasing maturity, more and more like those of adults.

No matter from what point of view the problem of grade sequence is attacked, the needs and abilities of children must be given far greater consideration than at the present time. Answers must be obtained to such questions as: What is a good life for students in grade one? in grade six? in grade twelve? What are the abilities and experiential resources of students at various levels? What should the student know or

feel or do to meet adequately the social situations in which he is placed? What are his interests? his responsibilities? Some progress has been made in answering these questions, sometimes by methods of research, sometimes by methods of judgment. For example, we know a great deal about the vocabulary, intelligence, and reading ability of students at various levels and about the influence of these factors upon learning in the social studies. A few fragmentary studies have been made of the social situations with which students are confronted. The existing data indicate that both child-centered curricula and those of the more traditional type fail grievously to give proper consideration to the needs and limitations of students. The result is that good teaching is impossible.

METHOD OF TEACHING IN RELATION TO FUNDAMENTAL MODES OF INQUIRY

Method in the pedagogical sense must reflect the fundamental requirements of scholarly thinking in social studies. Scholarship is not merely an accumulation of knowledge, no matter how fundamental and well ordered this knowledge may be; it is also a point of view and a method of attack. The literature on teaching the social studies places great emphasis upon teaching the truth, upon understanding rather than verbal learning, upon critical thinking, and upon the development of competence to study social questions for oneself. All these emphases are good. But in protecting himself against biased or erroneous ideas, and in directing and safeguarding his thinking, the student of the social studies must depend upon the principles and methods that have been laboriously developed and perfected by historians, geographers, economists, political scientists, and other competent workers in these

fields. There are no other sources upon which he can draw.

It is true, of course, that to understand knowledge is not the same thing as to discover it. Nevertheless, learning should be carried on in the spirit of discovery, and the student's search for sources of information, his inquiry into their authenticity, his selection, appraisal, and organization of data, and his efforts at interpretation should be guided and safeguarded by the same principles that are used in scholarly research in these fields. These requirements are demanded not because it is the primary intention of the public school to prepare for professional careers in history or geography, for example, but because, without such guidance and protection, the student will neither acquire the fundamental ideas deemed necessary for intelligent citizenship nor develop the ability to think for himself. It is true also that the thinking of the immature student is relatively simple as compared with the elaborate and technical processes that characterize the thought of the scholar, yet the differences are matters of degree rather than of kind.

Method, so conceived, is important not only because of its influence upon the student's habits of thought but because of its effect upon the quality of the concepts that he forms. *The product of thought is permeated with the process through which it was achieved, and it is not mere inert vestiges of method that remain but forces that determine the degree to which the concept is kept dynamic, growing, and usable.* Sound and vital ideas cannot result, therefore, from learning through petty teaching devices.

The dependence of methods of teaching upon the disciplined modes of thought in the social studies has been forcefully pointed out in the field of history by Johnson and by Firth. Their arguments apply, in principle, to the other social

studies and to geography. Johnson's insistence that historical method should be taught even in the elementary school is too well known to need detailed discussion here.[25] His success in teaching children how historical data are discovered, organized, and interpreted has commanded the admiration of historians and teachers alike. In England, likewise, Firth, as shown in the following quotation, sees much in common between the method of the historian and the method by which children should study history in the elementary schools:

"Yet to learn the story of the past is the business of child and historian alike, and to consider the methods of the historian may throw light on methods for the child. Each is studying history, and there are certain principles of study involved in the nature of the subject itself which may show a link between the work, say, of Maitland and of Tommy Brown. There is a method proper to history, and to analyze it may help to show how the child may best teach himself, how the teacher shall present material, and how children in studying it may learn not only history but historical method, and so forge for themselves an instrument which their minds will continue to use when school is behind them.

". . . The method of history is first of all scientific. The historian's first business is to find out the truth about the past, and he must begin by treating the material with which he has to deal as far as possible as the scientist would treat it. The search for evidence, the framing of hypotheses, their testing, their verification, modification or rejection, and the search again: this is in actual fact the process followed not only by the student in the Public Record Office, but by every teacher who works out a fresh lesson for a class, and by every child who writes his own answer to a 'thinking question.'

[25] Johnson, *Teaching of History*, Chap. XIV.

"It is true that for historian, teacher, and child alike, there is also a place for the acceptance of the work of other people; but while there is no student of history who does not at some point rely upon authority, neither is there any student of history who must not at some point and in some degree adopt the methods of science. The relative place for authority and for research will vary, of course, with the stage of the learner; but any one who has reached the point of development at which he can ask the question 'Is it true?' and has never asked it in relation to history, or followed it up by 'How do we know?' has not been studying history by sound historical method. Historian, teacher, and child alike, at their different stages, if they would learn the truth about the past, must search patiently for the facts and 'sit down before them.' . . .

"The difficulty lies, often, less in the inaccessibility of information than in the curiously common idea that so long as children are 'interested,' the accuracy of what they are told is of little importance. But history is a true story. It has no meaning otherwise. To present a child with 'fancy' pictures, with untruly colored incidents, with rhetorical rhapsodizings, with generalizations apart from evidence, or statements slovenly and confused, is to make the learning of history impossible for him and to give him something of much less value than a fairy tale."[26]

The recognition of the importance of familiarizing the student with the fundamental methods of inquiry in the social studies does not lead to the conclusion that he should make use of all of the specialized minutiæ of research in history, geography, and other related fields. To go to this extreme is impossible, and to attempt it is absurd. And yet, in a

[26]Firth, Catherine B., *The Learning of History in Elementary Schools.* Kegan Paul, Trench, Trubner and Co., London, 1932, pp. 9–13. Firth expands these arguments in Chaps. II, VIII, and IX.

simple way, it is possible to use the fundamental modes of inquiry so as to give very substantial protection against erroneous ideas and fallacious thinking. For example, statistical method is indispensable for the adequate study of many historical, geographical, economic, social, and political problems. At first thought this method may seem too difficult and formidable to be employed by students below the college level, and of course in its more theoretical and technical aspects, this is true. Yet its simple, logical elements can be intelligently and very profitably utilized in the higher grades of even the elementary school. Students, for example, can be led to realize the fallacies that are likely to result from reasoning from a single case and the consequent necessity of an adequate sampling. They can come to recognize that all cultural traits are distributed over a wide range. They can secure a working knowledge of the three measures of central tendency: the average, the median, and the mode. They can learn to look for the variations above and below the central tendency. They can even learn to use simple devices, such as the scatter diagram, for showing the relationship between two measures, as, for example, between the amount of income and the amount spent for food. If computations are kept simple, there is no reason why students should not utilize all of these statistical concepts.

The use of the field trip is another illustration of the way in which basic research procedures may be reflected in instruction. It is not expected that a field trip taken by a sixth grade to study land utilization will involve all of the refined techniques that the professional geographer brings to bear upon this problem. Yet the field trip is not a mere pedagogical device, but a fundamental method of inquiry. It may even duplicate, in the main, some of the essential procedures that the geographer uses himself. Much of the material in the

land utilization survey in England, for example, was gathered by school children, under the direction of Doctor Stamp and his assistants.

Of all the attempts to embody scholarly techniques in methods of teaching, the best-known, perhaps, is the source-study method, which for fifty years has been the subject of much controversy.[27] There can be no question of the importance of learning what are the most valuable and dependable sources of information and how to use them. But students should learn also what makes these sources dependable; that is, they must learn to recognize and use primary sources. Many successful teachers make frequent, although discriminating, use of primary sources even in the elementary school. It is obvious, however, that students below the college level, and perhaps even those in college, can construct very few, if any, of the important ideas in the social studies wholly from original sources. But students can become accustomed to inquiring as to the evidence behind statements given in their texts and reference readings. Even in the early grades, they may be led to ask such significant questions as: Is the statement true? Upon what evidence is it based? How adequate is the evidence? Why do various accounts differ? What difference does it make? Certainly no student should leave the public schools without coming to realize something of the scholarly methodology by which evidence is appraised, sifted, organized, and interpreted in the attempt to discover the truth about social problems.

It is possible, of course, to become so obsessed with the methodology used to arrive at the truth in the social studies and to spend so much time upon it that very little is learned

[27]For a bibliography of related articles, see pages 236–239. (Collateral Reading.)

about the truth itself. Methods of research, like methods of teaching, can readily be formalized and degenerate into a cult. The unfortunate extremes to which the source method was sometimes carried a few years ago in teaching history is a case in point. Methods of study must be kept subservient to the ideas, attitudes, abilities, and ideals that represent the ends of learning. Yet the attainment of competent facility in the attack on social problems is in itself one of the chief purposes of education. Johnson points out, in the case of history, that a balance must be maintained between the acquisition of a body of organized truth and the development of facility in carrying on the process of establishing and organizing truth.[28] These two purposes, far from being antagonistic, are correlative.

A student is not likely to gain an appreciation of the importance of dependable methods of thought in the social studies nor to develop facility in these methods except under teachers who themselves are accustomed to use these important procedures. The teacher's grasp of the points of view and the disciplined modes of thought of these fundamental methodologies will be reflected in setting up problems, in selecting and using references, in questioning, in guiding class discussion, in developing students' interests, and in every other aspect of his work. This suggests that teachers should, as a part of their training, become familiar with some of the authoritative books on methods of research in the social sciences.[29]

[28]Johnson, *Teaching of History*, p. 387.

[29]Barnes, Harry E., and others, *The History and Prospects of the Social Sciences*. Alfred A. Knopf, New York, 1925; Gee, Wilson (ed.), *Research in the Social Sciences*. The Macmillan Co., New York, 1929; *Journal of Educational Sociology* V (September, 1931) (entire issue); Langlois, C. V., and Seignobos, Charles, *Introduction to the Study of History*. Henry Holt & Co., New York, 1932; *Recent Developments in the Social Sciences*. J. B. Lippincott Co., Philadelphia, 1927, Chaps. I, III, VI, and VII; Rice, Stuart A. (ed.), *Methods in Social Science*. The University of Chicago Press, Chicago, 1931; Sumner, William G., and Keller, Albert G., *The Science of Society*, Vol. III. Yale University Press, New Haven, 1927.

These books may prove somewhat disturbing in their lack of complete agreement as to the importance of the various instruments of research, the points of view that should prevail, and the way in which data should be interpreted. They should leave the teacher, however, with the wholesome recognition of the fact that the work of the social scientist is never done[30] and that thought in the social studies, far from being confined within narrow limits, requires all the disciplined resources of the mind.

The demand sometimes made, however, that students should attack social problems by scientific methods alone, gives evidence of a misconception of the modes of thought and inquiry in the social studies. The limitations of scientific procedures in these fields have been repeatedly pointed out by those scholars who are most interested in improving the methods of inquiry in the various disciplines, and these limitations should be clearly recognized. While historians, sociologists, geographers, and others do not always agree as to the extent to which scientific method should prevail in the social studies or as to the manner of its use, few, if any, would deny the significance of the philosophical, normative, and æsthetic character of much of the thought in these fields.[31] Undoubtedly, however, teachers of the social studies err more consistently in neglecting than in overemphasizing the discovery and interpretation of exact data. The student should be taught that social problems are not solved solely, or even chiefly, by scientific methods, although they should be attacked in the scientific spirit. He should be sensitive to the need for a careful search for data and for the best techniques for marshaling and in-

[30]See Schlesinger, Arthur Meier, "History," in Gee, *Research in the Social Sciences*, p. 210.

[31]Beard, *Charter for the Social Sciences*. This is brought out in all of the books cited in footnote 29. See especially Rice, *Methods in Social Science*, pp. 70 ff.

terpreting them. The finished solution, good or bad, will doubtless be influenced by these data, but it will be the result of logical, and even intuitive, processes. Ideals, attitudes, and purposes will make themselves felt in each solution. To teach otherwise is to fail to teach the truth.

METHOD IN RELATION TO EQUIPMENT

Perhaps no other factor shapes and delimits method so incisively as does the nature of equipment. The formal question-and-answer recitation, which so often degenerates into a verbalistic exercise, is a common result of providing no equipment except a textbook. There is a plethora of evidence showing that students cannot understand the condensed and abstract treatment in a text, and it is not surprising that they should resort to verbalistic learning in order to satisfy their pride and to meet the requirements of their courses. One has but to place a few interesting references on the classroom shelves, and the recitation will begin to take the form of a discussion.[32] Even when inquiry has been dulled by the prolonged use of didactic methods, these references, supplemented by pictures, objects, maps, and materials for constructive activities, will revive it. The best cure for the ills attending the textbook method is to provide teachers and pupils with materials other than textbooks with which to work. While equipment cannot take the place of the teacher, the most competent teacher is hamstrung without it.

It is futile, therefore, to urge teachers to model their methods on the best modern practice when the equipment presupposed by that practice is not available. There can be no source method without sources; no map study without maps;

[32]Additional textbooks will not do. Detailed, interesting treatments are required. See pp. 229–235, 254–256.

no stimulation through concrete objects without museum materials; no laboratory method without laboratories; no use of motion pictures without films and projection apparatus. Although instructional equipment is seriously inadequate in most schools, there is some justification for pointing out the limitations of the textbook and for introducing teachers in training and in service to more effective methods of teaching. Teachers may thus be led to play their part in remedying the sorry condition that commonly prevails.

In courses on methods of teaching, in teachers' meetings, in pedagogical literature, in the resolutions and recommendations of committees, and in the prefaces to courses of study that teachers themselves help to write, the teacher is exhorted to enrich the students' understanding, to develop in them the ability to use facilities of investigation, and to teach them how to think. The importance of these goals can scarcely be overemphasized. Yet it is sheer hypocrisy to continue to pretend that we are reaching them when we know perfectly well that they cannot be attained with the pitifully inadequate facilities that are now provided in the great majority of schools. There is a crisis in instructional equipment.[33]

THE LEARNER AND THE LEARNING PROCESS

Method is inevitably influenced by the teacher's conceptions of and points of view toward child development and the psychology of learning. Psychology, moreover, represents a part of the equipment that the social scientist himself uses in securing and interpreting his data. The teacher is likely to be somewhat bewildered by the large number of schools of psy-

[33]The limitations of the textbook and the need for instructional equipment are discussed in detail in Chap. VI.

chology and by the conflicts that rage among them.[34] Freeman gives a brief, helpful review of the theories held by the various schools, summarizes the general trends, and points out the implications of each for teaching the social studies.[35] He concludes:

"All that is true in the special views can conceivably be incorporated into a comprehensive psychological theory. There can be no final conflict between facts and truths, and two incompatible theories cannot both be true. Hence, the truest psychology is the one which views all presentations of facts and hypotheses critically but at the same time receptively, weighing all in the light of the evidence, and from these forms a composite."[36]

It is from a similar eclectic point of view that the problems of learning are attacked in this volume, and since these problems are later treated in detail, no further discussion is required at this point.

THE INFLUENCE OF CERTAIN ADMINISTRATIVE FACTORS UPON METHOD

There are many administrative decisions that have far-reaching consequences for methods of teaching: the distribution of students by grades; the grouping of students within a grade; the size of class; the teaching load, affecting the teacher's ability to prepare his work, to become interested in the individuals, and to make effective plans for teaching; the area of the teacher's responsibility—the room teacher, departmental teaching, platoon schools; the daily and weekly program; and the total time allotted to social studies. All of these adminis-

[34]Schlesinger has suggested a psychology-of-the-month club. Schlesinger, "History," in Gee, *Research in the Social Sciences*, p. 237.

[35]*Fourteenth Yearbook*, Department of Superintendence, Chap. III.

[36]*Ibid.*, p. 37.

trative problems are undeniably important but, with the exception of the first three,[37] they are discussed in this volume only in connection with other problems.

BROAD TYPES OF TEACHING

Method is also affected by the general type of teaching that is adopted: the daily recitation or the class discussion, based on assignments to textbooks and other references; the lecture, whether or not followed by a quiz; the Dalton plan; the unit mastery plan; individual instruction; activity programs; the laboratory method; the problem method; the project method; and the topical method.

These plans combine devices and methods in endless variety. There is almost as much variation among methods listed under the same name, such as unit mastery technique, as among those under different names. The worth of the broad type of teaching found in any school must be judged, therefore, by the quality of the learning procedures that are used.

Each of these broad types also involves certain other considerations of method, such as, in traditional practice, the assignment, the study period, the recitation, reviews, and tests. Both the broad types of teaching procedures and the administrative steps involved in carrying them out raise problems of unquestioned importance, but a discussion of these problems is purposely omitted in this volume, except in such incidental treatment as is given to them in the treatment of the more fundamental problems of learning: the provision for individual differences, the nature of thinking, the problem of understanding, and the provision for growth and retention. It is to these matters that most of the present volume is devoted.

[37]The distribution of students by grades, the grouping of students, and class size are discussed in Chap. II.

THE CRUCIAL INFLUENCE OF THE TEACHER

All of the influences upon method that have been discussed up to this point, and many others, are modified, for good or for evil, by the teacher: through his sympathetic understanding of students, his grasp of the psychology of learning, his skill in teaching procedures, his knowledge of subject matter, his familiarity with reference materials, his command of the fundamental modes of thought and inquiry, and, binding all these together, his insight into the ultimate purposes of instruction. No matter what teaching procedure is considered, its effectiveness is conditioned by the competence of the teacher who uses it.[38]

The selection and training of teachers and the maintenance of conditions in service that are favorable to their professional development are, therefore, of the utmost concern. These matters are discussed only incidentally in this volume, however, since they are treated extensively in another volume of the report of the Commission.[39] There is one aspect of the problem, however, that deserves mention. A survey of the literature on teaching and teacher training during the last thirty or forty years shows two general and divergent trends of thought. Among the members of academic faculties, on the one hand, there is at least a minority—perhaps a majority—who manifest an antipathy toward courses in methods, a misconception of the nature and purposes of these courses, and a lack of both interest in and understanding of the needs and conditions in public schools. Among members of faculties of education, on the other hand, are to be found those who display an equally

[38]The truth of this statement will become increasingly apparent as each of the following chapters is read.

[39]Bagley, William C., *The Selection and Training of the Teacher.* Charles Scribner's Sons, New York, 1937.

strong antipathy toward the content fields, a misconception of their purposes, and an inadequate understanding of their subject matter. The debates between these two hostile camps are marked more by emotion and prejudice than by critical thought and openmindedness. As a result, prospective teachers are baffled and harassed. Fortunately, this deplorable condition is being alleviated in many institutions where a broad view of the values and limitations of the various aspects of teacher training have resulted in co-ordinating the facilities of the institution for the development of qualified teachers of the social studies.

THE EFFECT OF SUPERVISION

All of the qualifications that have just been set forth as essential in teachers are essential also in those responsible for the administration of schools and supervision of instruction. It should be obvious that leadership in constructing curricula, in securing more adequate equipment, and in improving teaching necessarily implies broad social vision and sound scholarship in subject matter as well as competence in solving the practical instructional problems of the school.

The importance of social vision as a basic and controlling qualification on the part of administrators and supervisory officers is strongly emphasized in the Commission's *Conclusions and Recommendations*[40] and in a number of the supporting volumes.[41] There should be no belittling, however, of other aspects of the work of the superintendent, the supervisor, or the principal: the co-ordination of the school with other educational agencies, the establishment of effective public relations, the raising and the efficient expenditure of school funds,

[40] *Conclusions and Recommendations,* Chap. VIII.
[41] See especially Newlon, *Educational Administration.*

the selection of teachers and the facilitation of their growth, the securing of adequate tenure, the protection of teachers from pressure groups, the provision for adequate buildings and instructional equipment, the integration of all of the agencies of educational leadership, the securing of effective co-operation of teachers in the formulation of school policies. A failure at any of these points may negate the social policies of the superintendent, no matter how well founded they may be, and may at any moment create a crisis that will absorb most of his energy.

That in rendering these essential services the administrator should be guided by sound social philosophy and a competent interpretation of the needs of modern life has been clearly recognized by the leaders in school administration. This point of view has dominated most of the yearbooks of the Department of Superintendence for more than a decade.[42] It is the avowed policy of all national administrative and supervisory organizations, moreover, to facilitate the work of teachers in every possible way, to release and develop their creative energies, and to encourage their participation in the establish-

[42]See especially the following yearbooks of the Department of Superintendence, Washington, D. C.
"The Elementary School Curriculum," *Second Yearbook*, 1924.
"Research in Constructing the Elementary School Curriculum," *Third Yearbook*, 1925.
"The Nation at Work on the Public School Curriculum," *Fourth Yearbook*, 1926.
"The Junior High School Curriculum," *Fifth Yearbook*, 1927.
"The Development of the High-School Curriculum," *Sixth Yearbook*, 1928.
"The Articulation of the Units of American Education," *Seventh Yearbook*, 1929.
"The Superintendent Surveys Supervision," *Eighth Yearbook*, 1930.
"Five Unifying Factors in American Education," *Ninth Yearbook*, 1931.
"Character Education," *Tenth Yearbook*, 1932.
"Educational Leadership," *Eleventh Yearbook*, 1933.
"Critical Problems in School Administration," *Twelfth Yearbook*, 1934.
"Social Change and Education," *Thirteenth Yearbook*, 1935.
"The Social Studies Curriculum," *Fourteenth Yearbook*, 1936.

ment of the policies of the school.[48] Nevertheless, there has been too little emphasis on the importance of scholarship in the social studies as a part of the essential qualification of those who direct instruction in this field. This is shown not only in the yearbooks of supervisory organizations and in the deliberations of these organizations at their state and national meetings; it is shown also in the patterns of courses in teachers' colleges for the training of supervisory officers. It is not uncommon to find supervisors who insist that a teacher should have adequate scholarship in the fields in which he teaches but who do not see that it is even more important that they themselves have a scholarly grasp of the subjects they supervise. If social insight and a competent grasp of subject matter are essential qualifications for those who teach the social studies, they are even more so for those whose responsibility it is to guide and improve instruction. Shortcomings in these particulars are certain to be reflected in every aspect of the supervisor's work, and particularly in his contacts with teachers. When these qualifications are absent, supervisors are especially likely to harass teachers with pedagogical fads, formulas, and devices.

CONCLUSION

It should now be apparent that there is no such thing as a method of teaching that is good for all subject matter at all times and at all places. Rather, there are methods by which, in a given situation, for a definite purpose, at some specified

[48]See the yearbooks of the Department of Superintendence, *op. cit.*, especially *Twelfth Yearbook*, Chap. VII; the yearbooks of the Department of Supervisors and Directors of Instruction of the National Education Association. See especially the *Fifth Yearbook*, 1932, "Supervision and the Creative Teacher," and the *Sixth Yearbook*, 1933, "Effective Instructional Leadership," Bureau of Publications, Teachers College, Columbia University, New York. See also "The Principal and Supervision," *Tenth Yearbook*, Department of Elementary School Principals of the National Education Association, Washington, D. C., 1931.

grade level, and with such instructional equipment as is available, a specified unit of subject matter organized in a certain way and placed in a certain sequence may be taught to students of a given kind and distribution of ability and background of experience. All these conditioning factors operate, moreover, under the guidance of what the Commission has termed some "frame of reference," and through some teacher. In short, methods are instrumental and must be chosen and appraised in view of the ends to be reached and in the light of conditioning circumstances. Otherwise, method becomes a cult, an empty and ritualistic exercise, without vitality and without significance.

In view of the inherent difficulty of the important problems in the social studies, the subtlety and elusiveness of the attitudes associated with them, and the complexity of the modes of thought and inquiry required for their solution, one may well doubt the efficacy of any discussion of method that stops short of a definite application to specific units in the curriculum. The relation between general background and specialized procedures is not unlike that which exists in medicine. To teach the profound and pervasive influence of the "Industrial Revolution," for example, is a far more complicated task than that faced by the physician in his treatment of any common ailment, yet no one would claim that fidelity to the oath of Hippocrates, a bedside manner, and a general knowledge of basic sciences, such as anatomy, physiology, and bacteriology, constitute a sufficient equipment for the physician's work. Each disease requires specialized knowledge, skill, and insight, as does each unit of subject matter in teaching. There is, on the other hand, a warning in this analogy. Competence in either teaching or medicine is not to be achieved through rule-of-thumb procedures acquired, after the manner of an

apprentice, with little understanding of their significance. The resourceful adaptation to individual circumstances demands a competent grasp of the basic conditioning factors. Both general and specialized training are required.

It is entirely possible that a treatment of method focused directly, at each grade level, upon the teaching of the chief units of the curriculum would be more profitable to teachers than that of the present volume.[44] Such a plan was precluded in the present instance, however, even if otherwise practicable, by the fact that specific recommendations as to curriculum content and organization were not made by the Commission, and by the lack of uniformity in existing curricula. There are, nevertheless, important data and fundamental problems of learning that are inevitably basic in determining the methods of teaching in any course of study: the classification of students for purposes of teaching; the policy as to indoctrination, freedom of teaching and learning, and teaching students how to think; the factors that influence understanding; the way in which dependable ideas are formed; the rôle of reading in learning in the social studies; the selection and use of instructional equipment; the uses of oral instruction, including both oral presentation and questioning; the utilization of other sources of experience, such as visual aids, museums, field trips, and constructive activities; the use of aids to the imagination; and finally, the provision for growth and retention. It is to these matters, and others integrated with them, that the remainder of this volume is devoted.

[44]For an example of such a treatment, see Gillett, Norma, Snedaker, Mabel, and others, *Course of Study in Pioneer Life*. College of Education, Series No. 34, State University of Iowa, Iowa City, 1935.

Chapter II

THE IDENTIFICATION AND CLASSIFICATION OF STUDENTS FOR THE PURPOSE OF TEACHING

Methods of teaching cannot be intelligently planned without a reasonable knowledge of the nature and distribution of the school population that is to receive instruction. According to the *Biennial Survey of Education,* 1931, "Approximately 30,000,000 students were enrolled in day schools in 1930. Of these about 23,500,000 were on the elementary-school level, 4,800,000 on the high-school level, 1,100,000 on the college level, and 500,000 on various levels in special schools."[1]

Nine and eight-tenths per cent of elementary students, 7.8 per cent of high school students, and 51.6 per cent of college students were in schools under private or religious control. Slightly more than one half of all the students in public elementary and secondary schools are either in towns and villages of a population under 2500 or in strictly rural communities.

The students in this total population vary in intelligence from feeble-mindedness to genius; in economic status, from extreme poverty to extreme wealth; in environment, from the isolated home in the pioneer fringe to the congested area in the city, from communities that are wholly American to those that are almost wholly foreign, and from neighborhoods whose pattern of life encourages good citizenship to those that

[1]United States Office of Education, *Biennial Survey of Education, 1928–1930,* Bulletin, 1931, No. 20, Vol. II. The quotation is from page 3; the following data are taken or compiled from pages 4, 38, and 105.

encourage lawlessness; in home surroundings from the highly cultivated to the illiterate and from the luxurious to the destitute; in social outlook from rich opportunities that seem reasonably assured to faint hopes of success to be reached by almost superhuman efforts; in educational opportunities, from facilities of the most restricted nature to those almost unlimited in their possibilities. All of these variations are reflected in the social habits, backgrounds of experience, interests, abilities, and ways of thinking that must be utilized in teaching social studies. How methods of teaching are affected by them cannot be shown here, but there is considerable incidental discussion of the attendant problems in later chapters.

This student population is organized into a variety of types of units, the most common of which are, in the traditional sequence, the kindergarten, the eight-year elementary school, the four-year high school, and the college.[2] Among the many innovations of school organization that may be mentioned, the most significant are: the growth of the junior high school, the tendency to shorten the time from school entrance until graduation from high school, and the growth of the junior college.

Regardless of how these broad units of organization are arranged in any school system, however, it is an almost universal practice to assign pupils to grades or divisions that tend to correspond roughly, in case progress is normal, to the ages of the pupils. It is impossible even to sketch here the history

[2]Spaulding, F. T., and Frederick, O. I., "The Junior High School Movement in the Year 1930," *School Review* XLI (January, 1933), pp. 15–26. See also Coxe, W. W., "The Development of Public School Organization," in "School Organization," *Review of Educational Research* I (June, 1931), pp. 163–72, and, in the same bulletin, Reavis, W. C., "Evaluation of the Various Units of the Public School System," pp. 173–99; Otto, Henry J., "Current Practices in the Organization of Elementary Schools," *Northwestern University Contributions to Education*, School of Education Series, No. 5, 1932, Evanston, Ill.

of the graded school or to treat the many problems that attend the use of this form of school organization.[3] A vast amount of challenging data has been collected concerning the nature and effectiveness of our grade organization.[4] Two phenomena are so impressive and so significant for teaching the social studies as to deserve special consideration: (*a*) the wide range of abilities and achievements at any grade level, and (*b*) the large overlap between the abilities and achievements of students in any grade and those of students in adjacent grades. These phenomena are illustrated in Tables I to IV.

Attention has already been called to the indefiniteness of such designations as a "third-grade child" or a "seventh-grade child." The only thing that can be said with assurance about a third-grade child is that he is in the third grade. Children in any grade are usually more homogeneous with respect to chronological age than with respect to any other trait; but how far from being homogeneous they are in this respect is illustrated in Table I, which describes the situation in 100 city

[3]While any attempt to think realistically about adjustments to individual students in the social studies opens up all of the problems of school organization, classification, and the progress of children through the school, it is impossible to discuss these problems in detail here. There are a score of different aspects upon which whole volumes have been written, and on many of these aspects extensive committee reports have been prepared. See "The Grouping of Pupils," *The Thirty-fifth Yearbook*, Part I, National Society for the Study of Education. Public School Publishing Co., Bloomington, Ill., 1936, Chapters II, III.

This section of the report attempts to depict certain conditions and to clarify certain issues that are basic to a thoughtful consideration of the proposals made in subsequent chapters. Even these issues are, of necessity, treated briefly, and any one who is concerned with the problem of adjustments to individual differences should supplement the reading of this section by reference to the books and articles recommended in the footnotes.

[4]For a discussion of these problems and a review of related research, see the *Review of Educational Research* I, pp. 163 ff.; Heck, Arch O., *Administration of Pupil Personnel*. Ginn and Co., Boston, 1929; Ayer, Fred C., "School Progress," *Review of Educational Research* III (June, 1933), pp. 194–200; Cubberley, Ellwood P., *Public School Administration*. Houghton Mifflin Co., Boston, 1929, pp. 434–74; Mort, Paul R., *The Individual Pupil*. American Book Co., New York, 1928

TABLE I

AGE-GRADE TABLE FOR THE ELEMENTARY SCHOOL PUPILS IN 100 CITY SCHOOLS OF IOWA[5]

GRADE	3 YRS.	4 YRS.	5 YRS.	6 YRS.	7 YRS.	8 YRS.	9 YRS.	10 YRS.	11 YRS.	12 YRS.	13 YRS.	14 YRS.	15 YRS.	16 YRS.	17 YRS.	18 YRS.	TOTAL	MED. AGE
Grade 1	2	219	2119	2017	379	74	18	5	2	1	..	..	..	..	..	..	4,836	6.04
Grade 2	..	3	144	1937	2144	592	143	40	14	9	1	2	..	..	..	..	5,029	7.20
Grade 3	..	..	..	182	1822	1934	606	225	58	29	17	5	2	..	..	..	4,880	8.23
Grade 4	..	..	..	4	173	1693	1835	737	246	82	33	10	4	1	..	..	4,818	9.29
Grade 5	..	..	..	..	7	196	1713	2055	847	344	129	61	17	3	..	..	5,372	10.37
Grade 6	..	..	..	..	..	4	234	1592	1859	838	394	120	38	5	1	1	5,086	11.38
Grade 7	..	..	..	..	..	..	10	169	1157	1439	728	288	101	27	3	..	3,922	12.43
Grade 8	..	..	..	..	..	..	..	2	141	994	1301	643	231	61	10	3	3,386	13.43
Total	2	222	2263	4140	4525	4493	4559	4825	4324	3736	2603	1129	393	97	14	4	37,329	
Aver. Grade	1.00	1.01	1.06	1.56	2.40	3.30	4.28	5.13	5.97	6.75	7.18	7.30	7.35	7.48	7.64	7.5		

[5]Adapted from Freden, Gustaf, "Age-Grade and Progress Indices for the Public Elementary Schools of Iowa," University of Iowa *Studies in Education*, Vol. IV, No. 2, State University of Iowa, Iowa City, 1927, p. 15.

TABLE II

DISTRIBUTION OF MENTAL AGES BY GRADES
1925

MENTAL AGE	GRADE						TOTAL
	1	2	3	4	5	6	
16–6	..	..	..	..	..	5	5
16–0	..	..	..	..	..	4	4
15–6	..	..	..	..	..	3	3
15–0	..	..	..	1	1	13	15
14–6	..	..	..	..	3	19	22
14–0	..	..	..	1	4	29	34
13–6	..	..	..	2	9	28	39
13–0	..	..	..	5	23	49	77
12–6	..	1	..	19	41	49	110
12–0	..	..	4	21	58	60	143
11–6	..	2	6	47	88	56	199
11–0	..	5	19	60	106	32	222
10–6	..	15	67	69	73	23	247
10–0	4	36	116	76	47	11	290
9–6	7	83	143	88	45	4	370
9–0	22	81	101	51	24	1	280
8–6	43	98	90	53	14	2	300
8–0	87	70	33	32	3	..	225
7–6	127	67	23	22	..	..	239
7–0	127	28	5	7	..	..	167
6–6	132	7	1	2	..	..	142
6–0	86	3	2	1	..	..	92
5–6	71	1	..	..	..	..	72
5–0	22	..	..	..	..	..	22
4–6	8	..	..	..	..	..	8
4–0	8	..	..	..	..	..	8
Total	744	497	610	557	539	388	3335

(From an unpublished study by Dr. Bird T. Baldwin.)

schools in Iowa. Similar variations in age, differing only in degree, can be seen in any age-grade table.

The data of Table II are especially significant, not only because of the importance that has been attached to intelligence as a basis for classification, but also because mental age is generally regarded as an important factor in determining both learning readiness and methods of learning. Notice in this

TABLE III

DISTRIBUTION OF PUPIL SCORES ON A BATTERY OF TESTS OF READING COMPREHENSION[6]

PUPIL SCORE	GRADE		
	6	7	8
68–71	1	..	5
64–67	1	11	54
60–63	10	53	167
56–59	50	128	309
52–55	74	265	442
48–51	137	340	553
44–47	227	442	642
40–43	290	558	660
36–39	397	619	692
32–35	526	675	699
28–31	689	807	587
24–27	984	863	585
20–23	1096	843	435
16–19	1021	630	250
12–15	681	372	99
8–11	307	159	31
4– 7	88	38	9
0– 3	18	6	3
N.	6597	6809	6222
A.M.	25.6	31.3	38.0
Mdn.	23.9	29.9	37.9

[6]From *Summary Report of Results of the Iowa Every-Pupil Testing Program for Grades 6, 7 and 8.* State University of Iowa, Iowa City, 1935.

table the wide range of abilities represented in grade four. The highest mental age is as high as any in the fifth grade and is surpassed by less than 4 per cent of those in grade six; the lowest is as low as any in grade three and is higher than only the lowest of the mental ages in grade two. The median mental age of the pupils of this grade is equal or superior to one fourth of those in grade five and is equaled or surpassed by over one third of those in grade three. While the children

of any grade vary widely with respect to mental age, they are more like than unlike the children of adjacent grades.

Table III shows the enormous variation in the reading ability within grades in representative school systems as well as the marked overlap of abilities in adjacent grades. This table is of especial import because of the relation of reading ability to learning in the social studies.[7]

The scores of only five of the 6222 eighth-grade students are higher than the eleven highest in grade seven, and the lowest score in grade eight is as low as any in either grade seven or grade six. If it be assumed that the pupils' scores represent equal intervals, the range in grade seven is almost eleven times the difference between the medians of the sixth and seventh grades, more than eight times the difference between the medians of the seventh and eighth grades, and more than four and a half times the difference between the medians of grade six and grade eight. The difference between the tenth and ninetieth percentiles in grade seven is more than five times as great as the difference between the medians of the sixth and seventh grades and more than twice as great as the difference between the medians of the sixth and eighth grades. More than 11 per cent of the pupils in the sixth grade are above the seventy-fifth percentile of grade seven. Even if the best and poorest fourth of the students of the seventh grade are removed from the table, the difference between the best and poorest student in the remaining middle half is nearly three times as great as the difference between the medians of the sixth and seventh grades and greater than the difference between the medians of the sixth

[7] A word of caution should be urged with regard to Tables II, III, and IV. If some other test of intelligence, or reading ability, or achievement in social studies had been used, similar variability and overlap would be shown, but the rank of individual pupils within a grade would be materially changed. See Table VI, p. 61. The comparisons in the following paragraph are based on the raw data from which Table III was made.

TABLE IV

DISTRIBUTION OF SCORES OF PUPILS FROM THREE HIGH SCHOOL GRADES IN THE 1932 IOWA EVERY-PUPIL TEST IN AMERICAN HISTORY

SCORE	10th Grade		11th Grade		12th Grade	
	N	%	N	%	N	%
101.5—108.4	0		2	.04	2	.12
94.5—101.4	1	1.25	18	.40	7	.43
87.5— 94.4	0		69	1.55	30	1.83
80.5— 87.4	1	1.25	138	3.09	59	3.60
73.5— 80.4	1	1.25	279	6.26	109	6.64
66.5— 73.4	13	16.25	510	11.43	185	11.27
59.5— 66.4	8	10.00	688	15.43	253	15.42
52.5— 59.4	16	20.00	821	18.41	303	18.46
45.5— 52.4	12	15.00	793	17.78	295	17.98
38.5— 45.4	13	16.25	635	14.24	207	12.61
31.5— 38.4	12	15.00	356	7.98	132	8.04
24.5— 31.4	3	3.75	127	2.85	50	3.05
17.5— 24.4	0		20	.45	9	.55
10.5— 17.4	0		4	.09	0	
Number	80		4460		1641	
Average (M)	52.58		55.69		56.18	
S. D.	13.86		14.70		14.70	
S. E.	1.54		.22		.362	

(Adapted from Bane, Loren, *Analysis of the Every-Pupil Test in United States History of the 1932 Iowa Academic Contest.* Master's thesis, State University of Iowa, Iowa City, 1932, p. 86.)

and eighth grades. Although the range in reading ability of a single typical class at any grade level is usually somewhat less than that reached in this table, it is always so great that it constitutes a very serious problem in teaching. Ranges of from six to eight years in reading age are very common.

Even more striking are the data in Table IV, which portrays the distribution of scores of pupils in three high school grades in the 1932 Iowa Every-Pupil Test in American His-

tory. The table shows a wide range of individual differences within a grade similar to that shown in the case of chronological age, mental age, and reading ability. One would expect more growth in knowledge and insight in American history than is here shown, since the students at the higher levels had additional years of learning in social studies.

Similar variability and overlapping have been shown whenever any well-constructed test in the social studies has been given at various grade levels. Indeed, some tests, while showing variability within a grade, do not always show even the small increments of growth depicted in this table. Sometimes actual decadence is manifested. Yates, for example, has shown that the judgments of students on certain common case situations in slander not only fail to improve from grade six through college but actually retrograde, if measured either against the standard of accepted ethical principles or the judgments of higher courts.[8] It has been found repeatedly, moreover, that students in grades preceding that in which systematic instruction is given in some branch of social studies not infrequently show a marked overlapping with students who have had such systematic instruction. A clear picture of the growth in social knowledge, attitudes, and behavior from year to year during the period of public education would undoubtedly show that we need to reconstruct our ideas of the content and methods of teaching that should be used at various grade levels.

While the preceding tables are merely illustrative of what probably would be revealed by a complete inventory, all available evidence, even though it is piecemeal, seems to warrant the following conclusions:

First, that the variation of abilities at each grade level of

[8] Yates, Ida M., "Concepts and Attitudes Concerning Slander and Freedom of Speech," University of Iowa *Studies in Education*, IX, No. 1, 1934, pp. 183–206.

schools as they are now organized is so great as to create a serious problem of adjustment to individual students.

Second, that the overlap between adjacent grades, and, indeed, between grades several years removed, is very great. With respect to the attainment of ultimate objectives set up by this Commission, and with respect to the detailed achievements and abilities related to the attainment of these objectives, it is probable that at least a fourth of the best students in any grade are superior to the median child of the grade above and that at least a fourth of the poorest students are inferior to the median of the grade below. As a general rule, the brightest students in any grade are only slightly superior in achievement to the brightest students of the grade below, if at all, and the poorest students are only slightly inferior to the poorest students of the grade above. Part of this overlapping may be due to the haphazard way in which the course of study is graded. There is reason to believe that if a course of study were planned so that each grade represented an essential step in the progress toward the achievement of the ultimate goals, less overlapping would be shown. Under such a plan the work of each grade would be a basis upon which subsequent instruction could build, and each grade would make conscious and intelligent use of what has gone before. There have been many theories as to how such steady and systematic growth is best facilitated.[9] Only confusion can result from the assumption that the instruction in each grade is a thing unto itself without reference to what has gone before or what is to come after. The teacher of social studies in any grade has a right to know the nature of the efforts to educate children in the preceding grades, and he should know how the results of his own instruction are expected to be utilized in subsequent years.

[9]See references to grading the course of study, Chap. I.

Third, the available data lend little support, as far as social studies are concerned, to the belief in periods or stages of development in which children, as a group, are relatively homogeneous and different from children, again as a group, of other age or grade levels.[10] The picture is one of growth rather than of unique stages, and differences are matters of degree only. This is true whether the measure be the degree of attainment of instructional goals or of such contributing factors as attitudes, interests, capability of sustained attention, ability to obtain meanings, ability to memorize, or ability to reason.

All this clearly implies that variations in methods at various grade levels should be matters of degree rather than matters of kind. There are to be found, even in the reports of important committees, recommendations based on assumptions that run counter to available data on this point. Particularly objectionable has been the unwarranted theory that young children cannot think, and that the purpose, therefore, of the lower levels of instruction, is to stress the memorization of facts that should be drilled upon in order to make possible their retention until the later stages (usually assumed to begin not earlier than adolescence), when they could be subjected to rational treatment. Few handicaps greater than this have been put upon children by erroneous theory. It is a sorry commentary upon the incisiveness of much educational and psychological thought that at the time when children are notorious for their "whys" it is recommended that their intellectual diet be limited to

[10]For a review and evaluation of the theory and evidence on development and growth stages, see Hollingworth, H. L., *Mental Growth and Decline.* D. Appleton & Co., New York, 1930, Chap. IV.

A more recent and complete summary is given in the monograph, "Mental and Physical Development," *Review of Educational Research* III (April, 1933). A bibliography of 433 books and articles is appended to this monograph. See also Cameron, Edward H., *Psychology and the School.* The Century Co., New York, 1921, Chap. XV.

drill and memorization. Equally harmful and unwarranted has been the assumption that older children can acquire meaning and be stimulated to think through the sole means of the abstract verbal symbols of the typical textbook.[11]

Additional evidence shows that one should be cautious in recommending methods, courses of study, or materials for a given grade in general as well as in making assumptions as to the quality of work that may be expected in that grade. City, state, and nation-wide surveys have shown that individual schools vary enormously in their achievements. For example, the average scores of schools in United States history on the Iowa Every-Pupil Test for 1933 ranged from 33.09 to 82.00. The average of all schools was 47.97. The frequency distribution of scores of individual pupils in these schools and in one of the highest ranking schools is as follows:

TABLE V

FREQUENCY DISTRIBUTION OF PUPIL SCORES IN UNITED STATES HISTORY IN ALL OF THE 202 PARTICIPATING SCHOOLS AND IN ONE OF THE SCHOOLS RANKING HIGHEST ON THIS TEST[12]

	0–7	8–15	16–23	24–31	32–39	40–47	48–55	56–63	64–71	72–79	80–87	88–95	96–103	A.M.
Pupils in all schools.....	2	19	154	685	1305	1518	1387	948	581	316	116	40	4	47.93
School A.....	..	..	..	..	..	6	21	25	38	36	19	8	1	68.38

[12]These data, as well as the averages in the preceding paragraph, are from the original files of data collected by Dr. E. F. Lindquist in connection with the Iowa Every-Pupil Testing Program.

Less than 4 per cent of the pupils of School A are as low

[11]See the discussion on the relations of adaptations of method to ability groups, pp. 64 to 68. See also the discussions on meaning, pp. 136 to 137, and on the textbook, pp. 254 to 256.

as the average of all schools, and no pupil of School A has a score as low as the average of the lowest school. Obviously what is done in School A is a very different thing from what is done in the lowest ranking schools.

These comments are not meant to imply either that the present plan of organization, including grade classification, should be discarded or that it should be amended. The advantages and disadvantages of grade classification, as well as other forms of organization, were described in the reports of Horace Mann,[13] and experimentation has gone on steadily since that time.[14] The trend of modern opinion seems to be that some form of grade organization should be used and that the child after entering the school should move forward progressively with the minimum of repeating. All that is here desired is to call attention to some important realities of the situation that prevails in the great majority of schools today and to point out some of the implications of these conditions for methods of teaching in the social studies.

It is obviously difficult to adapt instruction to individuals whose abilities extend over such wide ranges as are pictured in the preceding tables. The most extreme form of adaptation to wide variations in ability is individual instruction. Even under the Winnetka plan, however, which is perhaps the most carefully thought out and most thoroughly tested of any so far set up, individual instruction in the social studies is limited to the narrow field of mechanical and informational matters, such as map location. The emphasis is on group work. The Dalton plan, which involves individual instruction, is not widely used nor is it believed by those who do use it to meet

[13]See also Kiddle, Henry, and Schem, Alexander J., *The Cyclopædia of Education*. E. Steiger, London, 1877, pp. 375–77.

[14]For a historical review of these experiments, see Heck, *Administration of Pupil Personnel*.

with unusual success in providing for individual needs.[15] From the standpoint of motivation, the clarifying of ideas, the development of tolerance for the views of others, and training in the co-operative attack on social problems, work in groups has unmistakable advantages. Face-to-face discussion, held by Dewey to be a primary means of building intelligent public opinion in adult communities, is even more essential for immature students.[16]

Billett, after studying the questionnaire returns from 8594 secondary schools, concluded that "No fact has been established more firmly by this study than the fact that comparatively few schools are making thorough provisions for individual differences."[17] He classified the replies to the questionnaire under twenty-eight different headings, which constitute, in his judgment, an exhaustive list of the provisions that schools make for individual differences. The four plans reported to have met with greatest success are: (1) variation in the number of subjects that a pupil may carry, (2) differentiated assignments, (3) special coaching of slow pupils, and (4) homogeneous and ability grouping. The core elements in most successful programs of adjustment to individual differences in secondary schools are, according to Billett, homogeneous grouping, special classes, and the differentiated unit assignment. Similar provisions are found also in elementary schools.[18] Since all three of these "core elements" involve the identifi-

[15]Billett, Roy O., "Provisions for Individual Differences, Marking and Promotion," Bulletin, 1932, No. 17. National Survey of Secondary Education, United States Government Printing Office, Washington, D. C., 1933, pp. 266–87.

[16]Dewey, John, *The Public and Its Problems.* Henry Holt & Co., New York, 1927, Chap. VI.

[17]Billett, "Provisions for Individual Differences," p. 9.

[18]Mort, Paul R., "School Surveys and Adjustments of School Organization and Teaching Procedure to Individual Needs," *Teachers College Record* XXIX (February, 1928), pp. 404–408.

cation or classification of pupils in terms of some ability or complex of abilities, the theory and evidence on these problems should be reviewed.

The literature on the general problem of ability grouping is extensive[19] and highly controversial. Excellent summaries and evaluations of the most important studies are given by Billett,[20] Rankin,[21] and Turney.[22] The conclusions reached by these three writers as a result of their surveys are conservative and are much more in agreement than are the studies that they review. For the many issues involved in ability and homogeneous grouping, the reader is referred to these résumés and to the recent yearbook, "The Grouping of Pupils."[23] Billett concludes from his survey of the field that: (1) "A relatively small number of the schools using homogeneous grouping regard the plan as meeting with unusual success." (2) "No two schools are proceeding along identical lines so far as bases used are concerned."[24]

Rankin's summary statements are:

"1. That the evidence slightly favors homogeneous grouping, as contrasted with heterogeneous grouping, particularly where adaptations of standards, materials, and methods are made.

"2. That the evidence regarding the attitude of teachers toward homogeneous grouping is that most teachers prefer to

[19]Even in 1932 a bibliography of 314 items was given in Storm, Howard Charles, *Ability Grouping with Differentiated Courses of Study*, Doctor's dissertation, University of California, Berkeley, 1932, and this bibliography is by no means complete.

[20]Billett, "Provisions for Individual Differences," pp. 16–37.

[21]Rankin, Paul T., "Pupil Classification and Grouping," *Review of Educational Research* I (June, 1931), pp. 200–230.

[22]Turney, Austin H., "The Status of Ability Grouping," *Educational Administration and Supervision* XVII (January–February, 1931), pp. 21–42, 110–27.

[23]*Thirty-fifth Yearbook*, Part I, National Society for the Study of Education.

[24]Billett, "Provisions for Individual Differences," pp. 40, 125.

work with homogeneous groups rather than with mixed groups.

"3. That the evidence regarding the relative merits of various bases of grouping is conflicting and inconclusive.

"4. That the evidence regarding the relative merits of various types of adaptation of standards, materials, and methods is inadequate to form a judgment.

"5. That the evidence indicates greatest relative effectiveness for dull children, next greatest for average children, and least (frequently harmful) for bright children.

"6. That the evidence regarding the particular grade levels or subjects in which homogeneous grouping is particularly effective is inadequate to form a judgment.

"7. That the evidence regarding the effect of homogeneous grouping upon characteristics of pupils other than knowledges and skills is highly subjective and cannot be said to be conclusive."[25]

Turney, after stating that his conclusions should be recognized as merely tentative, says:

"1. Most of the studies purporting to evaluate ability grouping have proved nothing regarding ability grouping but have only added evidence bearing upon the nature and extent of individual differences.

"2. Most of the experimental attacks upon the value of ability grouping have failed to evaluate the chief claim for it, *i.e.*, the possibility of adapting content, method, or time.

"3. There is some reason to believe that ability grouping can best be exploited by using measures of mental ability as the major basis for sectioning.

"4. The experimental literature indicates that more often

[25]Rankin, "Pupil Classification," p. 229.

than not pupils do better in homogeneous groups than in heterogeneous groups.

"5. There is a fairly strong indication that when efforts are made to adapt the means and materials of instruction to the needs of different levels of ability, better achievement occurs in homogeneous than in heterogeneous groups.

"6. In the experimental situation where there is no special effort made to adapt content or method the average and lower groups appeared to benefit more often than the higher groups.

"7. There is some evidence, not conclusive, that ability grouping promotes motivation of the pupils to increased effort.

"8. There is no adequate information as to whether the majority of teachers really find it easier to teach homogeneous groups.

"9. There is no acceptable evidence as to the effect upon the mental hygiene of the child.

"10. There is some evidence that homogeneous grouping reduces failure but it is not conclusive.

"11. There is no direct evidence that elimination is reduced as a result of homogeneous grouping per se.

"12. The true evaluation of ability grouping must be deferred until adequate experimental attacks have succeeded in measuring its alleged advantages."[26]

These cautious statements should be a warning to those who wish to regard as settled the case either for or against ability grouping. Much of the confusion and fallacious thinking that have been manifested in the controversy on the subject is undoubtedly due to accepting as matters of fact propositions that are supported by a very narrow margin of favorable evidence or are true only to a limited degree. There are four propositions that merit special attention.

[26]Turney, "Status of Ability Grouping," pp. 122–23.

The first of these is, *that it is possible, with present techniques, to classify children in groups on some single general basis that will give a high degree of homogeneity in ability to work in the various subjects of the curriculum.* While in such grouping, as it is ordinarily practiced, the range of abilities in any given subject is somewhat narrower than that found in heterogeneous groups, the degree of homogeneity within groups is much less than has commonly been assumed. Heterogeneity is reduced, but it is far from being obliterated.[27] This is to be expected from the low correlations that have been reported between subjects, or between any general basis for grouping, such as intelligence or composite scores; and achievement in any given subject. The limitations of a general basis for grouping are emphasized by Burr, who reports that when pupils are so grouped, "on the average 78 per cent of the total grade range of achievement is found in each section of a grade." He points out further that, "When groups are made non-overlapping in achievement in one subject, such as reading, they overlap greatly in other subjects, such as arithmetic. Even when groups are made non-overlapping in one phase of a subject, such as arithmetic reasoning, they overlap greatly in other phases of the same subject, such as arithmetic computation."[28]

Such data as are given by Burr and others seem to indicate that grouping on some general criterion or criteria is less satisfactory than grouping on the basis of ability to achieve in a

[27]Billett prefers the term *reduced* heterogeneity to that of homogeneity. Billett, Roy O., in *Thirty-fifth Yearbook*, National Society for the Study of Education, Part. I, Chap. XII.

[28]Burr, Marvin Y., *A Study of Homogeneous Grouping.* Contributions to Education, No. 457, Teachers College, Columbia University, New York, 1931, p. 55. Turney and others have criticized the statistical treatment by Burr and hold that the overlap is somewhat less than that indicated.

particular subject.[29] It is the variation in the abilities of students in the subject that constitutes the problem for the teacher at any given time. And, while grouping on some general basis does not necessarily obscure individual differences in learning in any subject, for example in history, it certainly does little to throw light on them.

The second proposition is *that pupils at any grade level can be formed into groups that are relatively homogeneous in their ability to learn one or more social studies.* While this assumption is more tenable than the preceding one, the evidence does not indicate that we have succeeded very well in our attempts to form such groups. The three bases that seem to hold most promise for grouping in the social studies are intelligence, reading ability, and the quality of previous achievement in the social studies. No one of these has proved satisfactory in practice. The correlations reported between intelligence and achievement in the social studies are surprisingly low—lower than would be indicated by common-sense judgment. These low correlations may be accounted for in four ways: (*a*) They may be due to a lack of validity or reliability in intelligence tests. Students grouped within a narrow range on one well-known intelligence test scatter widely on another; this is especially true of those individuals whose intelligence quotients fall between 80 and 129. (*b*) Present tests of intelligence may not measure the mental traits that are involved in learning the social studies. Thorndike has suggested that there are three kinds of intelligence: mechanical, social, and abstract;[30] others believe in an even greater variety.

[29]On the other hand, a strong statement of the case for grouping students on the basis of the general ability "g," is made by Turney, A. H., in the *Thirty-fifth Yearbook*, Part I, National Society for the Study of Education, Chap. VI.

[30]Thorndike, Edward L., "Intelligence and Its Uses," *Harper's Monthly Magazine* CXL (January, 1920), pp. 227–35. See also Thorndike, Edward L., and others, *The Measurement of Intelligence*. Bureau of Publications,

(*c*) It may be that verbal memory rather than understanding and thinking is stressed in the usual teaching of the social studies. (*d*) Factors other than intelligence, such as motivation and experience, are influential in determining achievement.[31]

Correlations that have been found between standard reading tests and achievement in the social studies are also low.[32] This, again, either may be due to the fact that standard tests measure only in part or in small degree the kinds of reading required in social studies, or it may be caused by a failure to require of the student of social studies the kind of reading that is demanded for understanding. There is reason to believe that well-constructed tests of the ability to do such reading as is required in the social studies would show a high correlation with achievement in social studies wherever the quality of teaching is superior.

The best single basis for grouping that has been reported is that of past achievement in the social studies. Lindquist, for example, found correlations above .75 between the scores made on the Iowa Every-Pupil Test in the social studies in different subjects in successive years.[33] Since these tests measure one aspect of learning (the acquirement of high-grade information), it is possible that this correlation is somewhat higher than that existing between the total achievements in these two fields of history.

Teachers College, Columbia University, New York, 1927. For a summary statement of the arguments for and against some general factors of intelligence, such as Spearman's "g," see Turney, A. H., "The Psychological Basis of Grouping," *Thirty-fifth Yearbook*, Part I, National Society for the Study of Education.

[31]Turney, A. H., *Factors Other than Intelligence that Affect Success in High School.* University of Minnesota Press, Minneapolis, 1930.

[32]Clarson, James W., *The Ability of High-School Students in Silent Reading and Its Correlation with Achievement in High-School Subjects.* Doctor's dissertation, University of Chicago, Chicago, 1928; Christy, Mary Edith, *The Relation of Reading Ability to Progress in Social Studies.* Master's thesis, University of Denver, Denver, 1931.

[33]Unpublished data furnished through the kindness of E. F. Lindquist.

The fact that any one of the preceding measures, or any combination of them, predicts success in the social studies only to a limited extent does not mean that such standards are worthless either for grouping or as a guide to instruction in heterogeneous groups. In considering their use, however, one should keep clearly in mind the significance of the reliability of any given test that is used as a basis either for identification or for classification, the validity of the test, and its power to predict achievement. Consider first the matter of reliability. Suppose, for example, that pupils are formed into three groups of equal size on the basis of a test whose reliability is .50. It can be predicted from the statistical properties of this reliability that the groups so formed would overlap almost completely if measured by a test of perfect reliability. If groups are formed on the basis of a given test (say intelligence, reading, or achievement in the social studies), they will overlap greatly on the scores that they will make on some other test purporting to measure the same ability. This is true even when the reliability of each test is high and when the correlation between the two tests is relatively so. Table VI, for example, illustrates this overlap in the case of two intelligence tests with a correlation of almost .80. Such variations lead one to suspect that the classification of a child or the appraisal of his ability is often influenced nearly as much by the tests that happen to be used as by his actual ability.

A test may have very high reliability and still have low predictive value. As has been pointed out above, the highest correlations reported between scores that may be used for purposes of classification and scores on subsequent tests of achievement are those between achievement in one subject and achievement either in some other part of the same subject or in some other closely related subject. For example, the corre-

TABLE VI

SCATTER-GRAPH OF STUDENTS ACCORDING TO INTELLIGENCE QUOTIENTS AS DETERMINED BY TWO WELL-KNOWN TESTS, GRADE NINE STUDENTS, PASADENA JUNIOR HIGH SCHOOLS, 1929-30[34]

Intelligence Quotients by Group Intelligence Test "Y"	"Y" / "X"	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-UP	TOTALS
	140-Up...	..	..	..	..	..	..	2	5	5	12
	130-139...	..	..	..	..	..	2	5	9	8	24
	120-129...	..	..	..	..	4	21	28	9	6	68
	110-119...	..	..	1	5	25	44	32	5	..	112
	100-109...	..	..	2	16	77	57	15	2	..	169
	90-99.....	..	3	20	52	58	26	1	..	..	160
	80-89.....	..	5	26	33	14	1	..	..	..	79
	70-79.....	..	3	5	2	..	..	..	..	..	10
	60-69.....	1	2	4	1	..	..	..	..	..	8
	Totals....	1	13	58	109	178	151	83	30	19	642

[34]From Hughes, W. Hardin, "How Homogeneous Is a 'Homogeneous Group'?" *The Nation's Schools* VI (October, 1930), p. 23.

lation between the scores made by 606 pupils on the 1932 Iowa Every-Pupil Test in world history and the subsequent achievement in American history is .70. The relationship between the scores of these 606 sampled cases on the two tests is shown in Table VII. This scatter diagram indicates that the 1932 test on world history has a fair amount of discriminating power at the extreme upper and lower levels only. Notice, for example, that the students who scored between 56 and 59 on the 1932 test in world history ranged all the way from the very highest to very nearly the lowest scores on the 1933 test in American history.

These tables are not offered as an argument against tests as the basis for grouping in the social studies or as a means of

TABLE VII

SHOWING THE RELATIONSHIP OF SCORES OF 605 PUPILS ON THE 1932 EVERY-PUPIL TEST IN WORLD HISTORY AND ON THE 1933 TEST IN AMERICAN HISTORY[35]

World History, 1932	American History, 1933																		
	16–19	20–23	24–27	28–31	32–35	36–39	40–43	44–47	48–51	52–55	56–59	60–63	64–67	68–71	72–75	76–79	80–83	84–87	88–91
88–91	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..
84–87	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2	1	..	..
80–83	..	..	..	..	..	1	..	..	1	..	..	..	..	2	1	1	..	2	2
76–79	..	..	..	..	1	1	..	..	..	..	2	..	1	1	..	2	4	1	2
72–75	..	..	..	..	..	2	..	..	..	..	1	1	1	5	3	3	..	..	..
68–71	..	..	..	..	1	..	..	..	..	..	..	2	7	1	2	1	1	..	..
64–67	..	..	..	..	1	..	..	..	..	2	2	..	4	2	2	2	1	1	..
60–63	..	..	..	..	1	2	..	4	1	4	7	6	5	2	3	2	..	..	..
56–59	..	..	1	1	1	1	3	4	3	5	5	9	2	2	1	..	..	1	1
52–55	..	..	..	..	..	2	2	4	8	6	6	8	6	2	..	1	..	..	..
48–51	..	..	..	1	3	1	5	5	8	4	5	4	..	4	1	..	1	..	..
44–47	..	..	..	2	4	9	8	12	9	3	4	2	3	..	..	..	..	..	..
40–43	..	1	1	6	12	6	9	17	8	11	3	1	..	3	1	..	..	..	..
36–39	..	3	1	2	12	12	14	9	10	6	2	3	1	..	1	..	..	..	..
32–35	..	1	5	7	8	7	6	12	6	4	1	..	..	1	..	..	..	..	..
28–31	1	1	5	11	8	6	9	2	2	1	..	1	..	..	..	..	..	..	..
24–27	1	..	2	6	6	4	1	..	..	1	2	..	1	..	..	..	..	..	..
20–23	1	..	2	1	2	3	1	..	..	1	..	..	..	..	..	..	..	..	..
16–19	1	2	1	1	2	1	1	1	..	..	..	..	..	..	..	..	..	..	..

[35]This table is furnished through the kindness of E. F. Lindquist.

appraising the abilities of pupils in heterogeneous groups, but as a warning not to expect too much from them. Adjustments, however, are likely to be needed for students whose test scores fall near the upper or lower limits. The available evidence indicates, moreover, that it is at the extreme lower level that students profit most from grouping, special coaching, directed study, and differentiated assignments.

There is, of course, a wide difference between the best and poorest efforts of a student on any test and at all levels of ability. This is true of intelligence as well as achievement tests.[36] The scores that students make on different forms of a

[36]Thorndike and others, *The Measurement of Intelligence*, pp. 43 ff. and Appendix I. See also Horn, Ernest, in the *Twenty-fourth Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1925.

test or on the same test repeated are clearly influenced by motivation, mind set, and by other mental and physical conditions. Thorndike points out that, "Keats may have written *On Reading Chapman's 'Homer'* in one hour, and have written nothing in some other hour when he tried as hard, whereas an average twelve-year-old varies at the most from nothing up to a composition scoring 50 on the Hillegas scale."[37] It is hazardous, therefore, to appraise or classify a student on the basis of a single test no matter how valid or reliable that test may be. Adequate adjustments to developing individuals require repeated reappraisals of students at relatively short intervals as well as constant alertness on the part of the teacher to their immediate needs in all the processes of instruction.

The third proposition is *that, assuming for the moment that homogeneous groups can be made, we know how to differentiate curricula for each group.* This involves two assumptions: first, that we have adequate courses of study in the various social studies, and second, that we know how to differentiate such courses for different levels of ability. The problem of determining appropriate courses of study for any ability group (classified either on the basis of general ability or on the basis of special ability in the social studies) cannot be considered apart from the general problem of curriculum making. The fact is that while we have made progress in determining the course of study without respect to differentiated abilities, we have a great many problems yet to solve. Indeed, in the case of social studies what needs yet to be done looms larger than what has already been accomplished.

The reduction of the number of topics presented, the substitution of detailed for abstract treatment, the focusing upon the topics and problems pertinent to the needs and interests

[37]Thorndike, *The Measurement of Intelligence*, p. 46.

of the common man, the orderly development of knowledge and methods of work—all these provisions help to bring the curriculum in social studies within the limits of the abilities of students of all groups and especially of those of low ability. The best course of study that could be made along these lines would be better for any allegedly homogeneous group than any differentiated course of study that has yet been made. Nevertheless, it is obvious that pupils whose abilities vary widely cannot be expected to master the same course of study. There must be differences in the extent of the curriculum, in the rate of progress, and in the thoroughness of knowledge and depth of insight that are expected to be attained. Even differentiated assignments made to students in heterogeneous groups result practically in a differentiated curriculum. Differences in present learning capacity, however, are but one factor to be considered in differentiating curriculum; a more fundamental principle is the probable future demands that social life will make upon the student, gifted or otherwise.[38]

The fourth proposition that needs to be challenged is *that, assuming that students can be classified into groups that are relatively homogeneous in their ability to learn social studies, we know how to make adjustments in method to each of these groups.*[39] This is true only to a limited extent. Suppose, for example, that 200 eleventh-grade students have been classified into X, Y, Z groups on some basis that is assumed to make the groups relatively homogeneous and more unlike than like other groups. (We know, of course, that, classified on any basis now known, any one of these groups will contain a large percentage of the range of abilities of the heterogeneous groups

[38]Horn, Ernest, "Differentiated Courses for Bright Pupils," Department of Superintendence *Official Report*, Detroit, 1931, pp. 267–68. *Thirty-fifth Yearbook*, Part I, National Society for the Study of Education.

[39]Experiments and theories on the differentiation of methods are reviewed by Rankin, "Pupil Classification," pp. 212–15.

and will be more like than unlike the adjacent group.) How do students in the X group differ from students in the Y or Z groups in the way in which, in the social studies, they get meanings, make imaginative constructs, think, remember, form attitudes, or develop conduct patterns? An examination of the later chapters of this volume will make clear that our knowledge of learning in these particulars is far from complete and that while individual differences are disclosed in the various experiments that are reviewed, they cannot be reliably related to differences in intelligence or to any ability that is used at present for purposes of classification. All this seems to point to the conclusion that whether or not children are classified into homogeneous groups, the teacher's attention should be directed to individual children and their immediate problems in learning rather than either to the group as a whole or to the median child of a class. There is, of course, no reason why this cannot be done even where grouping is practiced, but there is a danger that, having erroneously assumed the group to be homogeneous, the fact of variability within the group tends to be ignored.

Terman,[40] Baker,[41] and others have described what they believe to be characteristic differences of children at various intelligence levels and have pointed out what seem to be the implications of these differences for teaching. Great care should be used in deriving conclusions from these reported differences. Suppose that it is found that children with low intelligence quotients have difficulty in making logical deductions. This does not mean that they should not be trained to

[40]Terman, Lewis M., *Genetic Studies of Genius*, Vol. I. Stanford University Press, 1925. See also Vols. II and III.

[41]Baker, Harry J., *Characteristic Differences in Bright and Dull Pupils.* Public School Publishing Company, Bloomington, Illinois, 1927. For additional bibliography and a review of various suggestions for differentiated materials and methods see Rankin, "Pupil Classification," pp. 212–15.

make such deductions; it may mean merely that more pains will have to be taken with them if desirable habits in thinking are developed. The evidence indicates, moreover, that each of the abilities pertaining to such achievement in social studies is widely distributed at any level of intelligence (as now measured) and especially so in the ranges above an I.Q. of 90.

The limitations of these four propositions pertaining to homogeneous grouping are reflected also in the identification and teaching of students in heterogeneous groups. These limitations are not pointed out in any iconoclastic spirit but in order to face squarely the realities of the situation. It seems likely that some form of grouping will be practiced in most schools that have an enrollment large enough to make it feasible. There is certainly much to be said for Billett's recommendation to make two groups rather than any larger number, the lower group to be a small one consisting of students who have shown, or seem likely to show, extreme disabilities. It must be kept in mind, however, that grouping is only a beginning step, and a very small one, toward the provision for individual differences.

The problems of teaching under ability or homogeneous grouping differ in degree rather than in kind from those met in teaching heterogeneous groups. In either case, adjustments of methods or materials should be made to each individual's needs as they arise in the regular process of instruction. Such vital provisions for the needs of individuals are fundamentally different from those made for a group erroneously assumed to be homogeneous and from those made for individuals foreordained, on the basis of some alleged measure of ability, to receive a certain type of instruction.

Perhaps the best single provision that can be made for individual differences is not in grouping, or in the differentia-

tion of courses of study, or yet in the modification of fundamental methods of learning, but in providing instructional equipment of a range of difficulty and depth of treatment commensurate with the range of ability at each grade level. When such a range of material is available, pupils may be led to select references that they are capable of reading. Without it, the differentiated assignment is largely a formality. The problem of providing proper instructional materials for students at the upper ranges of ability is not difficult in the more advanced grades, since many students can use even the standard references written for adults. There is, however, very little worthwhile material that can be read by young children or by students of poor reading ability. The need for readable and authoritative books in social science is particularly marked in the lower grades of the elementary school.[42]

The discussion of adaptations to individual differences, whether in "homogeneous" or in heterogeneous groups, should not be concluded without raising the question as to what is the best social policy.[43] Those who have been drawn into the work of discovering and classifying pupils according to ability have been interested chiefly in psychology or in mental and achievement tests. This is significant in view of the fact that the principal basis for making curricula, differentiated or not, is sociological. Social education is a matter not of taste or ability but of necessity. Skills, knowledges, insights, and attitudes that are frequently and crucially needed for living together well should be learned as thoroughly as possible by all students, regardless of the difficulty that any student may find in such learning. Both social policy and the welfare of in-

[42]See the recommendations on instructional equipment, pp. 254 to 261 of this report.

[43]For a detailed treatment of this question see *Thirty-fifth Yearbook*, Part I, National Society for the Study of Education, Chaps. I to V.

dividuals demand that pupils of all levels of ability, except perhaps the very lowest, should focus attention upon the main objectives of education in the social studies. This is essential to the development of a community of interests in our social problems. Acceptance of this principle would naturally delimit any plan of differentiation of courses of study. And since pupils of all classes and levels of ability must work together in life outside the school, it is well to begin this cooperation in the school.

CLASS SIZE

The problem of adjustments to individual differences leads to a consideration of the way in which these adjustments are affected by the size of class. It is not infrequently assumed that the success of these adjustments varies inversely with the number of students in a group. As a consequence, there has been for many years a strong sentiment either for a radical reduction in the size of class or for individual instruction. It has long been evident, however, that substantial benefits to learning as well as financial economies result from work in groups.

The ideal point of view from which to approach the relation between class size and teaching procedures is first to determine the best conditions for effective learning and then to inquire concerning the limits of class size within which these conditions best operate. On the other hand, one may approach the problem with a given class size, deemed to be necessary for reasons of administrative control, and ask what methods can be used most effectively under these circumstances. Both of these approaches have been used.

The conditions for effective learning, which are examined in detail in subsequent chapters, include provisions for increasing understanding and insight, improving the quality

of thinking, developing continuing interests, and providing for growth and retention. Among the administrative factors that must be taken into account are enrollment, housing facilities, equipment, teaching load, and available funds. Although it is impossible to enter here into a detailed discussion of these factors,[44] they should receive careful attention not only from those who are primarily interested in administrative control but also from those interested in the improvement of learning.

There is apparently little agreement as to the limit above which a class should be called large or one below which it should be termed small. Largeness and smallness may be related to common practice, to requirements of good learning, or to the demands of administrative necessity. One may get a summary view of the practice in cities from the following table:

TABLE VIII

MEDIAN SIZE OF CLASSES IN ALL SUBJECTS IN CITIES, 1930–31[45]

	KG	TOTAL ELEM.	JR. HIGH SCHOOL	SR. HIGH SCHOOL
47 cities over 100,000.....	33.0	39.1	34.1	30.6
101 cities 30,000–100,000....	31.8	34.2	29.4	27.0
56 cities less than 30,000....	30.1	32.2	28.6	26.1

[45]These data are taken from *Educational Research Service*, Department of Superintendence and Research Division, National Education Association, Washington, D. C., Circular No. 6, May, 1931, p. 2. All classes undoubtedly increased in size during the period from 1930 to 1933. This is indicated by the increase in the number of pupils per teacher, as shown in Circular No. 124, October, 1933, of the Office of Education, Washington, D. C.

The most illogical tendency shown in this table, as well as in the more detailed data from which it was constructed, is the

[44]Discussions of administrative factors are available in such general references as Strayer, George D., and Engelhardt, N. L., and others, *Problems in Educational Administration*. Bureau of Publications, Teachers College, Columbia University, New York, 1925. The most important references on class size are given in the footnotes to the discussion that follows.

gradual decrease in the size of class from the beginning of the elementary school to the end of the high school. This practice cannot be justified from any point of view, for young children are more dependent upon the teacher, and there is a smaller amount of instructional equipment that is suited to their needs. There are no administrative necessities that require larger classes in the lower grades than in the high school. But while the present condition cannot be justified, it may be explained in part by the history of the American high school and particularly by the influence of the requirements of various accrediting agencies.

Recent data on the size of class in the social studies are not available for the elementary school, except as one deduces them from the size of class in general. The median class size and the policies with regard to minimum and maximum limits in junior and senior high schools are shown in Table IX. The figures in this table show median practice and median policies; the range in each case is very great.

TABLE IX

POLICIES AS TO MINIMUM AND MAXIMUM CLASS SIZE IN SOCIAL STUDIES, EXPRESSED IN MEDIANS[46]

	Junior High Schools			Senior High Schools		
	ACTUAL MEDIAN SIZE	POLICY AS TO MINIMUM SIZE	POLICY AS TO MAXIMUM SIZE	ACTUAL MEDIAN SIZE	POLICY AS TO MINIMUM SIZE	POLICY AS TO MAXIMUM SIZE
Over 100,000.....	35.0	25	40	30.7	20	35
30,000–100,000....	32.1	25	35	29.2	20	35
Under 30,000	31.4	20	35	29.7	17	35

[46]The data in this table are taken from *Educational Research Service*, Department of Superintendence and Research Division, National Education Association, Washington, D. C., Circular No. 1, January, 1931, and Circular No. 6, May, 1931.

EVIDENCE FROM OTHER SUBJECTS

The investigation of the relationship of class size to efficiency in instruction began with that of Rice in 1896. Most of the early studies were carried on in elementary schools, but more recently attention has also been given to the problem in high schools and colleges. Several investigations of class size in the social studies have been made. There is also indirect evidence from a large number of studies of class size in other subjects. The data from experiments in such subjects as arithmetic, spelling, handwriting, reading, and high-school mathematics are probably of only limited value as a basis for arriving at conclusions regarding the effect of class size in the social studies. Data from more closely related subjects, such as literature, science, history of education, and psychology, are more significant. The many investigations in these more or less closely related fields cannot be reviewed here. Excellent summaries, critical evaluations, and bibliographies are given by Hudelson,[47] Irwin,[48] Smith,[49] and Brown.[50] The general conclusion reached is that, while most teachers and pupils favor small classes, the experimental evidence seems to indi-

[47]See especially Hudelson, Earl, *Class Size at the College Level.* The University of Minnesota Press, Minneapolis, 1928. Inserted opposite page ten is a large chart which displays, in convenient form, for various investigations: the date, place, and length of experiment; grade(s); subject(s); number of cases; size of class; controlled factors; critical factor(s); means of measurement; and results and conclusions. See also Hudelson, Earl, "Class-Size Opinions, Evidence, and Policies in Secondary Schools," *The North Central Association Quarterly* IV (September, 1929), pp. 196–208.

[48]Irwin, Manley E., "A Summary of Special Investigations of the Effect of the Size of Class upon the Effectiveness of Instruction," *The North Central Association Quarterly* IV (December, 1929), pp. 352–57. See also Irwin, Manley E., "Educators Have Not Solved the Class Size Puzzle," *The Nation's Schools* X (December, 1932), pp. 23–26.

[49]Smith, Dora V., *Class Size in High School English.* The University of Minnesota Press, Minneapolis, 1931.

[50]Brown, Albert E., "The Effectiveness of Large Classes at the College Level," University of Iowa *Studies in Education,* VII, No. 3, 1932.

cate that, within the limits commonly found in schools, class size is not an important factor in determining achievement as commonly measured.

EVIDENCE IN SOCIAL STUDIES

The investigations that have been made of the relationship of class size to efficiency of teaching in the social studies have yielded results that are in harmony with those found in other fields. Davis, in a study with one hundred co-operating schools, taking large-, small-, and medium-sized classes as he found them, reported a slight superiority for small classes in social studies. When, however, large-, medium-, and small-sized classes were deliberately organized and an attempt was made to keep the methods of teaching uniform, negligibly higher marks were reported for the larger classes. He concluded that for subjects in general, "There is no necessary connection between size of class and efficiency of instruction as measured by pupils' grades."[51]

Stevenson, comparing high-school classes of thirty-seven and seventeen in ancient history and classes of thirty-eight and nineteen in American history, found the achievement of the smaller classes to be slightly superior.[52]

Hudelson states that in forty-six of the fifty-nine controlled experiments with college classes at the University of Minnesota, ". . . a more or less decided advantage accrued to the paired students in the larger sections." This superiority is shown in classes in American history, sociology, and economics, as well as in such related fields as psychology, educational so-

[51]Davis, C. O., "The Size of Classes and the Teaching Load in the High Schools Accredited by the North Central Association," *The School Review* XXXI (June, 1923), pp. 412–29.

[52]Stevenson, P. R., "More Evidence Concerning Large and Small Classes," *Educational Research Bulletin* IV (May 27, 1925), pp. 231–33.

ciology, and the history of education. In the social studies the "small" classes ranged from twenty to forty; the "large," from thirty-seven to one hundred and seven. Hudelson concludes that "At every intelligence level the paired students in the large sections excelled their mates in the small."[53]

Gould, in a study of eighth- and eleventh-grade history classes in five Los Angeles schools, concludes that "classes of approximately sixty . . . can achieve as good results in subject mastery as can classes of approximately thirty." Class size did not affect achievement even in the case of the less able pupils. The study revealed, however, that large classes call for excellent equipment, more detailed teacher preparation, extensive modification of methods, and more careful planning. Only superior teachers were used in the study, and clerical assistance was provided. Even under these favorable conditions the teachers report that such large classes entail much more nervous strain.[54]

Bloomfield, in a carefully controlled experiment, compared the achievement in American history of classes of thirty and fifty-five, the pupils being paired on the basis of an intelligence test and an objective test in American history. The question-and-answer and the discussion methods were used both in the large and in the small classes. He found no significant difference in the relative attainments of the two classes but concluded "that the large class, *ipso facto,* forces the student to a greater reliance upon himself and to less reliance upon the instructor."[55]

Davis and Goldizen, also using the matched-pair technique,

[53]Hudelson, Earl, *Class Size at the College Level,* Chap. VII.

[54]Gould, Arthur, *Experiments in Teaching Large Versus Small Classes.* Unpublished study of a Los Angeles committee working in co-operation with the research committee of the National Association of Secondary School Principals.

[55]Bloomfield, L. S., "Studies in Class Size. Class Size in Senior American History," *Department of Secondary-School Principals Bulletin* XXIX (1930), pp. 6–9.

compared the achievement of one class of seventy pupils in history with that of two classes of thirty-five. Instruction was modeled on the Morrison plan. Since the pupils in the large section seemed to be at no disadvantage, the authors concluded that large sections may be as well taught as smaller sections.[56]

Ewan reported that, as measured by standardized tests, the achievement of secondary-school pupils in civics and history is as satisfactory in large as in small classes. The average size of small classes in his experiment was thirteen pupils; the large classes, thirty-one. The smallest class in history contained nine pupils; the largest contained forty-eight.[57]

Eastburn found results obtained in American history in classes of thirty to be slightly superior to those in classes of sixty, but the differences found were not statistically significant.[58]

It is difficult to determine the significance of these findings, which run counter not only to the preferences of teachers and pupils but also to the judgments that have previously been held by critical students of the problem. The consistency of the results at all levels and in all subjects is impressive.[59] On the other hand, it does not seem possible, in classes as large as in some of the experiments, that teachers can readily utilize the procedures that have been found most effective in teaching the social studies. We have probably been too much concerned with the arbitrary limitation of class size. There

[56]Davis, Everett, and Goldizen, Mae, "A Study of Class Size in Junior High School History," *The School Review* XXXVIII (May, 1930), pp. 360–67.

[57]Ewan, S. N., "Class Size," *Department of Secondary-School Principals Bulletin* XL (1932), pp. 124–29.

[58]Eastburn, Lacey A., "The Relative Efficiency of Instruction in Large and Small Classes on Three Ability Levels," *Journal of Experimental Education* V (September, 1936), pp. 17–22.

[59]The studies reviewed above deal with class size at upper levels. For data on lower grades, see Whitney, F. L., and Willey, G. S., "Advantages of Small Classes," *School Executives Magazine* LI (August, 1932), pp. 504–6.

are many other factors that should give far more concern to those responsible for planning instruction in the social studies: adequate training of teachers, improvement of reading ability, provision for individual differences, provision of more and better reference equipment, improvement of the course of study, and improvement of methods. Not only are these matters more important in themselves; they are essential factors in determining the most efficient class size.

There are several possible explanations for the failure of medium and small classes to show superiority over large ones: First, it may be either that the alleged advantages of the small class accrue also to the large class, or that the large class has definite advantages to offset its possible disadvantages. Large classes, for example, are believed by some competent investigators to stimulate the development of self-reliance and a spirit of co-operation. Second, it is possible that the teachers who participated in these experiments did not make use of the opportunities that the small class has been held to offer. While this may be true of practice by and large, it does not seem reasonable that among all of the experiments in various subjects, from elementary school to university, there should not have been some excellent teachers who would have capitalized the advantages of the small class, if these advantages exist. Third, an examination of such tests as are reported to have been used in the various experiments indicates that they measure, for the most part, the possession of information. One should not jump to the conclusion, however, that if other valued outcomes had been measured, the superiority of smaller classes would have been clearly shown, although there is some slight evidence, mostly indirect, which supports such a view.[60] It

[60]See, for example, Tyler, Ralph W., "Certain Administrative Procedures in Botany and Zoölogy," *Service Studies in Higher Education*, Ohio State University Studies, No. 15, 1932, pp. 117–19.

must be kept in mind, however, that little difference has been shown between the achievement of large and small classes not only when measured by objective examinations but also when measured by grade points or, in the elementary school, by promotion. It is not unreasonable to assume that teachers in promoting and in assigning grades take into consideration factors other than the ability to recall information.

CONCLUSION

Those who have conducted the most comprehensive investigations of class size are disposed to place the burden of proof on those who favor small classes, since larger classes obviously effect a financial economy. These investigators have drawn their conclusions very cautiously, however, and have urged the need for more refined experiments. Future research may well be focused upon the relative efficiency with which classes of various sizes accomplish the ends set up to guide instruction in social studies. In other words, it is better, both in practice and in research, to center attention on what needs to be done in the development of intelligent citizens, including among other things attention to the needs of individual students, the development of abiding interests and adequate understanding, the acquirement of critical modes of thought, the proper use and discipline of emotions, and the improvement of conduct. Neither the available evidence nor common sense suggests that there is any magic in the small class, *per se,* that brings about miracles in the accomplishment of any of these ends. More attention should also be given, in future investigations, to the methods best suited to classes of various sizes and to the many interrelated administrative factors, each of which has its own variations and implications. Among such factors are enrollment, budget, housing facilities, instructional equipment, and

teaching load. For example, the provision for reference reading is a different problem in classes of fifty from what it is in those of twenty; the problem of housing facilities is particularly difficult at the high-school level, since most buildings have been constructed for classes of a size much smaller than that now deemed necessary.

Such questions as the following come to mind: What can be done in a small class to justify the expense that it involves? Is it done? What are we likely to lose by a moderate increase in class size? What do we gain? So long as "large" classes are kept within the limits of the median practices and policies given in Tables VIII and IX, neither the experimental evidence nor common-sense judgment would indicate significant loss in efficiency. The gain is in financial economy. In times of budget restrictions, and at all times for that matter, one must inquire as to how public money can be spent most advantageously. In view of the evidence, administrators seem to be justified in slightly increasing the size of classes if the money thus saved can be spent for the retention of able teachers, for more adequate equipment, or for decreasing the number of teaching periods in order to free some of the teacher's time for preparation and for work with individual pupils, especially those at the lower levels of ability. The danger is, however, that classes will be made larger without devoting the time and money thus saved to these important purposes, and without making the adjustments that are required for efficient work with large classes. Large classes undoubtedly increase the teacher load because of the strain of the actual conduct of the class periods, the almost inevitable increase in the number of different students with whom the teacher must become acquainted, the more detailed and thorough planning that is necessary, and the larger amount of pupils' work that must be

appraised.[61] Teachers vary widely in their ability to cope successfully with the more difficult administrative problems that the larger classes entail; for many, these problems are too formidable to be overcome.

No increase in class size should be considered, therefore, unless the number of teaching periods is decreased. Teachers of social studies carry an especially heavy load. The field with which they deal is unusually extensive and complicated; to keep abreast with modern problems and developments is very difficult; the time required for reading the best in current books and articles in the field is enormous. The crucial nature of the obligations that teachers of social science assume and the deep concern of the public with what they teach make it imperative that they be given time for a critical and mature formulation of their program and for maintaining a sympathetic understanding of public opinion both in their immediate community and in the country at large. The provisions for meeting the unusual difficulties of learning in the social studies that are described in the following chapters are likewise time-consuming, and the need for guiding the development of ideas, attitudes, and social conduct of individual children is perhaps greater than in any other field of teaching. To increase the teacher's load beyond the point where these demands can be met is penny-wise and pound-foolish.

[61] Teaching load is generally defined as the total number of pupils divided by the number of teachers. Measured on this basis alone, the teaching load in social studies is very heavy. See, "Teaching Load in 136 City High Schools." *City School Leaflet,* No. 9, June, 1923; Peterson, E. T., and others, "Teaching Load," *Review of Educational Research* I (1931), pp. 92–98. There are other important factors, however, that influence teaching load: adequacy of instructional equipment, number of classes taught, number of different preparations to be made, the teacher's training, extra-curricular activities. See, Brown, E. J., and Fritzemeier, L. H., "Some Factors in Measuring the Teacher's Load," *Educational Administration and Supervision* XVII (1931), pp. 64–69; Crofoot, M., "Amount of Time Spent in School Work in Terms of Teacher Hours and Pupil Hours," *Educational Administration and Supervision* XVII (1931), pp. 446–452; Davis, C. O., "Size of Classes."

Chapter III

WHAT AND HOW TO THINK

INTRODUCTION

The conflict and confusion of views toward social education must impress any one who reads widely in general and in educational literature. The legend of Babel has become a modern reality. Divergence of opinion is shown not merely in the practical problems of curriculum, methods, and materials of instruction; it is manifested in the fundamental conceptions of education, and particularly in those pertaining to the relation of the school to society. The confusion and lack of unanimity in the minds of those responsible for education are precisely what one should expect in view of the perplexities and disorders in society at large. A straightforward and unified educational program is difficult to maintain in a world in which the conflicts of ideologies are so violent and unresolved.

Even those knowledges, attitudes, and abilities that are clearly defined and universally accepted as desirable are not easy to develop in students. It is generally agreed, for example, that students should be able to spell correctly, to write legibly, to compute accurately, and to read with comprehension. But the attainment of the average student in these fields leaves much to be desired in spite of the fact that curricula, methods, and instructional equipment are far more efficient than ever before. As compared with spelling, reading, writing, and arithmetic, learning in the social studies is very difficult, even when directed to the descriptive aspects of society, about which

there is little or no disagreement: the distribution of forests in North America, the invention of the steam engine, or the growth of immigration from 1820 to 1920. Much of the curriculum in social studies is made up not of such simple and established matters but of ideas that are complicated and controversial. Social problems are hard for students to understand even when the solution is known, but for many of the most important questions neither the teacher nor any one else knows the answer. The task of instruction in the social studies is therefore immeasurably greater than that in less controversial fields.

While teachers are naturally perplexed by the conflict of social theories and circumstances, they are even more troubled by the efforts of powerful groups to control public opinion and action through appeals to prejudice, the dissemination of false ideas, the restriction of freedom of thought and speech, and the obstruction of every channel through which truth might reach the people. Most of these objectionable practices are associated with the modern forms of propaganda and indoctrination.

INDOCTRINATION AND PROPAGANDA

The terms indoctrination and propaganda are simple enough in their dictionary definitions. Indoctrination means merely instruction in certain principles or doctrines; propaganda, the inculcation of a particular faith. But these terms are far from simple in their connotations in recent discussions of social, political, and educational problems. For, in the long struggle for freedom of thought, of worship, and of speech, and for the maintenance of the rights of the individual in society, they have become charged with emotional repulsion. They have come to be associated with practices that are inconsistent with

and inimical to cherished causes, so that to brand any act of teaching as propaganda or indoctrination is to damn it in the eyes of the educational world.

According to Hearnshaw, "A propagandist is not anyone who promulgates an opinion, but anyone who does so on other than intellectual grounds."[1] Martin's indictment is more severe:

"Education aims at independence of judgment. Propaganda offers ready-made opinions for the unthinking herd. Education and propaganda are directly opposed both in aim and method.

"The educator aims at a slow process of development: the propagandist, at quick results. The educator tries to tell people *how* to think; the propagandist, *what* to think. The educator strives to develop individual responsibility; the propagandist, mass effects. The educator wants thinking; the propagandist, action. The educator fails unless he achieves an open mind; the propagandist, unless he achieves a closed mind."[2] Similar indictments have been made of indoctrination.

The foregoing statements represent the attitude of those who consider indoctrination and propaganda inherently bad. In contrast, others hold the terms to mean merely the marshaling of all the resources of appeal in the interest of forming opinion or securing action. From this point of view indoctrination or propaganda may be either good or bad according to the intent and the method. Propaganda for the reduction of fire hazards is an illustration of good intent; propaganda

[1]Hearnshaw, F. J. C., "History as a Means of Propaganda," *Fortnightly Review* CXX (August, 1923), p. 323.

[2]Martin, Everett Dean, Bernays, Edward L., "Are We Victims of Propaganda?" *The Forum* LXXXI (March, 1929), p. 145. Discussion LXXXI (April, 1929), sup. 49–52. For a similar statement, see *Proceedings of the National Education Association*, 1929, Report of the Committee on Propaganda (abstract), Edwin C. Broome, chairman, pp. 206–7.

for the use of a worthless nostrum or for the promotion of the interests of a vicious political ring are illustrations of bad intent. Good intent is identified with the interests of society; bad intent, with its exploitation. Good method, while not limited to intellectual appeals, rejects the falsification or distortion of evidence and the use of any procedures that block thinking. Perhaps the best protection against the more objectionable types of indoctrination and propaganda is a clear realization of their extent, their purposes, and their methods. The following statement by Dunlap reveals some of the tricks of the trade:

"The principles of propaganda as it is employed today by agencies of all sorts are reducible to succinct rules. These rules read like a catalog of social shame, but that they are in use is 'a condition and not a theory,' and it is imperative that those to whom propaganda is directed should recognize them, since the propagandists recognize them well enough. There are six fundamental rules:

"1. If you have an idea to put over, keep presenting it incessantly. Keep talking (or printing) systematically and persistently.

"2. Avoid argument, as a general thing. Do not admit there is any 'other side'; and in all statements scrupulously avoid arousing reflection or associated ideas, except those which are favorable. Reserve argument for the small class of people who depend on logical processes, or as a means of attracting the attention of those with whom you are not arguing.

"3. In every possible way, connect the idea you wish to put over with the known desires of your audience. Remember that wishes are the basis of the acceptance of ideas in more cases than logic is.

"4. Make your statements clear, and in such language that

your audience can repeat them, in thought, without the need of transforming them.

"5. Use direct statements only when you are sure that a basis for acceptance has already been laid. Otherwise, use indirect statement, innuendo, and implication. Use direct statement in such a way that the attention of the audience shall be drawn to it sufficiently to take it in, but not sufficiently to reflect upon it.

"6. For the most permanent eventual results, aim your propaganda at the children; mix it in your pedagogy. . . ."[3]

Students should be taught to suspect the motives and the integrity of any persons or organizations that use these methods.

As already indicated, the trend in current discussions is to apply the terms indoctrination and propaganda rather loosely to practices that are held to be objectionable. Just what is objectionable, or why, is not usually defined explicitly. As a result, many discussions degenerate into mere vituperation and the real issues are obscured. Yet there are real issues, the most vital of which are: First, shall the schools set up a social program and attempt to realize it through the inculcation and control of attitudes, habits, knowledge, patterns of thought, and value norms; *i.e.*, shall they inculcate "sound" doctrines? Second, shall controversial issues be studied, and if so, by what methods? Third, shall freedom of teaching and discussion prevail? Fourth, shall the schools teach pupils what to think or how to think? Fifth, shall symbolism, slogans,

[3]Dunlap, Knight, *Social Psychology*. The Williams & Wilkins Co., Baltimore, 1925, p. 256. See also Biddle, Wm. W., "A Psychological Definition of Propaganda," *The Journal of Abnormal and Social Psychology* XXVI (October-December, 1931), pp. 283–95; Bernays, Edward L., *Propaganda*. Horace Liveright, New York, 1928. An especially helpful analysis of the forms of propaganda and the means of combating them through education is given in "Education Against Propaganda," *Seventh Yearbook*, National Council for Social Studies, 1937.

conditioning, or emotional appeal be utilized; and if so, in what manner? These issues are obviously so closely interrelated that a decision on any one of them must influence the decisions on all the others. They will be clarified by directing attention away from the attempt to define or evaluate propaganda and indoctrination and to a consideration of the issues themselves.

If any valid conclusion with regard to these issues is to be reached, however, certain realities must be faced squarely: the vastness and complexity of the modern world, the conflicts of ideologies, the limited abilities of students, the nature of thinking and understanding, and the inadequacy or inaccessibility, both in schools and in communities at large, of sources of data on social problems. A consideration of these realities is therefore interwoven with the following discussion.

I. SHALL THE SCHOOLS HAVE A SOCIAL PROGRAM?

The manifest difficulty of making a vast and complicated world intelligible leads to a conviction, more and more widely accepted, that the schools should present to students a social program that is explicit, unified, and dynamic.[4] According to this point of view, social education should be deliberate and purposeful, not haphazard and aimless. It should seek to give a valid description of modern society—its phenomena, its processes, its trends, and its problems. Even more important, it should seek to select and inculcate certain value norms rather than others. In short, it should seek a plan in which the ends and instruments of social living are seen in one intelligible and integrated pattern.

[4] *Conclusions and Recommendations* of the Commission on the Social Studies, American Historical Association. Charles Scribner's Sons, New York, 1934, Chaps. I–IV; *Fourteenth Yearbook*, Department of Superintendence, Washington, D. C., 1936. This is the report of the Department's Commission on the Social Studies Curriculum, C. B. Glenn, chairman.

It is not easy to get a valid understanding of our modern social world, even in its descriptive outlines, and much less so in its normative aspects.[5] "The world in which the individual must live and act and exercise the rights of citizenship transcends his powers of comprehension."[6] People of all ages have been baffled by the problems confronting them. Even a primitive or relatively static society, with an almost perfect and unchanging consensus as to the ends and techniques of living, is difficult for the mind to encompass; modern society is so vast, so complicated, and so rapid and uneven in its evolution that a unified description or interpretation of it is well-nigh impossible.[7] Indeed, a single aspect of the social process, such as the distribution of wealth, or the use of marginal land, cannot, with its ramifications, be readily comprehended.

If the child, or even the adult, is to grasp their meaning and significance, the various parts of the social process, as well as the unified whole, must be reconstructed on simpler models.[8] These models, if well made, are valid in a pragmatic sense; that is, they make possible both efficient thought and action. They must not be oversimplified or removed too far from the world they represent, since they can maintain their vitality and validity only through constant references to con-

[5]Evidence of the lack of understanding in the social studies is presented in Chap. IV. See also Rugg, Harold, *Culture and Education in America.* Harcourt, Brace & Co., New York, 1931.

[6]Counts, George S., *The Social Foundations of Education.* Charles Scribner's Sons, New York, 1934, p. 517.

[7]How colossal a task this is is indicated in a number of recent books: *Recent Social Trends in the United States.* McGraw-Hill Book Co., Inc., New York, 1933. See also: Beard, Charles A., *The Nature of the Social Sciences.* Charles Scribner's Sons, New York, 1934; Ogburn, William Fielding, and Goldenweiser, Alexander (editors), *The Social Sciences.* Houghton Mifflin Co., Boston, 1927; Barnes, Harry Elmer (ed.), *The History and Prospects of the Social Sciences.* Alfred A. Knopf, New York, 1925.

[8]Lippmann, Walter, *Public Opinion.* Harcourt, Brace & Co., New York, 1922.

crete realities. Thus the concept that one has of marginal lands, to remain authentic and dynamic, must constantly be related to soils, rainfall, and location of specific areas; to the invention of machinery and new methods of farming; to markets; to the quality of life of the farmers of such lands; and even to social policy. This last relationship is especially significant, for the social studies pertain not merely to objective circumstances but to custom, social interest, and human purpose.[9]

The task of building an authentic and acceptable picture of these ends and instruments of society calls for wisdom and scholarship of the highest order. This conclusion seems inescapable in view of the enormous amount of knowledge needed as a basis for thinking about modern social problems; the extent, diffusion, and inaccessibility of the necessary basic data; and the time as well as the technical skill required to discover and to interpret these data and to organize them into usable form. And not merely is competence required, but co-operation, and the use of all the resources of science, philosophy, and common sense. The machinery for establishing competent leadership has not yet been set up, but some approach to it has been made by various committees and commissions that have undertaken similar tasks. Indeed, the Charter of this Commission[10] is an example of the way in which co-operative leadership might focus upon the problem. The Committee on Recent Social Trends has suggested the possibility of establishing a permanent body for the discovery and interpretation of significant social data.[11] The need of machinery to gather and interpret basic information was

[9] *Conclusions and Recommendations*, Chaps. I–IV.

[10] Beard, Charles A., *A Charter for the Social Sciences in the Schools.* Charles Scribner's Sons, New York, 1932.

[11] *Recent Social Trends in the United States*, I, p. lxxiii.

pointed out also by a committee of the National Education Association.[12] The members of the teaching profession should take a leading part in the deliberations of such a body, but they should not assume the responsibility alone.

No authoritative and complete description of the goals and instruments of American society is as yet available. Meanwhile, the schools must run. Those responsible for their operation must, with such co-operation as they can secure, make the best decisions they can, however tentative they may be. Various committees have made substantial progress in the accomplishment of this task. Educators have, moreover, many related problems that are distinctively professional: the determination of the special province of the school in developing public opinion, the decision as to what and how much social education the school ought to undertake, the making of curricula and their adaptation to different levels of development, the selection of instructional equipment, the adoption of efficient methods, and the appraisal of results.

II. SHALL CONTROVERSIAL ISSUES BE TAUGHT?

The lack of consensus on public questions.—The establishment of a definite constructive program assumes either a reasonable consensus among the leaders in social thought or the dominance of the ideology of some group in power. But the divergence of views on vital problems of the day is a matter of common observation. It is shown in an impressive fashion by Pierce and by Raup in their studies of the social and educational programs of certain organized interests in

[12] "Report of Committee on Social-Economic Goals of America," F. J. Kelly, chairman. *Proceedings National Education Association*, 1933, pp. 210–13. This suggestion is elaborated by the chairman in an address, "How Education Can Assume Its Responsibility for Social Betterment," *Proceedings National Education Association*, 1932, pp. 225–35.

America.[13] For example, Raup studied the position taken by important organizations on such matters as the principle of *laissez-faire* in business, naval and military preparedness, capitalism, and the rights of private property. On these problems, the views held by the United States Chamber of Commerce, the National Association of Manufacturers, and the Daughters of the American Revolution are almost diametrically opposed to those held by the People's Lobby, the League for Industrial Democracy, and the American Civil Liberties Union.

Indeed, surprising differences are found even on questions that are usually regarded to be matters of general agreement. For example, Latham,[14] in a study of concepts concerning trespass, and Yates,[15] in an investigation of concepts concerning slander and freedom of speech, found that individuals not only disagreed with one another but also with the decisions of the courts. In addition to the diversity of opinion among various groups, and perhaps contributing to it, there are, moreover, as Merriam points out, conflicts among the loyalties given by the individual himself to the different groups of which he is a member: the family, the church, the circle of friends, political party, occupational group, and various other cultural affiliations.[16]

[13]Pierce, Bessie Louise, *Citizens' Organizations and the Civic Training of Youth.* Charles Scribner's Sons, New York, 1933; Raup, Bruce, *Education and Organized Interests in America.* G. P. Putnam's Sons, New York, 1936, especially Chap. VIII. See also Latham, Orval Ray, *Children's Concepts Concerning Trespass as Affected by Training and Environment.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1928; and Yates, Ida M., "Concepts and Attitudes Concerning Slander and Freedom of Speech," University of Iowa *Studies in Education,* Vol. IX, No. 1. State University of Iowa, Iowa City, 1934, pp. 185–202.

[14]Latham, *Children's Concepts Concerning Trespass.*

[15]Yates, "Concepts and Attitudes Concerning Slander."

[16]Merriam, Charles E., *Civic Education in the United States.* Charles Scribner's Sons, New York, 1934, Chap. IV.

The policy of the school.—What the policy of the school should be, in view of this lack of unanimity, is still debated. Some see in the lack of consensus the need for the dominance of one ideology—a dominance achieved through the scholarly authority of leaders in social thought, by centralized educational control, or even by political power, as in Soviet Russia, Fascist Italy, or Nazi Germany. Dominance is demanded, according to this view, not only to build social solidarity but also to make the task of learning tolerable. In contrast, others hold that the school should not be expected to resolve differences that society itself cannot harmonize. To those who hold this conviction, two alternatives are open: first, to attempt to eliminate all controversial issues from the school; second, to include such issues but leave the students to arrive at their own conclusions as a result of their consideration of the evidence. Correlative to this second alternative are the proposals to "teach both sides of the question" and to "teach pupils how to think, not what to think." The latter of these proposals is also made by those who would remove controversial issues from the school. Nevertheless, the trend of both public and professional opinion and the practice of superior teachers has turned definitely in favor of teaching controversial issues. "Willy-nilly," says Beard, "the social studies deal with debatable and debated issues, and any organization of these studies is debatable and debated."[17] The *Conclusions and Recommendations* of the Commission on Social Studies states:

"The program of social science instruction should provide for a realistic study of the life, institutions, and culture of contemporary America. In doing this, it cannot omit study of the inefficiencies, the corruptions, the tensions, the conflicts,

[17]Beard, Charles A., "The Nature of the Social Studies," *Fourteenth Yearbook*, Department of Superintendence, Washington, D. C., 1936, p. 59.

the contradictions and the injustices of the age, or consideration of the material and spiritual potentialities implicit in man's mastery of natural forces."[18]

Krey reports that, of a large number of superior teachers investigated, *"nearly every one of them made some use of current controversial issues."*[19] Merriam's conclusion is fairly representative of the position taken by most scholars in the social studies. He points out that: "In a world of thought it will prove impossible, even for those disposed to do so, to prevent discussion of the foundation principles of political action; and every gain in such direction, or what seems a gain, is in fact a loss, for it only postpones the day of consideration to an hour less favorable.

"An ostrich policy of avoiding the consideration of controversial questions cannot well be the basis of intelligent or dynamic citizenship. The very fact that controversies often rage on an emotional level makes it important that these elements of emotion may be analyzed and separated in the atmosphere of school analysis. Where emotions are already aroused, there is at least the certainty of attention and interest, and this may be utilized for the purpose of stimulating the faculty of analysis and deliberation. It should at least be possible to 'join the issue' to delimit the controversy, and to pave the way for further search for data, for analysis of puzzling situations otherwise passed over."[20]

It is not to be expected that divergencies of opinion on public questions will ever be permanently resolved. Never in history have the American people been of one mind, not even during the War of Independence. Because these differences

[18]*Conclusions and Recommendations*, p. 53.
[19]Krey, A. C., "Dealing with Controversial Topics," *Junior-Senior High School Clearing House* VIII (October, 1933), p. 91.
[20]Merriam, *Civic Education*, pp. 147–48.

cannot be settled once for all, we must be open-minded, must provide free discussion, and must seek progressively and experimentally to discover better solutions. Social policies must always be tentative.

The need for intellectualization.—The most crucial task involved in the study of controversial issues in the school is the achievement of what Dewey has called intellectualization. The more controversial the issue, the more likely it is that the student will attack it in an emotional and prejudiced spirit. The need for training in the intellectualization of social problems is paramount. It constitutes, indeed, one of the strongest arguments for including controversial issues in the school. For this training cannot be given by talking about the abstract principles of open-mindedness, the importance of careful thinking, and the need for sympathetic understanding of the other person's point of view. It must be given in the direct and critical consideration of the issues themselves.

Objective thinking about controversial issues is undoubtedly promoted by the practice and idealization of two safeguards long recognized as fundamental to research in the natural sciences—the use of the negative hypothesis and the search for negative data. These two safeguards are even more crucial in the study of social problems, not only because the solutions are more elusive but also because of the greater likelihood that custom, prejudice, and wishful thinking may hamper or frustrate the intellectualizing of the problems. As applied to controversial issues, the negative hypothesis may well be the opponent's point of view, and the negative data the facts and arguments that he presents. The student should come to see, moreover, that these two principles are more than techniques; they are ideals—the foundations of intellectual honesty.

Indoctrination through subjects.—Since a lack of consensus concerning the social program is inevitable, and since obvious difficulties accompany the presentation of controversial issues in the school, it has been suggested that such issues be omitted and that the provision for social education be restricted to giving a sound background in history, geography, and the structural aspects of government. It is argued that these subjects are more nearly limited to matters of fact, that consequently there is a greater consensus with regard to them, and that they may well constitute, in the long run, the best mental equipment for the study of modern problems. This proposal gives a false sense of security, for if the content of these subjects is selected and organized so as to afford background and orientation for the realistic study of modern problems, controversies cannot and should not be kept out. Indoctrination, although indirect, is inevitable, and, indeed, it may be more effective because of its very subtlety and indirection.

No historian, for example, writes all he knows about any phase of civilization that he treats. He does not usually attempt to find out everything about it. His selection of data, his organization, and even his style are determined by some purpose or point of view. History, even that of a remote period, is rewritten from time to time, not solely because of the discovery of new or the discrediting of old monuments, but because of the establishment of new points of view, new purposes and new hypotheses.[21] And each rewriting makes a different selection, organization, and interpretation of historical data.[22] For example, history containing little or no mention of wars is

[21]Salmon, Lucy M., *Why Is History Rewritten?* Oxford University Press, New York, 1929; Schlesinger, Arthur Meier, *New Viewpoints in American History.* The Macmillan Co., New York, 1932.

[22]See, for example, Croce, Benedetto, *History, Its Theory and Practice.* Harcourt, Brace & Co., New York, 1921; Robinson, James Harvey, *The New History.* The Macmillan Co., New York, 1918.

prima facie anti-militaristic, perhaps as much so as to dwell on arguments against war. It indoctrinates by omission and by the creation of other interests. On the other hand, history giving great space to the undeniable heroism of soldiers and sailors in war is *prima facie* militaristic. It indoctrinates by selection and emphasis. The trend in textbooks in American history during recent years, for example, has been away from military and political history, and toward the economic, social, and cultural.[23] In biography many military heroes have been supplanted by leaders in social and mechanical invention. And even the history of wars is rewritten in order to create new attitudes. Witness the recent accounts of the Revolutionary War. Nor has all this gone unnoticed, as is shown in the legislation of many states, in the activities of Thompson at Chicago, and in the steady pressures of such groups as the Daughters of the American Revolution. The selection, organization, and interpretation of the data on geography and civics are no less powerful influences for indoctrination.

Even when accurately and competently taught, geography, history, and civics must inevitably exert a profound influence upon the students' thought and attitudes about modern life. And when, as is common both in Europe and in the United States, the treatment in the text and in the classroom is narrow, prejudiced, and jingoistic, the students' ideas are warped as badly as in the biased and direct treatment of modern issues. Truth is always somewhat distorted in school textbooks and courses of study. A student who has obtained his knowledege

[23]Horn, Ernest, "Possible Defects in the Present Content of American History as Taught in the Schools," *Sixteenth Yearbook*, Part I, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1917, Chap. X; *Twenty-second Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1923, pp. 317–24.

of the history and geography of the world in an American school would, to a large degree, find the world as pictured in German schools to be queer and unfamiliar. An important part of the nationalistic indoctrination in French schools is the omission or cursory treatment of the history, geography, and social problems of other countries.[24] Such practice leads inevitably to a lack of sympathy and understanding.

Indoctrination by description.—One more delusion needs to be dispelled: the belief that we can eliminate controversy and prevent indoctrination by limiting teaching and study to the descriptive aspects of society. Teach the facts, it is urged, and let the students judge for themselves. To be sure, we need facts and plenty of them. But facts do not select, emphasize, and organize themselves. These processes are performed by some individual, working under the guidance of some norm, some point of view, and some hypothesis, conscious or unconscious. And the most insidious of these directive influences, as many have pointed out, are those of which the author or teacher is unaware.

Suppose, for example, that the student is presented with a vivid picture of the conditions of home life at each decile of income. These descriptions, if reiterated, would undoubtedly exercise powerful formative influences upon his conception of and attitude toward the distribution of wealth. What view he would take, however, would depend upon the person who did the describing. Even if authentic individual facts were available, the selection and emphasis of some and the rejection of others would lead inevitably to prejudice. In description, moreover, the purported facts themselves are often falsified or distorted. He who would indoctrinate, therefore, might well choose description rather than exhortation.

[24]Hayes, Carlton J. H., *France, A Nation of Patriots.* Columbia University Press, New York, 1930, pp. 38–48.

Conclusion.—If the schools follow the advice of national committees, as well as that of the leading social scientists, they will teach controversial issues in the schools. In this they will be supported by the majority of voters of this country.[25] No other course is open to them if they are to deal realistically with social problems. Nevertheless, this decision is attended with very serious difficulties, which arise not merely from the nature of controversy but from the nature of the complicated problems. It is not easy, as has been pointed out, for students to reach an adequate understanding of simple descriptive aspects of society that are beyond controversy, such as the limitations placed upon the farmer in the Great Plains by the nature of climate. The data that are basic to any side of a controversial question are much more complicated than these. The student, moreover, must not only attain an understanding of one side but of all sides and on the basis of this understanding must reach some sort of conclusion, though it may be only provisional. To do this unaided is exceedingly difficult —so difficult, indeed, that it may be quite beyond the ability of students at the grade levels at which complicated issues are sometimes taught.

There are many substantial objections to the inconclusive treatment of controversial issues. In the effort to present all sides of a question, teaching may degenerate into an arid and colorless procedure—a sort of intellectual dilettantism that leaves the student either unconcerned or imbued with a sense of defeat. And after all, life demands action and decision, however tentative the decisions may be. It is debilitating to remain always in a state of suspended judgment. Open-mindedness, tolerance, and the presentation of all sides of an

[25]See the poll taken by the American Institute of Public Opinion reported in *The Des Moines Sunday Register*, May 17, 1936.

issue are means of arriving at conclusions, not a substitute for them. The extreme form of tolerance and open-mindedness that is often advocated in theory is neither possible nor desirable of attainment. It neglects the rôle of ideals and emotions in human decision and action. Kandel is probably quite right in saying that we must find in this country the moral equivalent of certain of the appeals that constitute the driving power of the Nazis and Fascists.[26]

There is something in the contention that the increased vigor given to an author's presentation by a deep conviction stimulates interest and thought to a degree that offsets a good deal of possible bias. The same may be said of the teacher. He creates more interest and commands more respect if he stands for something. And the thing that he stands for must be something more than mere impartiality. The admonition sometimes urged upon teachers never to let students suspect what the teacher believes is hard to follow, even if it be judged desirable; and it is difficult, if not impossible, for the teacher not to make his influence count, even though unconsciously, on the side of his beliefs. While he should studiously avoid imposing his views upon the students, the frank expression of his reasoned convictions need not be incompatible with the sincere desire to encourage and bring about the fairest possible presentation of points of view other than his own. Candor is the best policy.

III. SHALL FREEDOM OF TEACHING PREVAIL?

The teaching profession has chosen to include controversial issues in the school because of its conviction that the truth regarding each side of these controversies should be known.

[26]Kandel, Isaac L., *The Dilemma of Democracy*. The Inglis Lecture, Harvard University Press, Cambridge, 1934.

This decision makes it mandatory that there should be no withholding of essential information, no stifling of thought, and no wavering from the intellectualization of the issues. In short, there must be freedom of thought and teaching. How else can the basis for intelligent judgment be formed? The vital condition for government "of the people, by the people, and for the people" is the free and unpolluted flow of knowledge and the unrestricted use of critical discussion.

The lesson of history is that the development of the scientific habit of mind, the unbiased presentation of all sides of an issue, and a free discussion of policies not only form the only sound bases for enlightened public action but also *constitute a powerful conservative force.* "But when men have realized," said Justice Holmes, "that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out."[27] Sound policies have nothing to fear from free discussion.

Freedom of teaching, however, is not a self-contained prerogative; its justification rests on the rights of students as prospective citizens to know the truth and to develop the power of disciplined thought. It must be viewed in its relation to all types of freedom in the world at large. And freedom, as Dewey points out, "is a word applied to many things of varied plumage,"[28] some of which appear socially desirable

[27]Quoted by Cook, W. W., in "Academic Freedom," American Association of University Professors *Bulletin* XXII (April, 1936), p. 259.

[28]Dewey, John, "Philosophies of Freedom," in Kallen, Horace M. (ed.), *Freedom in the Modern World.* Coward-McCann, Inc., New York, 1928, p. 236.

and some, in their selfishness and in their anarchistic license, seem socially destructive. Space does not permit an inquiry into the manifold aspects of freedom in society. A helpful analysis is presented in such compendiums as *Freedom in the Modern World*.[29] Two phases of the problem, however, deserve mention: first, that freedom is made possible only by social co-operation in which the individual relinquishes certain types of liberty in order to maintain freedom in society,[30] and second, that it must be achieved, on the part of the individual, through self-discipline and the intellectualization of action.[31] These principles apply to freedom of speech as well as to conduct in general.

The many instances of flagrant restriction of freedom of teaching in this country and its almost complete obliteration in Germany and Italy are rightly viewed with deep concern by thoughtful persons, both in and out of schools. There are forces lying back of these restrictions that are powerful and sinister, and they should be combated with all the resources of society. Especially important is the creation of public opinion that is fully informed on the social consequences of these infringements as well as on their implications for the conduct of our schools. An effort must be made, moreover, to correct the intolerance that seems inherent in human nature. The problem is admittedly complicated, involving freedom of utterance and action on the part of teachers outside the school, security of tenure, and freedom of teaching.[32] The present

[29]Kallen, *Freedom in the Modern World.*

[30]See Dewey, John, *The Public and Its Problems.* Henry Holt and Company, New York, 1927.

[31]See Dewey, John, *How We Think* (new edition). D. C. Heath and Company, Boston, 1933, pp. 85–90.

[32]For a critical discussion of these various phases of the problem, see "General Report of the Committee on Academic Freedom and Academic Tenure," Edwin R. A. Seligman, chairman, American Association of University Professors *Bulletin* I, Part I (December, 1915), pp. 17–43.

discussion must be limited chiefly to the last of these aspects.

Discussions of freedom of teaching, like those of other controversial issues, should be guided by the principle that all important sides of the question should be fairly presented. Yet even a brief excursion into the literature on this issue makes it evident that the principle is often disregarded by both the proponents and opponents of freedom of teaching. Not infrequently the claims for freedom of teaching are presented in so narrow and one-sided a fashion as to weaken its defense and antagonize the public rather than win support. Occasionally there are found, under the guise of pleas for freedom of teaching, arguments for the sole right to present one ideology to the exclusion of all others. These biased and partial claims are generally found, however, in the writings of individuals rather than in the judicial conclusions of responsible committees.

A large number of committees from various professional groups, such as the American Association of University Professors and the National Education Association, have made reports on freedom of teaching.[33] These reports in general, while recognizing ominous trends, both here and abroad, toward the mental enslavement of the people, and while resolutely holding freedom of inquiry and of teaching to be the sacred right and obligation of schools, do not regard this freedom to be absolute and unqualified. Although no single brief statement can embody all the facets of the problem, the following quotation from the report of the American

[33]For an analysis of the problem and a bibliography and reprints of important reports and articles published up to 1925, see Johnsen, Julia E. (compiler), "Academic Freedom," *The Reference Shelf*, Vol. III, No. 6. The H. W. Wilson Company, New York, 1925. For a recent symposium, although not a committee report, see *The Social Frontier* II (March, 1936). The entire issue is given over to discussions of the theme, "Freedom in the School."

Association of University Professors is perhaps representative of the general point of view that prevails:

"Since there are no rights without corresponding duties, the considerations heretofore set down with respect to the freedom of the academic teacher entail certain correlative obligations. The claim to freedom of teaching is made in the interest of the integrity and of the progress of scientific inquiry; it is, therefore, only those who carry on their work in the temper of the scientific inquirer who may justly assert this claim. The liberty of the scholar within the university to set forth his conclusions, be they what they may, is conditioned by their being conclusions gained by a scholar's method and held in a scholar's spirit; that is to say, they must be the fruits of competent and patient and sincere inquiry, and they should be set forth with dignity, courtesy, and temperateness of language. The university teacher, in giving instruction upon controversial matters, while he is under no obligation to hide his own opinion under a mountain of equivocal verbiage, should, if he is fit for his position, be a person of a fair and judicial mind; he should, in dealing with such subjects, set forth justly, without suppression or innuendo, the divergent opinions of other investigators; he should cause his students to become familiar with the best published expressions of the great historic types of doctrine upon the questions at issue; and he should, above all, remember that his business is not to provide his students with ready-made conclusions, but to train them to think for themselves, and to provide them access to those materials which they need if they are to think intelligently."[34]

This statement, although written as a guide to teaching in

[34]"General Report of the Committee on Academic Freedom and Academic Tenure," pp. 33–34.

college, applies as well to teaching in elementary and secondary schools.

In the reports of various committees and in the writings of those persons who have been most deeply interested in maintaining freedom in the school, there are a number of conclusions to which special attention should be called. These are:

1. The best safeguard to freedom of teaching is intelligent public opinion. The public at large, as well as teachers and pupils, should understand that the pollution or withholding of information, the limitation of free and enlightened discussion, and the use of prejudiced appeal are, like coercion itself, the instruments by which ignorance is enthroned and tyrannical government and predatory interests are maintained. It is particularly important that the public should realize that while the school is responsible to the public at large, it cannot perform its proper function unless protected from political interference and the pressure of special groups.[35]

2. The public, as well as teachers, Haggerty points out, should recognize "that the issue of academic freedom relates primarily to pupils rather than to teachers. The issue is whether children and youth shall have freedom to learn, to go through the educative process of fashioning the pattern of their minds so that they will recognize evidence, weigh facts, and draw useful conclusions. The denial of academic liberty is the denial of intellectual opportunities to youth. It is upon this ground that the battle must be waged."[36]

3. Students should be led to see that the conditions of freedom of thought or action are accurate knowledge and dis-

[35]Beale, Howard K., *Are American Teachers Free?* Charles Scribner's Sons, New York, 1936; Pierce, *Citizens' Organizations and the Civic Training of Youth.* Raup, *Education and Organized Interests.*

[36]Haggerty, Melvin E., "The Paramount Service of Education to Society," *The Annals of the American Academy of Political and Social Science* CLXXXII (November, 1935), p. 18.

ciplined thinking. "Genuine freedom, in short," says Dewey, "is intellectual; it rests in the trained *power of thought*. . . . To cultivate unhindered, unreflective external activity is to foster enslavement, for it leaves the person at the mercy of appetite, sense, and circumstance."[37]

4. Freedom of teaching is founded on and limited by the competence of the teacher. The *responsibility* for teaching the truth is no less important than the *freedom* to teach it. "A teacher who narrows the process of learning within the limits of his own interests and prejudices has used the freedom of his professional office without reference to one of his primary professional obligations."[38] And a failure to teach the truth may be caused by ignorance and by a lack of a disciplined mind on the part of the teacher as well as by his deliberate intention or the pressures made upon him by outside forces. There are many legally qualified teachers who, because of a lack of intelligence and scholarship, ought not to be permitted to teach at all, much less to inflict their erroneous and distorted ideas on pupils. For every student whose quest for truth is frustrated by administrative restrictions on the freedom of teaching, there are scores who are hampered by their instructors' lack of competent scholarship.

5. Freedom of thinking requires, by implication, ready access to essential sources of information and to adequate statements of different points of view. These requirements are not met, even to a modest degree, by the library facilities of most schools.

6. Since the primary justification for freedom of teaching is to enable students to arrive at an intelligent understanding

[37]Dewey, *How We Think* (new edition), p. 90.

[38]"Academic Freedom in the Public Schools," *The Harvard Teachers Record* V (October, 1935), p. 209. This is a report of a General Conference held at Harvard University, July 22–25, 1935, Frank W. Ballou, chairman.

of the truth by means of critical inquiry, due consideration should be shown for the immaturity of the student. Many issues should be excluded from the elementary curriculum and from that of the early years of high school, not because these issues do not deserve the fullest impartial consideration at some time, but because they cannot be understood by students at these levels. To teach an issue that is beyond the comprehension of students at a given grade level results inevitably in indoctrination, with all its undesirable concomitants, and prevents the acquirement of dependable knowledge as well as the development of powers of critical thought. This injunction should not be pushed too far, however, for these issues must be met sooner or later, and may already be subjects of discussion among the students. It is doubtful whether the average adult who has been out of school five or more years can deal with them much more adequately than high school students working under the guidance of a competent teacher, with ample library facilities, in an atmosphere of tolerant criticism, and at the end of a carefully planned sequence of courses.

7. Freedom of teaching should be tempered by decent respect for the ideas and sensibilities of the local community. This involves not merely the manner of discussing issues in the classroom; it may sometimes demand that certain issues be omitted entirely in order that consideration of a large number of other important problems shall not be prejudiced in the minds of the public. "This limitation," Kilpatrick cautions, "is a delicate matter and easily abused, but a decent respect for the feelings of others is an obligation not to be lightly disregarded."[89] The defenders of freedom of teaching

[89]Kilpatrick, William H., "Freedom to Develop Social Intelligence," *The Social Frontier* II (March, 1936), p. 175.

are constantly embarrassed by teachers who find more joy in opinionated and inflammatory pronouncements on a petty matter outside their field of competence and offensive to the taste and good sense of the best elements of the community than in the thoughtful consideration of a hundred important problems that, although controversial, may be studied thoroughly with the support of public opinion.

8. Students should develop an appreciation of the fundamental importance of personal, face-to-face discussion as a condition essential to the creation of intelligent opinion and action in the community.[40] The work of the school itself should constitute an introduction to the ideals and regulations that should govern group inquiry, discussion, and debate.

The qualifications suggested in the foregoing conclusions are not cited as reasons for diminishing the vigor of the insistence on the rights and obligations of schools to teach the truth. On the contrary, they enable teachers to wage the battle on more strategic grounds. The traditional American devotion to democratic ideals leaves no choice but to defend freedom of thought and teaching.

IV. SHALL THE SCHOOLS TEACH PUPILS HOW TO THINK OR WHAT TO THINK?

Prominent in the discussions of indoctrination and controversial issues is the proposal, "Teach pupils how to think, not what to think." Just what its proponents mean by this statement is difficult to ascertain. It has become a slogan, and like all slogans, tends to create bias, to block thinking, and to confuse rather than to clarify the issue. The first half of the statement is true; the importance of critical reflection cannot be denied. But the added phrase "not what to think"

[40]Dewey, *The Public and Its Problems*, Chap. VI.

makes it not even a half truth. Taken literally and as a whole, the statement is not only misleading but absurd, manifesting a gross misconception both of the nature of knowledge and of the requirements of thought. What to think and how to think should not be set in opposition, for knowledge and thinking are correlative rather than antagonistic. Knowledge in any real sense cannot be acquired without thinking, and fruitful thinking is impossible without knowledge. This reciprocal relationship between knowledge and reasoning is repeatedly brought out in logical analyses, and it seems to be confirmed by the high correlations generally reported between them.[41]

A detailed analysis of thinking is here impossible and is made unnecessary by the many recent books in which its nature, its safeguards, and the ideals for its control have been thoroughly and competently treated.[42] For the purpose of the present discussion, it is sufficient to call attention to the service of thinking in the acquisition of knowledge, to its dependence upon accurate and well-organized ideas, and to its complexity, as well as to the specialized disciplines required for thinking in the social studies.[43]

Thinking is needed in acquiring knowledge.—The building of accurate, well-organized concepts is, from the point of view

[41]See, for example, Van Wagenen, Marvin J., *Historical Information and Judgment in Pupils of Elementary Schools.* Contributions to Education, No. 101, Teachers College, Columbia University, New York, 1919; Maupin, Nell, *Ability to Reason and Its Relation to Information in Social Studies.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1928.

[42]Dewey, John, *How We Think;* Burtt, Edwin A., *Principles and Problems of Right Thinking.* Harper and Brothers, New York, 1928; Dimnet, Ernest, *The Art of Thinking.* Simon and Schuster, New York, 1929; *An Introduction to Reflective Thinking.* Columbia Associates in Philosophy. Houghton Mifflin Company, Boston, 1923.

[43]Rice, Stuart A. (ed.), *Methods in Social Science.* The University of Chicago Press, Chicago, 1931. This is a report of the Committee of the Social Science Research Council on Scientific Method in the Social Sciences.

of the student, a creative process in which thinking plays a leading rôle.[44] What are sometimes referred to as facts are merely words about facts, and it is only in the case of pure verbal memorization, which is comparatively rare, that thinking does not occur. Wherever understanding is present, some sort of thinking has taken place. Fundamental and complicated organizations of knowledge are achieved only by reflective thought of the highest type. If schools should center on the attainment of dynamic knowledge alone, more thinking would be required than at present prevails, and far better thinking would result than is likely to be induced by the stimulation of the slogan, "Teach pupils how to think, not what to think."

The knowledge that is best as knowledge when evaluated for purposes of describing and interpreting the world today is most useful in thinking and most effective for the development of reflective powers; and, as Thorndike points out, if this fundamental knowledge is not implanted in the minds of citizens, present or prospective, "error and phantasies will grow there."[45]

Furthermore, the real or fancied grievances cited by those who write against indoctrination result as much from a lack of dependable knowledge as from a lack of reflection. Because of the important part that ideas play in thinking, the emphasis upon thinking alone, especially when it is set up in opposition to knowledge, defeats the very purposes that the opponents of indoctrination have in mind and results in delusion or in a futile formalism. Thinking is not stimulated or developed in a vacuum.[46]

[44]See Chap. IV.

[45]Thorndike, Edward Lee, "In Defense of Facts," *Journal of Adult Education* VII (October, 1935), p. 388.

[46]Wood, Ben D., and Beers, F. S., "Knowledge versus Thinking?" *Teachers College Record* XXXVII (March, 1936), pp. 487–99.

Knowledge is required for thinking.—All thinking is dependent upon the quality of the concepts possessed by the student. When the concepts are vague or inaccurate, thinking must be fuzzy or invalid. Ideas not only furnish materials with which the mind works;[47] they motivate thought and give it dynamic quality. The acquisition of a well-organized body of knowledge, thoroughly understood and pertinent to the basic problems and processes of modern life, is no deterrent, therefore, to freedom or facility in thought,—quite the reverse obtains. "Wisdom," says Cohen, "does not come to those who gape at nature with an empty head."[48] Social efficiency and useful invention are characteristics not of the ignorant but of the well informed.[49] And with respect to accurate knowledge, the public mind appears to be sadly undernourished. While it is true that the thinker of today has the advantage of some techniques that are more elaborate and refined than those used by the thinker of three thousand years ago, his chief advantage is in the superior store of knowledge at his disposal. It is easy for any one to prove this for himself. Let him choose any problem: taxation, the distribution of wealth, the inalienable human rights, or the form of government best suited to human welfare. Without using any books let him do his best to arrive at an adequate solution of the problem. Then let him read what has been said concerning it by great thinkers throughout the ages. He will be shocked at the distorted nature of his concepts, at the number of essential and relative ideas that he has omitted, and at the fallacies that have unwittingly crept in; and this in spite of the fact that his thought has not been entirely without the

[47]Dewey, *How We Think* (new edition), Chaps. VII to X.

[48]Cohen, Morris R., *Reason and Nature*. Harcourt, Brace & Company, New York, 1931, p. 17.

[49] See pp. 442–445.

guidance of his past reading, although this reading may have been poorly digested and only partially remembered.

If some malevolent person should set out deliberately to incapacitate students for effective thinking about social conditions, he could find no better instrument for the purpose than the vacuous class discussions that are carried on without accurate and essential information. These are travesties on thinking. He would encourage the worst forms of "escapes" that masquerade as devices for aiding imagination.[50] And if he wished to make doubly sure of accomplishing his purpose, he would direct these practices to the study of problems so difficult, so far removed from the experiences of pupils, and so impossible for students to solve that the infantile ideas, the habits of seeking "escapes," and the superficial methods of thinking would be likely to persist in later life. His slogan would be, "Teach pupils how to think, not what to think."

Thinking is developed in a very different way: by selecting problems within the student's power of comprehension and close to his experience, by leading the student from the first to see the futility of thought without dependable data, by practicing him in the use of authoritative sources of information, and by maturing in him those methods of disciplined thought that have been found to facilitate and safeguard research in the social sudies.

Dewey offers the following analysis of a complete act of thought:

"Upon examination, each instance reveals, more or less clearly, five logically distinct steps: (*i*) a felt difficulty; (*ii*) its location and definition; (*iii*) suggestion of possible solution; (*iv*) development by reasoning of the bearings of the suggestion; (*v*) further observation and experiment leading

[50]See Chapter XI.

to its acceptance or rejection; that is, the conclusion of belief or disbelief."[51]

Every one of these steps is conditioned by the number and quality of the facts that the student possesses.

The amount of accurate and well-organized knowledge needed for thinking about social problems and conditions, if thinking is to be anything but a sham, is enormous. Over 1500 pages were required merely to summarize the findings of the Committee on Social Trends.[52] And anything but a superficial survey of these trends requires a careful reading of the individual volumes of the report in addition to other related books. The facts presented in such authoritative sources are indispensable to any one who wishes to reflect on the drift of modern affairs. Yet they are inaccessible to the great mass of the population. Some of the most important facts on any problem are not in print. Few libraries outside of the largest cities and universities are even moderately equipped with sources of reference. A large proportion of the population does not have ready access to any library at all, and the average home contains no authoritative books that bear on modern problems. Even in communities where the library facilities are most adequate, there are few citizens who have the training to make proper use of them.

Nothing is gained by refusing to take a realistic view of the mental equipment of the general public. Investigations of the knowledge and ability of students in high school and college, as well as of adults, leads one to suspect (*a*) that the average individual does not now have a sufficient background of accurate information to think effectively about modern problems; (*b*) that he does not know the sources of dependable

[51]Dewey, John, *How We Think*. D. C. Heath & Co., Boston, 1910, p. 72.
[52]*Recent Social Trends in the United States.*

information; and (*c*) that he could not read these sources with understanding even if he found them.[53] This condition is due in part to the difficulty and complexity of the task, in part to the limitations in native ability, in part to the shortcomings of some schools, and in part to the unfavorable forces which, outside the school, discourage the critical consideration of public questions.

The conditions revealed by this diagnosis are not pleasant to consider, but they need not lead to a pessimistic view of the limitations of social education or of the future of democracy. All these conditions can be vastly improved by the application of knowledge now available; even the effects of the limitations of original nature can be mitigated by education. "It is easy," Dewey points out, "to exaggerate the amount of intelligence and ability demanded to render such judgments fitted for their purpose. In the first place, we are likely to form our estimate on the basis of present conditions. But indubitably one great trouble at present is that the data for good judgment are lacking; and no innate faculty of mind can make up for the absence of facts. Until secrecy, prejudice, bias, misrepresentation, and propaganda as well as sheer ignorance are replaced by inquiry and publicity, we have no way of telling how apt for judgment of social policies the existing intelligence of the masses may be."[54]

The implications of a changing world.—The slogan, "How to think, not what to think," is proffered also as a solution to education in a changing world and as a refuge from the baffling complexity of modern life. The minds of the educational

[53]Learned, William S., "Study of the Relations of Secondary and Higher 'Education' in Pennsylvania: Knowledge as a Factor in Education—The Tests and Their Implications," *Twenty-eighth Annual Report of the President and Treasurer.* Carnegie Foundation for the Advancement of Teaching, New York, 1933, pp. 39–63. See also Chaps. IV and V in the present volume.

[54]Dewey, *The Public and Its Problems,* p. 209.

Heracliteans move in curious ways. Obsessed with the idea that we live in a changing world, they jump to the conclusion that the social heritage should be discarded; and hence, in school, that "subjects must go." Why teach this knowledge when, as they assume, it will be outmoded tomorrow? They neglect the fact that, as Thorndike points out, even if the greatest imaginable change should take place, "the science of the present, modified to suit the new status, will be our best preparation and guide,"[55] or, vaguely realizing the stupendous task of mastering the knowledge essential to the solution of social problems, now or in the future, they seek an "escape" in teaching pupils how to think without ideas to think with.

The historian, we are told, by reason of his craft knows that change is the one constant in history. But if this is all he knows, he is not much of a historian. For history pictures not merely change but the tenacious persistence of customs, ideologies, prejudices, and native human characteristics, as well as of the basic elements in the geographical setting in which the human drama is played.[56] One does not need to deny a large degree of stability in our civilization and in the elements that condition it in order to assign full value to the factor of change. In emphasizing relatively persistent elements, moreover, it is not necessary to establish their permanence for all time but only for a few years. For example, the average student graduates from high school at eighteen. Twenty to thirty additional years carry him well into the period of his active citizenship.

That we are in an era of profound change and conflict would be foolish to deny. What the teacher of social studies

[55]Thorndike, "In Defense of Facts," p. 384.

[56]See Cheyney, Edward P., *Law in History and Other Essays*. Alfred A. Knopf, New York, 1927; Robinson, James Harvey, *The Human Comedy*. Harper and Brothers, New York, 1937.

needs to know is how much change there is or is likely to be, its trends, how it takes place, and the implications of these matters for education. In schools where flux is exalted and the social heritage disparaged, the course of study is likely to deal with the transient aspects of society, chiefly pathological, rather than with more fundamental and permanent matters. There is, in such cases, an underestimation of the value of the organized bodies of knowledge that make up the social sciences, if not, indeed, an antagonism toward them. This is unfortunate. Teachers can admit freely the crucial nature of the changes now under way and yet adopt a very different and wiser point of view. They may ask, in the face of crucial conflict, what knowledge is likely to be most useful in the next few years in the thoughtful solution of the problems that now confront us. The more change is manifested, the more essential it is to discover the probable bases of stability.

The uses and abuses of authority.—The most eminent scholar must of necessity take much on authority. The historian, for example, turns to the work of others to determine the boundary lines between the United States and Mexico at various times, the amount of immigration in certain years, or the nature of town government in New England in pre-Revolutionary times. It is only by utilizing the work of others that he is enabled to make his own original contribution. He does not, of course, do this blindly. He selects his sources intelligently and subjects them to the critical evaluations peculiar to historical method. Even more must the student, obviously, depend upon the authorities in the field of his work, not merely for his data but also for the solutions themselves. There is, of course, a useful distinction to be made between thinking through the solutions arrived at by others and arriving at solutions after the manner of original research. Yet it is the former that must

constitute most of the work of the student in the social studies. What is needed, then, is not antagonism toward authoritative works but training in their selection and critical use.

In concluding the discussion on thinking, it is readily admitted that students in classes in the social studies undoubtedly do too little thinking, but this does not mean that they have learned too many facts. Rather, they have been equipped with too little functional information to make thinking possible. Let it be realized once for all that schools have never, either now or in the past, succeeded in teaching any considerable body of accurate knowledge, fundamental or otherwise. The average high school graduate does not have a respectable fraction of the facts required for thought about modern problems. Even the most elementary matters are often half learned or definitely misunderstood.[57] Probably we have tried to teach a good many facts of minor significance. Undoubtedly we have attempted to teach too much. If the task of social education is not to be beyond any possibility of achievement, there must be rigorous selection as well as skillful emphasis and organization—all determined by some "frame of reference" or some constellation of value norms.[58] But no matter how vigorously these principles be applied to the reconstruction of the course of study, there will remain a substantial body of knowledge that must be thoroughly learned.

V. SHALL SYMBOLISM, CONDITIONING, AND EMOTIONAL APPEAL BE USED?

To teach pupils *what* to think or to teach them *how* to think are not the only alternatives suggested in social education.

[57]See Chap. IV, pp. 142–145.

[58]Beard, Charles A., "The Nature of the Social Studies," *Fourteenth Yearbook*, Department of Superintendence, pp. 53–55.

Those who wish to build civic loyalty and to control public opinion not infrequently choose a very different program. They pin their faith to emotional conditioning, to blind habituation, or to the use of slogans, stereotypes, symbols, and taboos. Merriam, reviewing the methods of civic instruction used in the principal western nations, says, "Nationalistic education is often on the ceremonial level, and prefers the flights of jingoism and self-glorification, as if it feared the more sober examination of the alleged advantage or traits of the particular state or area or group."[59] The power of symbols and stereotypes is attested by the success of their use in all lands, in all times, in all causes—by the statesman, by the reformer, by the church, and by the press. And while it may be true, as Macaulay said, that ". . . Wise men . . . have always been inclined to look with great suspicion on the angels and dæmons of the multitude . . .,"[60] these same wise men, when they have wished to control public opinion, have not hesitated to avail themselves of such potent devices.

"The repulsion from symbolism," says Whitehead, "stands out as a well-marked element in the cultural history of civilized people."[61] This aversion to symbols grows out of many causes: their tendency to vagueness, which offends the scholarly and critical-minded; their emphasis upon emotion, dissociated from any rational basis; their tendency to formalism; the ease with which they are shifted to irrelevant contexts; and, as a consequence of these characteristics, their notorious prostitution by crafty and vicious interests in duping the public.

Symbolism, in the following discussion, must be understood

[59]Merriam, Charles Edward, *The Making of Citizens.* The University of Chicago Press, Chicago, 1931, p. 338.

[60]Macaulay, Thomas Babington, "Machiavelli," *Critical and Historical Essays.* J. M. Dent and Sons, London, 1907, Vol. II, p. 2.

[61]Whitehead, Alfred N., *Symbolism: Its Meaning and Effect.* Cambridge University Press, London, 1928, p. 71.

as having the narrow and special connotations of its use in the literature of the social sciences.[62] Symbolism has, of course, much broader psychological and philosophical connotations. In the broader sense, all thinking is symbolic. It is to the abuse of social symbolism, however, that attention is here directed. This abuse is made possible by the use of associative shifting, a principle well known to psychologists and thoroughly appreciated by the less scholarly but wily practitioner.

Associative shifting, as applied to symbolism, is varied and complicated in its operation and social control.[63] Reduced to simple terms, it involves the attachment of established aversions and loyalties to new objects, some of which are relevant and some of which are not. When the established aversion or loyalty is rational and in conformity with the highest social ideals, its association with new and relevant contexts is a legitimate and economical method of forming social opinion and action, but the established aversions and loyalties are not always desirable and their associations with new objects are not uncommonly brazen in their irrelevancies. Examples come readily to mind. Handsome men and beautiful women in the most luxurious surroundings are portrayed unceasingly in the advertisements of a certain brand of cigarette; interests hostile to the Child Labor Amendment are organized under names that imply that their sole and unwavering interest is the welfare of children and preservation of wholesome home

[62]For a discussion of symbolism in civic training, see Merriam, *The Making of Citizens,* especially pp. 145–54. For illustrations of this method, see Schneider, Herbert W., and Clough, Shepard B., *Making Fascists.* University of Chicago Press, Chicago, 1929, Chap. XI.

[63]For a statement of the psychological theory involved, see Thorndike, Edward L., *The Fundamentals of Learning.* Teachers College, Columbia University, New York, 1932, Chap. XVI. For a discussion of its application in molding public opinion, see Whitehead, *Symbolism;* Ginsburg, Isidor, "National Symbolism" in Kosok, Paul, *Modern Germany. A Study of Conflicting Loyalties.* University of Chicago Press, Chicago, 1933, pp. 292 ff.

life; the most sordid political convention is closed by the strains of the national anthem; attempts to improve the condition of the common man are branded as "socialistic" or "communistic"; the international machinations of the munitions maker are hidden by the smoke screen of patriotism. It is a part of the training of the future citizen to become canny about such manipulations. It would be well for him to know that where unreliable or false doctrines are to be taught, ". . . obviously, ceremonialism and ritualism are better adapted than more rational analysis and instruction in critically examined facts."[64] Such widespread abuses as these do not inevitably attach themselves, however, to social symbolism. Symbols may have rational aspects in conjunction with emotional aspects, and under these conditions are unquestionably effective instruments in social education. They may stand properly for concepts, emotions, attitudes, and aspirations of the highest order. They should be deliberately utilized, therefore, rather than shunned, but safeguarded by keeping them relevant to the substantial values that they purport to symbolize and by infusing them with reason and social purpose. Nor is the recognition of their proper functions incompatible with the definite effort to lead pupils to be sensitive to insincerity in schemes that associate symbols with irrelevant contexts and to be sophisticated concerning their age-old perversion in propagandizing unworthy causes. Pupils should learn that any attempt at such irrelevant associations is likely to be a symptom of duplicity and a danger signal of exploitation. It is possible, although admittedly difficult, to develop such wariness without breeding an undiscriminating cynicism and antagonism to all symbolism.

Appeals through symbolism are not necessarily insincere or

[64]Merriam, *The Making of Citizens*, p. 339.

fraudulent. Symbols may stand for ideas, ideals, and sentiments that are rooted deeply in the reasoned faith of those who use them. Where symbols are permeated with reasonableness and worthy purpose, their use shades off imperceptibly into more rational and logical training. Among the more traditional uses of symbolism, one readily calls to mind such examples as flag drills and etiquette, patriotic songs, parades, pageants, salutes, badges, insignia, rituals, uniforms, and cue words and phrases. No less symbolic, although perhaps more meaningful, are statues, portraits, monuments, and pictures of historic scenes; the study of episodes such as the signing of the Declaration of Independence; the celebration of patriotic holidays; excursions to historic spots; dramatization of historic events; a dramatic rendition of patriotic literature; and the stories of the lives of great men. All of these, when properly safeguarded, are appropriate and effective agencies in the making of citizens, but it is well to have in mind Whitehead's warning, which applies to social as well as to other types of symbolism: ". . . mankind by means of its elaborate system of symbolic transference can achieve miracles of sensitiveness to a distant environment, and to a problematic future. But it pays the penalty, by reason of the dangerous fact that each symbolic transference may involve an arbitrary imputation of unsuitable characters."[65] The vigor of Whitehead's admonition is justified by the history of the use and abuse of symbols, but as has already been pointed out, the abuses are not inevitable.

It is not possible to enter here into the relative degree to which human nature is formed or controlled by the various factors of intelligence, habit, and emotion. Educators, in their theoretical discussions, rely upon thinking more exclusively than do churchmen, politicians, or advertisers, and to a degree

[65]Whitehead, *Symbolism*, pp. 102–103.

not warranted either by common sense or by the best psychological evidence. The defense for this emphasis, no doubt, is the patent need of informed and critical thought in modern life. But thought cannot be divorced from custom and emotion any more in school than in life outside. It should be cherished and emphasized but it should not be isolated.

CONCLUSION

It should be evident from the foregoing discussion that the educative induction into citizenship involves such complicated problems that dogmatic rule-of-thumb procedures cannot be defended. Indoctrination and independent thinking, as Freeman points out, *"are not distinguished from each other in anything like the clearcut fashion that is often assumed."*[66] Indoctrination, even in the sense of influences that operate to change the student's ideas and attitudes by methods other than through his conscious and critical appraisal, goes on whether we will it or not, both in and out of school.[67] The separation and contrast of thought and knowledge is neither possible nor desirable; nor can either thought or knowledge be separated from attitudes, emotions, and ideals. Controversial issues cannot be excluded from the schools either by limiting instruction to history, geography, and the structural aspects of government or by attempting to take refuge in descriptive aspects alone. The question is rather, what issues shall be consciously selected, at what grade levels shall they be raised, in what manner shall they be dealt with, and how shall they be re-

[66]Freeman, Frank N., "The Nature of the Learner and the Learning Process," *Fourteenth Yearbook*, Department of Superintendence, p. 45.

[67]Annis, Albert D., and Meier, Norman C., "The Induction of Opinion through Suggestion by Means of 'Planted Content,'" *The Journal of Social Psychology* V (February, 1934), pp. 65–81. See also Counts, George S., *Dare the School Build a New Social Order?* The John Day Company, New York, 1932.

solved. Freedom of teaching, desirable as it is, is not absolute but relative. Symbolism, conditioning, and emotional appeal are both inevitable and essential. And in all of these matters, as shown in the previous discussion, the choice is between a vague and wavering policy and one that is clear, intelligent, and judicial.

The school is historically and inevitably a source of social control—in purpose, in the machinery set up to realize its purpose, and in its results. Within the limits of its effectiveness, for example, it instills the Golden Rule rather than the principle of "dog eat dog"; it inculcates honesty rather than fraud; it develops skill in the Arabic rather than in the Roman system of numbers; it breeds confidence in quarantine rather than in incantation; it encourages the reading of the Bible rather than the reading of the Koran—in short, it establishes certain habits, knowledges, attitudes, ideals, and value norms rather than others.

In the execution of its purposes, moreover, the school must evaluate contemporary civilization, interpret its trends, select this to be taught and reject that, prepare courses of study, erect buildings, select books and other instructional equipment, arrange programs, choose teachers, determine methods of instruction, appraise its results, set up the forms of social behavior in the school, and secure money to carry on the work. Each of these processes is fraught with significant consequences to the learner. And all this it does under the guidance of some social and educational philosophy, "grand or petty," partial or comprehensive.

The individual student, as well as society at large, has a right to expect that those intrusted with education assume the responsibility for determining the best preparation for citizenship. Certainly the student is in no position to ascertain this

for himself. It is no imposition for society, through the agency of the school, to decide what knowledge, what habits, what abilities, and what value norms are most desirable; it would be an imposition to neglect these responsibilities. The school, moreover, cannot teach everything. There must be a high degree of selection, emphasis, and organization in what is to be taught. It is true that, according to modern conceptions of education, ideas, habits, skills, and value norms are not to be impressed upon the student ready made. They should be achieved by him through his own thoughtful effort. Nevertheless, when the school decides what knowledge is of most worth, what problems are to be attacked, what norms are to be used as a basis for selection and emphasis, it has gone a long way in determining the student's patterns and modes of thought, and hence his mental outlook. In the dictionary sense of the term, it indoctrinates.

Finally, to avoid misunderstanding, it is well to restate the convictions by which the instructional program in social studies should be guided: (1) The purpose of society, as well as of the school, its chosen educational instrument, is the preservation and enrichment of human personality. (2) The right to know and speak the truth is as inalienable as that of life, of liberty, and of the pursuit of happiness, and is, indeed, the chief safeguard to this classic trinity. (3) The pursuit and dissemination of the truth is the best long-time policy, being the only sound basis for action and the chief bulwark against extremists of all sorts. (4) The access to unpolluted sources of information should be easy and unrestricted. (5) The need for disciplining the mind in dependable ways of arriving at the truth is imperative. (6) The spread of false doctrine must be opposed, especially in its use

in the exploitation of the mass of the people or any part of them for the selfish interests of some class or group. (7) The ideals of democracy are permeated with these principles and cannot be achieved without them.

Chapter IV

THE PROBLEM OF MEANING IN THE SOCIAL STUDIES

THE FUNDAMENTAL IMPORTANCE OF UNDERSTANDING

Intelligent understanding of social conditions, processes, and problems ranks high in frequency of mention and in emphasis among the objectives that are stated to guide instruction. And this is as it should be, for not only is intelligent understanding good in its own right; it is also intimately bound up with the accomplishment of all of the other major purposes of social education, whether stated in terms of thinking, attitudes, ideals, or conduct. Thus thinking is dependent upon the ideas that one possesses; conduct should be guided by the dictates of insight and understanding; ideals and attitudes should be permeated with intelligence. It is because of the fundamental rôle that understanding plays in social education that the major part of this volume is devoted to a consideration of the methods by which it may be achieved. This chapter attempts an analysis of the factors that condition understanding. The ways and means of achieving it are discussed in the chapters that follow.

It is to be regretted that so many of the basic problems pertaining to meaning and understanding are matters of controversy. Different schools of psychology, for example, approach these problems with very diverse hypotheses and investigate them with very different techniques. Philosophers and logicians are not less at odds. It is impossible here to discuss or even to list the controversies that rage around the

theories of meaning and understanding, but attention is called to the fact that these issues, far from being resolved, are more numerous and more complicated than ever before. Yet these issues are by no means academic, for every teacher is influenced by assumptions that relate to logic, philosophy, and psychology, no matter how naïve or lacking in systematic formulation these assumptions may be. Whatever troubles the logician, the epistemologist, or the psychologist in his study of the problems of meaning and understanding is likely also to harass those who are concerned with these problems in relation to teaching the social studies. The loose and faulty way in which such terms as meaning, understanding, insight, imagination, and reality are used in current pedagogical literature suggests that writers in the fields of curriculum and methods might well acquaint themselves with a few of the penetrating books and articles that treat these topics.[1] Although the psychological, logical, or epistemological problems related to meaning and understanding are not here discussed directly, an attempt is made, in this and the following chapters, to point out their most significant implications for teachers of social studies.

UNDERSTANDING AS AN ACTIVE PROCESS

Understanding is an active process. No matter how docilely receptive the student may be, he cannot be given ideas ready-made and, as one writer has expressed it, "under seal"; he

[1]A standard reference is Ogden, C. K., and Richards, I. A., *The Meaning of Meaning*. Harcourt, Brace & Company, Inc., New York, 1923. For a simpler introduction to this problem see, Langer, Susanne K., *The Practice of Philosophy*. Henry Holt and Company, New York, 1930.

A penetrating analysis of the higher thought processes in relation to education is given in Dewey, John, *How We Think* (new edition). D. C. Heath and Company, Boston, 1933. A brief description of the various schools of psychology in relation to teaching the social studies is given in "The Social Studies Curriculum," *Fourteenth Yearbook*, Department of Superintendence, Washington, D. C., 1936, Chap. III.

must build them out of the materials of his experience. The teacher can only stimulate and guide his efforts. The term "construct," which is sometimes used to describe either the process or its result, places a useful emphasis on the active way in which ideas are formed. But while there is no such thing as purely passive reception of meaning, the student's activity may be so slight, his attention so fickle, and his will to understand so weak that the ideas he forms, if he forms any, are too vague and too lacking in dynamic quality to be of much use to him. The emphasis upon active learning under the guidance of purpose in contrast with pedantic instruction under teacher domination has long been prominent in the writings of educational reformers and notably, in recent times, in the writings of John Dewey. It is in harmony with the theory and evidence on learning and is revolutionary, in so far as it is understood and applied, in transforming instruction in the social studies. Teachers become educators in the vital and generic sense of the term; pupils share in setting up problems and assume a large part of the responsibility for their solution. Ideas become growing rather than static things. The whole atmosphere of the school is changed.

This active process of understanding is, moreover, exceedingly complicated, even in the case of relatively simple matters.[2] It involves selective attention, inference, evaluation, and organization. The affective and volitional aspects, as well as the reflective, have been increasingly emphasized, both in theoretical discussions and in the interpretation of experimental results. The more urgent and complex the problem, the more significant these aspects become. The full import of this dynamic view of understanding becomes increasingly apparent

[2]Thorndike, Edward L., *Human Learning*. The Century Co., New York, 1931, Lecture 9.

upon more detailed analysis of the elements that determine the adequacy or inadequacy of ideas.

FACTORS WHICH INFLUENCE UNDERSTANDING

The meaning that a student gets in the study of any problem in the social studies is dependent upon three factors: *first, the inherent nature of the problem; second, the nature of the instructional media through which he comes to grips with the problem; and third, the student himself—his experience, interest, and ability.* These three factors are so interrelated in their operation that it is impossible to isolate one completely from the other. Yet, for purposes of discussion, it is useful to focus attention upon each in turn.

THE NATURE OF THE PROBLEMS IN SOCIAL STUDIES

The social sciences, as Dewey points out, are concerned with "the largest, most inclusive and most complex of all the phenomena with which the mind has to deal."[3] Yet the inherent difficulty, complexity, and remoteness of the problems that are found in typical curricula in the social studies appear to be greatly underestimated in discussions of learning. Indeed, there is little in pedagogical literature to show that these important factors have even been seriously considered. For how, except by assuming some such neglect or underestimation, could one explain the vast number of complicated problems that are crowded into the course of study?

Forget, for the moment, the immaturity, the poverty of experience, and the limited ability of the average student. Forget the meagerness of the facilities available in most schools. Assume a mature and gifted individual. Assume also every requisite facility for study in the way of libraries, travel, and

[3]Dewey, John, "Philosophy," in Gee, Wilson (ed.), *Research in the Social Sciences.* The Macmillan Company, New York, 1929, p. 261.

scholarly guidance. Even to this person, working under these favorable conditions, such topics as the following, from a representative course of study, must appear complicated, extended, and difficult: prehistoric man, Greek civilization, feudalism, the Renaissance, the French Revolution, the Industrial Revolution, the formation of the Constitution of the United States, the growth of nationalism, and the geography of world trade. These are but a small fraction of the topics included in the typical course of study, and such individual units, difficult as they are, are not meant to be learned in a piecemeal fashion, but are to be fitted into larger patterns, the most common of which are such organized bodies of knowledge as history, geography, economics, sociology, political science, ethics, and the great variety of courses designated as "social studies."

THE MEDIA THROUGH WHICH SOCIAL REALITIES ARE APPROACHED

An examination of courses of study shows that the bulk of instruction in the social studies is concerned with problems or topics outside the limits of the community that the child knows at first hand. Except in rare instances, the student does not deal directly with the realities of the world but with more or less adequate symbols of them: language, pictures, models, maps, charts, statistical tables, and the like. All of these symbols must be evaluated from two points of view: first, according to their adequacy as representations of the realities for which they purport to stand, and second, according to the degree that they are intelligible to the students who are to use them. Johnson has pointed out the sharp limits of our ability to reproduce historical phenomena in the classroom.[4] Practical difficulties of the same kind are found in dealing

[4]Johnson, Henry, *Teaching of History in Elementary and Secondary Schools.* The Macmillan Company, New York, 1928, Chaps. VIII–X.

with the phenomena in other fields of the social studies. The ideas that an individual forms of his social environment are refracted in many ways, as Lippmann has shown:[5] by the limitations of language, which in the school is the chief approach to social knowledge; by the limitations of even such relatively effective symbols as maps, photographs, and models; and by the student's interests, feelings, and the patterns of his thought. As a result, the ideas obtained are in a real sense unique, partial, and distorted versions of reality.[6]

Surveys of actual classroom instruction show that language, spoken or written, is the chief medium of teaching and learning, for although such aids as pictures, models, and maps find a place in school, a relatively small part of what is taught can be represented by such means. Most of the child's ideas of other times, of other places, and of other conditions must be built chiefly out of what he reads or hears.

Language is not, however, a mere pedagogical tool. Those who criticize its predominance in instruction ignore the fact that, quite apart from its uses in the school, language is not only the chief instrument of thought but also the principal means of communication. "It is therefore indispensable for any high development of thought," says Dewey, "that there exist intentional signs. Language supplies the requirement."[7] It not only identifies individual meanings; it makes possible their organization into the most complicated patterns. A satisfactory understanding of even a contemporary problem in one's immediate community is impossible without the use of language. Although he is one of the most relentless enemies of verbalism in teaching, Dewey warns,

[5]Lippmann, Walter, *Public Opinion*. Harcourt, Brace & Company, New York, 1922, p. 76.

[6]Dewey, John, "Context and Thought," *University of California Publications in Philosophy* XII, 1931, pp. 203–224.

[7]Dewey, *How We Think* (new edition), p. 232.

"Taken literally, the maxim, 'Teach things, not words,' or 'Teach things before words,' would be the negation of education; it would reduce mental life to mere physical and sensible adjustments. Learning, in the proper sense, is not learning things, but the *meanings* of things, and this process involves the use of signs, or language in its generic sense. In like fashion, the warfare of some educational reformers against symbols, if pushed to extremes, involves the destruction of intellectual life, since this lives, moves, and has its being in those processes of definition, abstraction, generalization, and classification that are made possible by symbols alone. Nevertheless, these contentions of educational reformers have been needed. The liability of a thing to abuse is in proportion to the value of its right use."[8]

It is evident that criticism should be directed not to the employment of language but to its limitations and abuses. Books are not used too extensively in teaching the social studies; they are used improperly. There is not too much talk in school, but the wrong kind of talk.

Even at its best, however, language gives an inadequate portrayal of the social realities that it attempts to represent.[9] This is true even when the reality to be symbolized is of the simpler sort, as in the case of an object or a concrete act. Thus, what is said about the first printing press is very much less than the press itself. Nor are the shortcomings of language less marked in the representation of movements, influences, aspirations, or the intellectual climate of any place or period.

The limitations of language are strikingly exhibited in the books used in elementary and secondary schools. In many schools the textbook is the only book to be found, and even

[8] *Ibid.*, p. 236.

[9] *Cf.* Ballard, Philip Boswood, *Thought and Language*. University of London Press, Ltd., London, 1934.

when other books are available, it is predominant in the instruction of most classrooms. The textbook treats so much in so small a space that the language is inevitably vague and abstract, and as a result, it is difficult, if not impossible, for one who does not know the field with which it deals to read it with understanding. Even in most schools where collateral readings are provided, this problem is still serious, for the additional books are often little less general than the texts. Consequently, the reading of the students results either in mere verbalisms or in concepts which are foggy, partial, or definitely erroneous.

It is not, however, the limitations of language in *embodying* thought so much as in *conveying* thought that constitute the most serious problems in teaching. The term "convey" is actually a little misleading, for language stimulates and guides the formation of ideas rather than imparts them. And language performs this limited function only to the degree that it is related to the student's experience.

LIMITATIONS INHERENT IN THE STUDENT

The full significance of the difficulty of concepts in the social studies and the inadequacy of the media through which the student comes to grips with them are seen when these factors are viewed in relation to the limitations and potentialities of the students themselves. As has been earlier shown, we do not give the student meanings; we merely stimulate him, usually through language, to construct them for himself. The adequacy of the mental constructs that a student makes as the result of the stimulation of what he hears or reads is dependent on many factors, the most important of which are his experience, interest, intelligence, command of language skills, and his methods of work, including capacity for per-

sistent effort. These same factors, not even excluding language, also influence the constructs made under the stimulation of pictures, maps, models, and of the concrete experiences in actual life situations. They would have to be taken into account if learning were regarded only as a matter of passive impression and memorization, but they are doubly significant when learning is understood to be an active, creative process.

Influence of experience.—Ideas must be built by the student out of the materials of his experience. This fact was pointed out years ago by the exponents of apperception. Yet many of the data of history, geography, and other social studies are far removed from the experience of the students at the grade levels where these data are presented. Indeed, the gap between the experience of the child and the realities that he is expected to understand is so wide that it can be bridged only with great difficulty. What meanings, for example, can an elementary school student who has lived only on the treeless plains obtain from the following statement? "On the seaward side of the mountains of Australia are dense hardwood forests. Among the most valuable trees are the eucalyptus, sometimes known as gum trees." What sort of mental constructs can he make of *the seaward side of mountains;* of *dense forests;* of *hardwood;* of *eucalyptus;* of *gum trees?* What significance will he attach to the statement as a whole? The books and references that are placed in the hands of students abound in concepts much farther removed from their experience than this one and much more complicated and difficult to comprehend.[10]

On the other hand, the failure to utilize the available resources of the local community may make the life of other times and places seem more foreign to the student's interest and experience than it really is. A survey of the way in

[10]Suggestions for meeting this difficulty are given in Chaps. VI to XI.

which fundamental needs are met shows unmistakably how dependent any community is upon the people of other localities. The past, as well as the present, moreover, impinges upon each community in a number of ways. This is evident in such material things as implements, bridges, and architecture, and it is still more evident in ideas, tastes, and value systems. To neglect these relationships is to squander educational capital. The pervading influence of these historical and geographical factors on the life of the local community constitutes one of the chief reasons for teaching history and geography.

The mere accumulation of casual contacts secured by the individual both in and out of school is not, however, an adequate experiental basis for thinking about the problems that confront him. The satisfactory apprehension of new ideas depends upon the clearness, accuracy, and organization of the ideas that the student already possesses. Unfortunately, much of what he knows is hazy, inaccurate, and haphazard. Its immediate value as well as its probable future usefulness in the solution of any problem demands, therefore, that it be clarified, supplemented, and organized. This is one of the distinctive functions of instruction in the school.

Learning should be a very much more orderly enterprise, then, than the casual, desultory thing into which it so often degenerates. It demands the acquisition and use of the organized bodies of fundamental knowledge. Beard, in one of the volumes of this Commission, has attempted to sketch, in rough outline, the backgrounds of knowledge that are essential to thought in the social studies.[11] The concepts and principles in this or any ordered series cannot, however, be imparted ready made. Nor does the student get them all at once. They

[11]Beard, Charles A., *The Nature of the Social Sciences.* Charles Scribner's Sons, New York, 1934.

are to be conceived rather as a guide to growth, a growth facilitated from the outset to the degree that accuracy, thoughtfulness, and system are maintained.

The antagonism of certain curriculum theorists toward all organized social disciplines cannot be viewed, therefore, with unconcern, and especially since these theorists do not offer, as a substitute, arrangements of knowledge that are deemed satisfactory by any competent group of social scientists. On the contrary, the individual units that they suggest are for the most part shallow in quality and lacking in either logical or psychological sequence. As a result, the student is not only deprived of the background of systematic knowledge that makes possible growth and effective thinking but is also habituated to superficial methods of work.

Interest related to experience.—When the problem to be attacked is too far removed from the student's experience, there is lacking not merely the raw material out of which the solution of the problem may be developed but also the will to work. Interest and purpose inhere in experience as much as does cognition. Indeed, understanding and interest are reciprocal in their influence. Interest and purpose afford the basis for the organization of meanings or constructs, and are progressively increased as understanding is deepened. For a topic to be uninteresting, therefore, is a serious matter. Yet a great many of the topics, problems, or units of the social studies curriculum have little, if any, relationship to the present needs and interests of the student so far as he can see. In fact, it is difficult to demonstrate that some of these problems are fundamentally pertinent even to the needs of the great majority of adults.

As remoteness from the student's life increases, motivation decreases, and, with the exception of the few individuals who read history or other social sciences as forms of vicarious ex-

perience, recourse must be taken to such extrinsic motivation as school marks and other devices. These devices are poor substitutes for the interests that grow out of pertinence to social purpose, being inferior not only in the degree to which they energize the making of constructs but also in their usefulness as norms for guiding the selection and evaluation of data and their organization into usable form.

The tendency for the social studies to be dissociated from the needs of life is caused in great part by selecting and organizing the curriculum in history or in other fields according to traditionally academic patterns. It would be much less marked if curricula were constructed to deal primarily with the problems, processes, and norms that most deeply concern the common man.[12] Such content would not only have greater initial appeal and greater possibility of accomplishment; it would lead also to the development of interests of more abiding value. It is no narrow or rule-of-thumb immediacy that is meant, however, but the broadest and richest background of knowledge and insight pertinent to the goals of instruction.[13]

In stressing the importance of interest, one should avoid two fallacious theories. The first views interest as the product of the methods and devices of the immediate classroom situation; the second assumes that instruction should be based upon whatever interests students manifest at the moment. Both of

[12]See, for example, Robinson, James Harvey, *The Humanizing of Knowledge*. George H. Doran Company, New York, 1924; and Robinson, James Harvey, *The New History*. The Macmillan Company, New York, 1918, especially Chap V, "History for the Common Man."

For descriptions of the efforts of curriculum makers in this respect, see the *Twenty-second Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1923; and *Fourteenth Yearbook*, Department of Superintendence, Chap. VII.

[13]See *Conclusions and Recommendations of the Commission*. Charles Scribner's Sons, New York, 1934, Chaps. I–IV; see also Beard, Charles A., *A Charter for the Social Sciences in the Schools*. Charles Scribner's Sons, New York, 1932.

these fallacies originate in the same source—the failure to recognize that interests arise out of values; that is, out of a sense of pertinence to fundamental needs. It is not the purpose of the school to interest the child in the sense of entertaining him, but to utilize and develop interests in those things that are most universally significant in life outside the school. Students in schools where this more fundamental view is taken not only show greater interest day by day than do those in schools dominated by either of the two fallacious theories given above, but they also develop a more critical sense of values and a superior power to evaluate. Their interests become intelligent.

The effect of intelligence.—Any mental construct, whether simple or elaborate, is *prima facie* evidence of the operation of intelligence. It is to be expected, therefore, that psychologists should stress the significance of the limitations of intelligence for understanding and thinking in the social studies. After discussing various types of intelligence, Gates suggests that our best-known tests, such as the Stanford-Binet Scale, presumably measure the kind of intelligence needed in dealing with abstract subject matter, such as that ordinarily included in the courses of study in history, geography, and civics. He represents the approximate distribution of persons in the general population in the following table:

(Intelligence Quotient)	(Percentage)
0–69	1
70–79	5
80–89	14
90–99	30
100–109	30
110–119	14
120–129	5
130–200	1

He holds, "that there are educational opportunities legally open to all, which are practically unavailable to many who lack the intelligence to profit by them." After estimating that nearly two thirds of the population have an I.Q. of less than 105, he gives examples of the probable limits of the comprehension of individuals at these levels. The meaning of the paragraphs that he cites as beyond their reasonable understanding are certainly easier to grasp than many that are found in junior high school textbooks in the social studies. He concludes: "It is therefore possible that the intellectual grasp of abstract ideas of half of our population is less than sufficient to provide the basis for thorough and comprehensive reasoning concerning many of our complex social, political, and economic issues."[14]

Scores on intelligence tests, however, must be interpreted very cautiously. As pointed out in the discussion of the classification of pupils, the correlations between these scores and achievement in the social studies, while positive, are not high, and there is great probability that many types of intelligence required for the understanding of social problems are not adequately measured by present intelligence tests. There is also considerable evidence indicating that other factors, such as interest, industry, experience, and systematic training count far more heavily, as compared with intelligence, than has been generally assumed.[15] Both evidence and common sense indicate, however, that intelligence, whether regarded as unitary or manifold and although not yet adequately measured, must always be an important factor in achieving social understanding.

[14]Gates, Arthur I., "Psychology," in Dawson, Edgar (ed.), *Teaching the Social Studies*. The Macmillan Company, New York, 1927, pp. 106–12.

[15]See Turney, Austin H., "Intelligence, Motivation, and Achievement," *The Journal of Educational Psychology* XXII (September, 1931), pp. 426–34.

Attention has already been called to the inherent difficulty of many topics in typical courses of study. To think effectively about such topics or to achieve an understanding that is sufficiently valid and comprehensive to serve any useful purpose would seem to demand intelligence of a relatively high order. In the light of our present knowledge of intelligence and its operation in learning, it would be rash to estimate the limits of intellectual capacity below which understanding is frustrated. Both understanding and thinking are matters of degree, and every one achieves at least a modicum of social knowledge and insight. There is substantial evidence, however, to show that, with most of the instructional methods commonly employed, students at the lower levels of intelligence develop very little comprehension of any of the larger problems now confronting them in typical curricula.

Perhaps we attempt the impossible. The statements of chimerical objectives, the range and complexity of curricula, the concern with the specialized paraphernalia of research—all these seem to imply unlimited talent, native and acquired, on the part of the mass of students in our schools. But the existing evidence on the range of intellectual capacity, on the ability of students to read with understanding, and on the knowledge and insight possessed by students who have completed our courses of instruction is very sobering. The ambitious goals that are set up in the typical course of study are probably attained by only a scattered few among our school population and by these few only to a modest degree, through long and arduous effort. Nevertheless, it is sound policy to encourage all students to think as hard as they can and to understand as much as they can. It is better to see through a glass darkly than not to see at all. Nor should there be any thought of deciding beforehand which students can attain

adequate understanding and social inventiveness. The opportunity should be open to all.

The unquestionable evidence of marked differences in the ability to learn, whatever the causes may be, must be faced squarely by those responsible for instruction in the social studies. In fact, these differences have far-reaching implications for social policy, as well as for education. Gates points out, for example, "The vote of the moron, of the average man, and of the genius count equally."[16] Ignorance, apathy, or wrong attitudes toward social problems must be combated wherever found, in the genius as well as in the dullard. A romantic disregard for limitations of ability and their implications leads to futile attempts to accomplish the impossible, causing both students and teachers to seek "escapes," of which verbalism, symbolism, fantasy, and make-believe are common types. Tough-mindedness in facing squarely the extent and significance of these limitations need not lead to a defeatist or pessimistic view of the limits of social educability but to the establishment of fundamental and attainable goals and to the devising of more effective means for their accomplishment. It is not uncommon to find instances in which the best fourth of the students in one school accomplish no more than the poorest fourth of the students in a school of like population. Experiments in other fields suggest that, with patient and skillful teaching, students of below-average ability achieve very much more satisfactory results than has heretofore been thought possible. Indeed the evidence indicates that the limits of social education at any level of ability have not yet been closely approached.

Command of language skills.—Since language is essential to thought, and since the data for building most of the student's

[16]Gates, "Psychology," in Dawson, *Teaching the Social Studies*, p. 109.

ideas in the social studies are obtained from what he reads or hears, the command of language is indispensable. So fundamental, indeed, is the part played by language that the entire instructional program should be organized so as to promote its effective use. Every influence that encourages verbalism should be combated. From the earliest days at school students should be accustomed to regard words as signs only and to seek the meanings for which the signs stand. They should develop those habits of critical reflection that safeguard their efforts to comprehend. They should be led to see that carelessness and inaccuracy in their own language, as well as in their interpretations of the language of others, make clear thinking impossible.[17]

Methods of work.—Valid ideas are obtained only through critical thinking. The differences between critical and superficial thinking are due in part to the richness and orderliness of the student's background of ideas and in part to his methods of work. Dewey points out that the ". . . control of observation and memory so as to select and give proper weight to data as evidence depends upon the possession of . . . standardized meanings, or conceptions."[18] Failure to provide the student with sound and organized knowledge is almost certain to be associated with improper methods of work. The superficiality of the product is evidence of the superficiality of the process. As a matter of fact, all ideas, attitudes, and skills reflect the methods by which they are attained, for the experiences associated with their attainment cannot be dissociated from the results. The quality of the learning process determines how dynamic and usable the resulting concept, attitude, or skill will be. Viewed in this light, methods of work become a basically important matter.

[17]The significance of language abilities, as illustrated in reading, is developed in detail in Chap. V.

[18]Dewey, *How We Think* (new edition), p. 179.

There are no ways of arriving at an adequate understanding of any social problem except those used by the social scientists themselves. If, for example, a student is to learn to think historically, he must use the methods that the best historians use. While the student does not have the time, the resources, or the ability to reproduce all the minutiæ of research pertaining to each unit in the course of study, the fundamental requirements of the methods in the various fields must be met and rigorous exercises in methodology must occasionally be given. "It is quite possible," Johnson points out, "to leave the pupil at the end of his high school course with fairly definite impressions of history both as a process of establishing and organizing truth and as a body of organized truth."[19] This relationship of method to organized knowledge holds also for geography and other social studies. The recognition of the importance of methods of thinking in the attainment of ideas is not meant to disparage the importance of a scholarly grasp of detail. Far from being incompatible, knowledge and thinking are interdependent.[20]

Much more time than that usually provided is necessary for a satisfactory understanding of even the simpler concepts in the social studies. In the days of Herbartianism one of the favored topics for demonstration teaching in arithmetic was the rule for finding the area of the rectangle. The skill with which this rule was developed was a source of great envy and admiration on the part of the students who observed the work. Several lessons were needed in order to develop the concept adequately, and additional lessons were required to perfect the application of the formula to the practical circumstances of life.

[19]Johnson, *Teaching of History*, p. 387. Chapter XIV, from which this quotation is taken, is an excellent discussion of "School History and the Historical Method."

[20]For a discussion of the relationship between knowledge and thinking, see Chap. III.

There are few topics in the social studies whose essential meanings are so easily constructed in the mind of the student as is this one. Yet the student is frequently expected to make adequate constructs of a number of difficult topics in one class period. At the conclusion of the study of the Civil War, for example, a single day's assignment included, in one instance, all of the following topics: the cost of the war in money, the cost of the war in lives, the effect of the war on business, the influence of the war on immigration, the effect of the war on women, permanent benefits from the war. Any one of these topics is more complicated than the problem of how the area of a rectangle is found. The data requisite for understanding are less available, the remoteness from the student's experience is more marked, and the time needed to master the fundamental meanings is much longer. What happens under these conditions, of course, is that no student achieves the essential meanings, and some students do not acquire even verbal memory of any important statement in the text.

All this leads to the conviction that more time must be found for the study of those problems that are deemed essential in social education. This additional time can be provided in three ways: first, the time allotment of the social studies in the general program may be increased; second, the present plan of cycles, under which the same topics are hurriedly studied a number of times, may be supplanted by the single cycle, which allows for the more intensive study of each problem; and third, the number of units in a social science course may be greatly reduced, more critically selected on the basis of relative value, and more skillfully ordered with reference to the student's development. Very likely all three methods will have to be utilized.

Persistent effort, as well as time, is required to make an

adequate mental construct of any important idea. As has been pointed out, problems in the social studies are the most difficult and complex of all those with which the student has to deal. The requisite data must be found, critically interpreted, and organized into an idea that is self-consistent and in harmony with other ideas. The ability to work unremittingly is one of the most important factors in determining the adequacy of the ideas that are obtained. There is no escape from arduous work, even by the most brilliant student.

The foregoing review of the factors and conditions that influence understanding in the social studies is purposely brief, since it is expanded in other chapters.[21] It is necessary, however, to consider the effect of these factors upon understanding.

THE EFFECT UPON UNDERSTANDING

When the concept to be formed is excessively difficult, when the instructional media are inadequate, when the student's experience, interest, ability, and training are limited, or when the time for learning is short, the constructs that the student makes will necessarily be unsatisfactory. Under extremely unfavorable conditions he may not attempt to make any construct at all, or, if he does make an attempt, may fail. The conscientious student, actuated by pride, marks, or the desire for approval, may memorize or paraphrase the words of the text or lecture even though little understanding attend his efforts. This is verbalism. It centers chiefly upon words rather than upon the ordering and authenticating of meanings, and either fails completely to give the student ideas of any sort or leads to ideas that are not sufficiently accurate or complete to be of use. Verbalism is not a thing of the remote past, when,

[21] See especially Chaps. IV and VI.

indeed, it did sometimes flourish in an exceedingly extreme form; it is still widespread at every level from kindergarten to the graduate school, as well as in society at large. It is a form of refuge for the individual who is unable to solve the problems that confront him or who, although potentially capable, is unwilling to put forth the necessary effort. Yet the distinction between verbalism and understanding is not clear-cut except in extreme instances. Pure verbal memory, completely divorced from understanding, is probably rare, even under the most formal memoriter methods. Concepts are not so often *un-understood,* to borrow a word from Shotwell, as *misunderstood,* or vaguely comprehended. Some meaning is obtained, some constructs are made, but the result is vague, partial, distorted, or wholly erroneous. Vagueness, which Dewey refers to as "the aboriginal logical sin—the source from which flow most bad intellectual consequences,"[22] is probably more frequent than actual misconceptions, and the difficulty of combating it is certainly much greater. "Totally to eliminate indefiniteness," says Dewey, "is impossible; to reduce it in extent and in force requires sincerity and vigor."[23]

Any teacher who has had much experience in reading student examination papers can recall amusing instances of "boners" or "howlers." Thus a student is reported to have written, "The French Revolution wrote insulting letters to the American Revolution." She justified this, when questioned about it, as a paraphrase of the statement made by the instructor himself. Her notes, confirmed by the instructor, showed the statement to be: "The French Revolution corresponded in a rough way with the American Revolution." In a recent investigation by Newburn, one student wrote, "All

[22]Dewey, *How We Think* (new edition), p. 160.
[23]*Ibid.*, p. 160.

conservatives are radicals and should be jailed."[24] Scott and Myers report that some members of a class of rural teachers "were thinking of the United States foreign minister to Japan as a Presbyterian clergyman, some as a Methodist, some as a Catholic priest, and so on. . . ."[25] Student errors are not always so amusing as these, but they frequently depart as far from adequate understanding.

From the evidence procured in tests of students' knowledge of the social studies, as well as from investigations in reading and other fields, one must conclude that inadequate and definitely erroneous concepts are very common.[26] Buswell and John report that pupils in grades four to six do not have a correct idea of many arithmetical terms. Some of these, such as *add, fraction, each, increase, acre, area,* and *century,* are commonly used in teaching the social studies. For example, they report that there are more children who think that an acre is larger than a square mile than there are children who think that it is smaller than a city block.[27] How would students who make this error interpret the provisions of the Free Homestead Act or a statement that pioneers in wooded areas cleared off a few more acres each year?

The lack of accurate geographical knowledge is notorious.[28]

[24]Newburn, Harry K., "The Relative Effect of Two Methods of Vocabulary Drill on Achievement in American History," University of Iowa *Studies in Education* IX, No. 3, State University of Iowa, Iowa City, 1934, p. 25.

[25]Scott, Flora, and Myers, Garry C., "Children's Empty and Erroneous Concepts of the Commonplace," *Journal of Educational Research* VIII (November, 1923), p. 327.

[26]For a general discussion, see Kelley, Truman L., and Krey, A. C., *Tests and Measurements in the Social Sciences.* Charles Scribner's Sons, New York, 1934.

[27]Buswell, G. T., and John, Lenore, *The Vocabulary of Arithmetic.* Supplementary Educational Monographs, No. 38, January, 1931. University of Chicago, Chicago, Ill.

[28]Hart, Isabelle K., "A Classification of Common Errors in Geography Made by Teachers and Pupils," *Thirty-second Yearbook,* National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, pp. 479–82.

Of the 337 eighth-grade pupils tested in King's study, only 165 knew that New York City is located near the mouth of the Hudson River. Forty pupils located it on the St. Lawrence, thirty-five on the Delaware, thirteen on the Ohio, ten on the Mississippi, five on the Potomac, three on the Connecticut, two on the Amazon, and eleven at miscellaneous places. Fifty-three did not attempt to locate it. Forty-one of the students in this same study thought that the Pacific Ocean borders the United States on the east.[29] Yet most, if not all, of these students had completed both a course in geography and a course in United States history.

College students are woefully ignorant of the simplest facts of location. One investigator reports that of 1264 college students attempting to identify states on a map showing the states in outline, more than half missed Delaware and New Hampshire, and more than a fourth missed Vermont, Maryland, Arkansas, Connecticut, Kentucky, Arizona, West Virginia, Mississippi, Rhode Island, Oklahoma, Virginia, Louisiana, New Mexico, Massachusetts, Alabama, and Wisconsin. One student missed forty-six states, and the two she had right, California and Arizona, had been involved in a lesson on the day before the test was given.

In one investigation conducted by the writer, ninety-four university juniors were asked to identify Boston on an outline map of the United States. Thirteen omitted the answer entirely; twenty-one made errors as follows: seven located Boston in Connecticut, three in New York, two in Delaware, two in Virginia, and one in the District of Columbia and in each of the following states: Maryland, Nevada, North Carolina, Ohio, Pennsylvania, and Vermont. When locations are so

[29]King, Mary Helen, *Pupil Comprehension of Place Location Data in Junior High School American History.* Unpublished master's thesis, State University of Iowa, Iowa City, 1934, p. 265.

poorly learned, it is to be expected that other significant matters dependent on location will not be understood.

Far more serious shortcomings are shown in other concepts. Fuller, for example, found that pupils of both the ninth and twelfth grades have very little idea of either the sequence or the duration of the greatest events and movements in United States history, and cannot associate great men with significant movements in the period in which they lived, or contemporaneous movements with each other.[30] In spite of the stress on biographies in teaching social studies, Donner reports that eighth-grade students are very deficient in their ability to associate noted men and women with the times or countries in which they lived, or with the aspects of civilization to which they made their greatest contribution.[31]

Meltzer found that the social concepts appearing most frequently in books and periodical literature are poorly understood, not only in the elementary school but in the high school as well.[32] Similar deficiencies regarding terms and concepts in the social studies are shown by Pressey, Wesley, and by Kelty and Moore.[33] The more crucial and basic the concept, the more seriously inadequate, apparently, are the student's ideas about it.

The attainment of adequate understanding is a difficult process even with good teaching, with ample instructional equipment, and with the support of intelligent public opinion. These favorable conditions do not always exist, however. False ideas are frequently inculcated by the deliberate intention of those

[30]Fuller, Alberta Harriet, *Time-Sense in American History.* Unpublished master's thesis, State University of Iowa, Iowa City, 1927.

[31]Donner, Arvin N., *Students' Knowledge of Eminent Persons.* Unpublished master's thesis, State University of Iowa, Iowa City, 1928.

[32]Meltzer, Hyman, *Children's Social Concepts: A Study of Their Nature and Development.* Contributions to Education, No. 192. Teachers College, Columbia University, New York, 1925.

[33]Kelley and Krey, *Tests and Measurements,* Chap. III.

who control the sources of information. Evidence of such machinations is discouragingly abundant, both at home and abroad—in the narrow and perverted nationalism of many allegedly patriotic societies, in the subversive propaganda of special-interest groups, in the misleading slogans of political parties, and in the distorted reports of a partisan press. Bias, intentional or unconscious, is manifested by teachers and textbooks in the schools themselves. Students can hardly be expected to search impartially for the truth when all these influences are moving in the opposite direction. It is because of the difficulties that have just been enumerated that training in dependable methods of thought and inquiry is of crucial importance.

Much as we wish it to be otherwise, it is clear that at the end of the period of schooling, even upon graduation from college, few students have either an understanding of our social problems or the background of accurate knowledge and disciplined thought by which understanding can be achieved. Nor are these shortcomings limited to students in the schools. Most adults are either uninformed or misinformed about much that goes on about them, and have many ideas that are wholly fictional. Certain it is that nations, as well as individuals, have been and are devoted to many ideas and ideals that will not check with reality. Cynical writers sometimes argue that the great mass of people are happier in clinging to fictions than in facing the facts. But whatever policy other nations may adopt, American schools are committed to the ideal, although at times with lip service only, that the truth should be taught. The intelligent rather than the servile or "conditioned" citizen is their goal.

There are practical limits, however, as to the amount and degree of knowledge that students can be expected to secure.

They cannot know everything about the many topics now included in the course of study. They cannot attain even a respectable minimum grasp of them. And although, as has been suggested, the time allotment in social studies may be increased, the superficial system of cycles abandoned, and the number of topics reduced, there will still remain the problem of deciding how much to teach about any topic.

In order to solve this practical problem, it is necessary to posit some theories regarding the nature and function of ideas, as well as the manner in which they are formed. The position here taken is that purpose not only guides their construction but holds them together. The function that an idea is to have in the intellectual life of the student determines the appraisal, selection, and organization of the data of which it is built. Meaning, import, significance, and value all imply the question, "For what?" In order to determine what and how much to teach about any topic, therefore, it is necessary to decide what uses are to be made of the ideas involved in it. These uses should be in the minds of the teachers, and, as rapidly as possible, they should be evolved also in the minds of the students. For it is use in thought and in action that motivates and guides the construction of ideas, gives them dynamic quality, and measures their attainment.

IMPLICATIONS FOR TESTING AND TEACHING

Tests are a necessary part of instruction and may serve as a significant factor in developing the student's understanding of a problem. Now, as in the past, however, their use has been subject to two chief defects. The first of these is an overemphasis on appraisal at the end of an instructional period. While this function is important, it should be regarded as a minor one. Attention should be focused rather upon the

greater contributions to be made by tests during the process of instruction: in setting up and delimiting a problem, in stimulating and guiding the student's attack upon it, and in measuring the adequacy of intermediary steps leading up to the final solution.

The second defect of tests is their tendency to focus upon isolated facts or, even worse, upon verbal statements about them. This fault has been pointed out repeatedly in studies of oral questioning and, more recently, in criticisms of the so-called objective pencil-and-paper tests, particularly those of the true-false and multiple-choice types. The criticism most frequently made of the true-false and multiple-choice tests is that, like the rapid-fire type of oral questioning, they test facts rather than thinking, but it has become increasingly clear that, unless very carefully constructed, they do not even provide a satisfactory measure of factual learning. Experiments have shown repeatedly that a student may make a very high score on a typical true-false or multiple-choice test item even though his ideas about it are exceedingly hazy or actually inaccurate. This has led the specialists in test construction to arrive at the same conclusions reached by earlier investigators of oral questioning; namely, that these tests should emphasize relationships. The student must be made to draw some inference; that is, to use his ideas. Such tests are much more difficult than the typical fact test, not only because they add a new element, the ability to see relationships, but also because they are more thorough and severe measures of the degree to which fact items themselves are understood. There is, of course, nothing new in this conception of testing understanding for, as one psychologist has pointed out, "In meaning, relationships are the one thing we have nothing else but." It is not merely because

understanding is more adequately appraised that this emphasis on relationships and significance is important; the retroactive influence upon instruction is far-reaching. The emphasis is shifted from verbal memory and from the satisfaction of "getting by" with the vaguest and scrappiest of ideas, to thorough learning and critical thought.

In the previous discussion of the factors that determine the quality of the constructs formed by students, no reference was made to the influence of the teacher. Yet it is of major importance. The prevalence of vague and erroneous ideas on even the simplest matters that are well within the comprehension of students and that may be readily learned, even with the meager equipment that exists in the average school, indicates that a large part of the blame for this condition must be assigned to poor teaching. Kerr, for example, reports that the majority of misconceptions manifested in the rigorous testing of one class in geography were traceable, as shown in stenographic reports of previous class discussions, either to erroneous statements made by the teacher or to wrong statements made by pupils and uncorrected.[34] When a teacher does not understand a topic himself, when he is insensitive to the needs of individual pupils, and when he is unaware of the nature of difficulties in learning in the social studies, it is hardly to be expected that his choice and management of readings, his discussions, his questions, and his guidance and appraisal of the students' efforts will result in sound ideas. On the other hand, no one can watch the competent teacher at work without being impressed by the many ways, some of them very subtle, in which he stimulates interest, aids students in perfecting their

[34]Kerr, Walter E., *A Case Study of Reading Comprehension Difficulties in Geographic Materials.* Unpublished master's thesis, State University of Iowa, Iowa City, 1934.

understanding, and develops their facility in independent thinking.[85]

The teacher should be concerned with the development of the individual student. Each student, as has been pointed out, must build his own ideas, and the evidence, as well as common observation, makes it perfectly clear that his attempts will be attended by many blunders and shortcomings. There is no substitute for the teacher, either in stimulating and guiding the student's efforts or in correcting and perfecting the ideas that he forms. No administrative device, no amount of instructional equipment, important as it is, and no paraphernalia of study aids and workbooks can take the teacher's place. Because of the complex and often controversial nature of problems in the social studies, it is crucially important that teachers in this field should have the highest qualifications.

[85]See Chapter VIII.

Chapter V

READING IN RELATION TO LEARNING IN THE SOCIAL STUDIES

It is inevitable that much of the instruction in the social studies should be based upon the use of books. The development of effective reading habits is therefore fundamental not only to the accomplishment of the immediate objectives set up in the course of study but also to the continuing attack on social problems when school days are over. Students must learn to locate dependable books and articles that deal with the problems at hand; to understand, appraise, and select data that bear on these problems; to organize these data, often secured from a variety of references, so that they will contribute to the solution of the problems; and to provide for the retention, improvement, and use of what has been learned. Since all of these processes are dependent upon the ability to comprehend what is read, the emphasis in this chapter is upon understanding.

PREVALENCE OF VERBALISM

Reading without understanding is empty and futile. Yet verbalism has long been common in our schools. Investigation after investigation has piled up evidence of serious inadequacies in the ability of students to understand what they read.[1] The memorization of empty words and the complacent possession of flagrant misconceptions and vague ideas appear to be more nearly the rule than the exception. All of these deficiences have been made glaringly apparent also by the investigations of the reading abilities of adults. This condi-

[1]See, for example, the evidence given later in this chapter, pp. 164–196.

tion persists partly because insight into the relationship between language and thought is lacking, partly because significant evidence accumulated from research in reading during the last thirty years has been ignored, and partly because many school practices tend to encourage and habituate mere verbal learning.

THE NATURE OF READING

There is some disagreement as to how broadly reading should be defined. The mere recognition of words as words, leading at times to their memorization, although it involves some degree of reading ability, obviously stops at too low a level. Some writers prefer to limit the use of the term to the understanding, varying from little to much, which accompanies the movement of the eyes along the lines of the printed page. Others would include also the selection, appraisal, reflection, and problem-solving that may be required for an adequate understanding of what is read. Still others would include under the term most of the processes associated with and necessary to the effective use of books. There are advantages and disadvantages in each of these definitions, although the narrowest of them is broader and less definitive than would at first appear. As used in the discussions in this chapter and throughout the volume, reading includes those processes that are involved in approaching, perfecting, and maintaining meaning through the use of the printed page. Since there are many such processes, and since each one varies in degree, the term must be elastic enough to apply to all the varieties and gradations of reading involved in the use of books.[2]

[2]For discussions of the nature of reading, its types, and its relation to study, see Yoakam, Gerald Alan, *Reading and Study*. The Macmillan Company, New York, 1928, especially Chaps. II and III; Gray, William Scott, *Summary of Investigations Relating to Reading*. Supplements Nos. 1, 2, 3, 4, and 5 to Monograph No. 28, The University of Chicago, The Department

Thorndike rightly points out that: ". . . reading is a very elaborate procedure, involving a weighing of each of many elements in a sentence, their organization in the proper relations one to another, the selection of certain of their connotations and the rejection of others, and the coöperation of many forces to determine final response. In fact we shall find that the act of answering simple questions about a simple paragraph . . . includes all the features characteristic of typical reasonings."[3]

Reading is so inseparably bound up with most of the serious study of social studies that it is difficult, if not impossible, to determine the place where reading leaves off and only thought remains. Teachers of these subjects will profit far more from regarding thought and reading as functionally related than from attempting to separate them. Lyman expresses this view admirably: ". . . the activities of reading, of thinking, and of studying are considered as three aspects of the one process by which we learn to use materials which we find in printed form. All are activities of the mind. We *read* serious books to get ideas; we *think* about them to see what these ideas mean; we *study* ideas and their meanings, endeavoring to make them our permanent possessions and to get ready to use them in problems of our own."[4]

These three aspects are not steps each of which leaves off

of Education, Chicago, 1926, 1927, 1928, 1929, and 1930; Judd, Charles Hubbard, and Buswell, Guy Thomas, *Silent Reading: A Study of the Various Types.* Supplementary Educational Monographs, No. 23 (Nov., 1922), The University of Chicago, The Department of Education, Chicago; "The Teaching of Reading: A Second Report," *Thirty-sixth Yearbook*, Part I, National Society for the Study of Education. Public School Publishing Company, Bloomington, Ill., 1937, Chaps. I to VI.

[3]Thorndike, Edward L., "Reading as Reasoning: A Study of Mistakes in Paragraph Reading," *The Journal of Educational Psychology* VIII (June, 1917), p. 323.

[4]Lyman, R. L., *The Mind at Work.* Scott, Foresman and Company, Chicago, 1924, p. 14.

when the other begins, but each may, and usually does, involve the others.

THE SYMBOLIC CHARACTER OF LANGUAGE

Two fundamental facts concerning the relation of reading to understanding must be kept clearly in mind: first, all language is symbolic, with all of the limitations implied by that term, and second, meanings are related to printed symbols in essentially the same way that they are related to spoken symbols; that is, the relationship is between meaning and language rather than between meaning and reading *per se*.

The significance of the symbolic character of language cannot be overemphasized. The words of the text represent the author's attempt to depict some aspect of social reality. The embodiment of reality into language, even for the purposes of the author's own thought, is not easy, but language, as Butler points out, involves a sayee as well as a sayer;[5] *i.e.*, it must be chosen with reference to the limitations and abilities of some audience. The author, moreover, does not really convey ideas to the reader; he merely stimulates him to construct them out of his own experience. If the concept is already in the reader's mind, the task is relatively easy, but if, as is usually the case in school, it is new to the reader, its construction more nearly approaches problem-solving than simple association. Moreover, any error, bias, or inadequacy in the author's statement is almost certain to be reflected in the ideas formed by the student. All this is so obvious that elaboration would be gratuitous were it not for the fact that the implications of the symbolic character of language are either not apprehended by teachers

[5]Butler, Samuel, "Thought and Language" in *The Humour of Homer and Other Essays*. A. C. Fifield, London, 1913, p. 213. See also Ballard, Philip Boswood, *Thought and Language*. University of London Press, London, 1934, p. 17; Dewey, John, *How We Think* (new edition). D. C. Heath and Company, Boston, 1933, pp. 230–46.

and by authors of texts in the social studies or are generally disregarded by them in practice.

If, in higher grades, a student cannot understand what he reads, he generally cannot understand what is read to him.[6] This is shown conclusively in the data secured by Young for more than two thousand subjects in grades four, five, and six. At the fourth-grade level it was found that most children could obtain somewhat more adequate meanings from what was told them than from what they read. This is not surprising, since children before enrolling in school have had several years' experience in responding to spoken symbols, but only since entering school have they learned to read. In the sixth grade, however, the ability to understand what was read was found to equal or exceed the ability to understand what was heard. These results are in harmony with those obtained by Russell and others, in indicating that, after the sixth or seventh grade, students may be expected to get more complete and adequate meanings from reading than from oral presentation.[7]

At each grade level the ability to understand what was heard was found to correlate highly with the ability to understand what was read, the correlations averaging above .80. There are many reading tests that do not correlate so highly with other reading tests.[8] Among the more than two thousand subjects used in his experiment, Young found no child who was superior in the ability to understand what he heard and yet

[6]Young, William Ernest, *The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention.* Doctor's dissertation, State University of Iowa, Iowa City, 1930. An abstract of this thesis has been published in *The Journal of Experimental Education* V (September, 1936), pp. 30–39.

[7]Russell, Ralph Douglas, *The Relative Effectiveness of Presenting Verbal Material Visually and Orally as Measured by the Amount of Recall.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1923.

[8]Current, Walter Freeman, *A Statistical Study of Certain Reading Tests.* Unpublished master's thesis, State University of Iowa, Iowa City, 1925.

was inferior in the ability to understand what he read, or vice versa. The closeness of the relationship between hearing and reading is shown even more conclusively in his quartile comparisons. For example, in one section of the experiment, involving 104 pupils, the 26 pupils who constituted the highest fourth in ability to understand what was heard were distributed as follows with respect to their ability to understand what was read: 20 were in the highest fourth, 5 in the second fourth, 1 in the third fourth, and none in the lowest fourth. Of the 26 pupils who made up the lowest fourth in the ability to understand what was heard, 21 were also in the lowest fourth in the ability to understand what was read, 3 in the second lowest fourth, 2 in the third fourth, and none in the highest fourth.

These data, combined with those of other similar investigations, seem to indicate that, with the exception of a few special types, most of the so-called reading disabilities may more properly be ascribed to disability in language. The full significance of this fact for the teaching of reading has not always been appreciated. As a result, the more technical and peripheral aspects of reading, such as phonics, eye movements, and mechanical drills, have loomed overlarge both in research and in practice, as compared with the vastly greater importance of the central thought processes. Yet it is clear that very little improvement may be expected from formal drill in reading unless at the same time provision is made for the enrichment of experience, the development of language abilities, and the improvement of thinking.

THE BROAD PERSPECTIVE

It should be evident from what has been said that reading must be viewed in a broad perspective. This perspective is furnished by the analysis of the problem of meaning that is

given and elaborated in the preceding chapter. If this analysis is sound, one must conclude that the meaning obtained by a student when he reads any given selection is dependent upon three main factors: first, the inherent nature and difficulty of the concepts with which the selection deals; second, the adequacy with which these concepts are presented in the language of the text; and third, the reader's ability, including his experience, intelligence, interest, and command of reading skills. In the act of reading, these factors are, of course, interdependent.

READING DIFFICULTY IN RELATION TO THE DIFFICULTY OF IDEAS

A selection can hardly be easy to read when it deals with ideas that are new, inherently difficult, and remote from the reader's experience. In such a case it is not the author's style or vocabulary that troubles the student so much as the complexity or profundity of the thought required. This distinction is expressed neatly by Ballard,[9] in reviewing a series of books. "Though they are written in a style that is vigorous and lucid," he says, "the language is so loaded with thought that the reading is by no means easy." In the case of difficult problems, the selection of pertinent elements from one's past experience, the gathering and evaluation of new data, and the organization of new and old ideas into an adequate construct takes time, skill, and reflective effort. It is akin to the work that must be done, after reading a difficult problem in mathematics, before the problem can be solved.

Many of the ideas presented in typical textbooks in geography, history, or other social studies are so intrinsically complicated that they would be difficult to understand even if described in liberal detail, in untechnical language, and in a lucid, attractive style. Actually, however, they are presented

[9]Ballard, *Thought and Language*, p. 300.

in the form of condensed and abstract statements that are readily understood only by those who have already formed the generalizations for which the statements stand. The background of experience, ideas, and interest that might make the statements intelligible is not provided in the books and it cannot be assumed to be in the possession of the students. Under these circumstances intelligent reading is impossible. What kind of understanding, for example, can be displayed by an eighth-grade student who, on the basis of a condensed statement occupying only a page or two, is asked to expound the principles of competition and monopoly, to trace the benefits and evils of each, and to illustrate them in the lives of Vanderbilt, Carnegie, Morgan, and Rockefeller? Or what but words can be expected of a high-school student who, after reading a brief paragraph, is required to tell the nature and influence of John Locke's philosophy? These two instances are illustrative of hundreds that are to be found in the textbooks now in common use.

The concepts in textbooks and courses of study are not only too difficult but also too numerous to be mastered, in the present time allotment, by reading or by any other means. There must be a sharp reduction in the amount to be learned. As will be pointed out later, the blame for this multitude of difficult topics should not be charged solely to textbook authors and publishers; it must be shared by those who select and use the books. In fact, the programs set up in textbooks are often less ambitious than those found in many courses of study.[10]

DIFFICULTIES PERTAINING TO THE NATURE OF READING MATERIAL

Closely associated with difficulties arising out of the inherent complexity of a concept are those related to the manner in

[10]For a fuller discussion of the problems raised in this paragraph, see Chap. VI.

which it is presented. If, as has been pointed out, a concept is strange and complicated, the reading material that bears upon it cannot be easy. Yet a relatively simple idea may be obscured, and a knotty problem made more difficult, by the way in which it is presented in printed form. What, then, are the elements of style that in themselves contribute to the ease or difficulty of reading?

The qualities that make a book interesting and understandable are subtle in their operation. Encouraging beginnings, however, have been made in their analysis.[11] The problem has been approached in a variety of ways. Literary critics have of necessity been concerned with clarity, along with other matters of style, but they have undoubtedly had in mind, in their appraisals, the tastes and abilities of a highly selected group of readers. Social scientists have likewise written for a restricted public and, in general, have been very critical of most attempts to popularize the treatment of their fields. There are exceptions to this attitude, however. James Harvey Robinson, for example, emphasizes both the desirability of selecting content that is related to the needs and interests of the common man and the importance of attractiveness and simplicity of style; ". . . most of the best books," he says, "are simply too long and too hard for even ambitious and intelligent readers."[12]

Teachers, librarians, publishers, and others have been concerned with a wide reading public and as a result of their experience have expressed judgments as to the factors that make

[11]Gray, William S., and Leary, Bernice E., *What Makes a Book Readable.* The University of Chicago Press, Chicago, 1935; Waples, Douglas, and Tyler, Ralph W., *What People Want to Read About.* The University of Chicago Press, Chicago, 1931; Dale, Edgar, and Tyler, Ralph W., "A Study of the Factors Influencing the Difficulty of Reading Materials for Adults of Limited Reading Ability," *Library Quarterly* IV (July, 1934), pp. 384–405.

[12]Robinson, James Harvey, *The Humanizing of Knowledge.* George H. Doran Company, New York, 1923, pp. 88–89.

a book readable.[18] Finally, a large number of investigations have dealt, directly or indirectly, with reading difficulty. A careful study of the data of investigations pertaining to various aspects of this problem and of the judgments of those who, like publishers, librarians, and teachers, have had to deal with the problem in a practical way, leads to the conclusion that the factors that exert the greatest influence upon the reading difficulty of any selection are the following:

1. The inherent difficulty of the concepts treated and their pertinence or lack of pertinence to the experience and interests of the reader. This factor, as earlier noted, is not only important in itself; it has a causal relationship to other important factors.

2. The author's evident lack of intelligent, sympathetic understanding of the needs and limitations of prospective readers.

3. A failure on the part of the author to define explicitly for himself the large ideas that he wishes to convey. As a result, his treatment lacks focus, and the reader is confused.

4. The omission of necessary, relevant details, and the inclusion of unnecessary, irrelevant details.

5. A style that is unsuited to the readers for whom the selection is intended.

The first four of these factors are discussed elsewhere in this and in other chapters.[14] The importance of the first and third is emphasized repeatedly. Further discussion at this point is therefore limited to qualities of style.

The effect of qualities of style upon reading difficulty has been the subject of numerous investigations, many of which, however, have centered almost exclusively upon structural elements, such as vocabulary and type of sentence. These are the

[18]Gray and Leary, *What Makes a Book Readable,* Chap. II; National Education Association, *Research Bulletin* XIII, No. 5 (November, 1935), pp. 309–12.

[14]See especially Chaps. IV and VI.

elements most easily defined and controlled for purposes of research. The most important investigations are those by Vogel and Washburne,[15] Dale and Tyler,[16] Ojemann,[17] and Gray and Leary.[18] There is substantial agreement among these investigators regarding the structural elements that give the most useful prediction of probable difficulty. According to Gray and Leary, these are: "number of different hard words; number of easy words; percentage of monosyllables; number of first-, second-, and third-person pronouns; average sentence-length in words; percentage of different words; number of prepositional phrases; and number of simple sentences."[19] Various factors have been combined into formulæ for estimating reading load.

All investigators agree that of the structural elements of style, vocabulary is an important, if not the most important, index of difficulty. It has been commonly assumed, therefore, that one of the most feasible ways of making books easier to read is to simplify the vocabulary. Thorndike has proposed that the relative frequency with which words are found in his *Teacher's Word Book* be used for this purpose.[20] Other lists have also

[15]Vogel, Mabel, and Washburne, Carleton, "An Objective Method of Determining Grade Placement of Children's Reading Material," *The Elementary School Journal* XXVIII (January, 1928), pp. 373–81.

[16]Dale and Tyler, "Factors Influencing Difficulty of Reading Materials," pp. 384–412.

[17]Ojemann, Ralph H., "The Reading Ability of Parents and Factors Associated with Reading Difficulty of Parent Education Materials," *Researches in Parent Education* II. In University of Iowa *Studies in Child Welfare*, Vol. VIII, State University of Iowa, Iowa City, 1934, pp. 11–32.

[18]Gray and Leary, *What Makes a Book Readable*. See also Thorndike, Edward L., and others, "An Inventory of English Constructions with Measures of Their Importance," *Teachers College Record* XXVIII (February, 1927), pp. 580–610.

[19]Gray and Leary, *What Makes a Book Readable*, p. 130.

[20]Thorndike, Edward L., "Improving the Ability to Read," *Teachers College Record* XXXVI (October, 1934), pp. 1–19; (November, 1934), pp. 123–44; (December, 1934), pp. 229–41; Thorndike, Edward L., *A Teacher's Word Book of the Twenty Thousand Words Found Most Frequently and Widely in General Reading for Children and Young People*. Bureau of Publications, Teachers College, Columbia University, New York City, 1932.

been suggested as bases for the simplification of vocabularies, many of them having been constructed to facilitate the teaching of English to foreigners.[21]

There is a real danger that the mechanical and uncritical use of the data on vocabulary will not only affect adversely the production, selection, and use of books but will also result in absurdities that will throw research in this field into disrepute. It is well to examine very carefully, therefore, the theory and practice pertaining to the simplification of vocabularies as a means of making materials easier to read.

The commonest method of determining the vocabulary load of a selection has been to compare the words in it with those of the Thorndike list. This is obviously an indirect attack, since the difficulty of the vocabulary of a selection is determined by the language limitations of those who do the reading. It is clear, however, that there is considerable correspondence between the order of frequency of words in the Thorndike list and their knowledge by students of any grade. There are two reasons why this should be so: first, if one assumes the list to afford a valid and reliable measure of the frequency with which words occur in general reading, it is to be expected that words of high frequency in this list are more likely to have been encountered by the student; second, a large percentage of the words of high frequency in the Thorndike list are found also in lists of words used most frequently by chil-

[21]Rejall, Alfred E., "Reading Vocabularies," *Thirty and One Reading Tests for Voters and Citizenship.* Noble & Noble, New York, 1926, pp. 49–69; Faucett, Lawrence, and Maki, Itsu, *A Study of English Word-Values Statistically Determined from the Latest Extensive Word-Counts.* Matsumura Sanshodo, Tokyo, Japan, 1932; West, Michael, *Definition Vocabulary.* Bulletin No. 4, Department of Educational Research, The University of Toronto Press, Toronto, 1935; Ogden, C. K., *Basic English.* Kegan Paul, Trench, Trubner & Co., Ltd., London, 1930. Note, however, the criticism of Basic English in West, M. P., Swenson, E., and others, *A Critical Examination of Basic English.* Bulletin No. 2, The Department of Educational Research, The University of Toronto Press, Toronto, 1934.

dren. Yet many words of fairly high frequency in the Thorndike list are beyond the comprehension of young students, and conversely, many useful words that are almost universally understood by them either are not in the Thorndike list at all or are beyond the limits ordinarily used for assuming words to be understood.

The absence of adequate data on the words that children understand at each grade level is a matter to be regretted. Important beginnings have been made to supply such evidence, but the results have not yet been published.[22] The data from investigations on words that children most often speak and write afford indirect evidence on the words likely to be understood in reading, but here again the results of the most extensive tabulations are not available in published form.[23]

For the purpose of estimating reading difficulty, there is one serious deficiency in the Thorndike list, in Horn's *Basic Writing Vocabulary,* and in the most extensive counts of the writing or speaking vocabularies of children: the various

[22]Dale, Edgar, *Familiarity of 8000 Common Words to Pupils in the Fourth, Sixth, and Eighth Grade.* Mimeographed. Bureau of Educational Research, Ohio State University, Columbus. A more extensive list, also unpublished, has been prepared under the auspices of Ginn and Company. A description and preliminary list are given in Buckingham, B. R., and Dolch, E. W., *A Combined Word List.* Ginn and Company, Boston, 1936.

[23]For a review and bibliography of these investigations, see Horn, Ernest, "A Basic Writing Vocabulary," University of Iowa *Monographs in Education,* No. 4, State University of Iowa, Iowa City, 1926; *Third Yearbook,* Department of Superintendence, Washington, D. C., 1925; McKee, Paul, *Language in the Elementary School; Spelling, Composition, and Writing.* Houghton Mifflin Company, Boston, 1934. See also Child Study Committee of the International Kindergarten Union, Madeline Horn, chairman, *A Study of the Vocabulary of Children Before Entering the First Grade.* The International Kindergarten Union, Washington, D. C., 1928; McKee, Paul, Unpublished study of words used by children in writing letters outside of school; Fitzgerald, James A., "Letters Written Outside the School by Children of the Fourth, Fifth, and Sixth Grades: A Study of Vocabulary, Spelling Errors, and Situations," University of Iowa *Studies in Education* IX, No. 1, State University of Iowa, Iowa City, 1934. The data from the most important investigations in these fields have been accumulated on tabular sheets, unpublished, but available at the College of Education at the State University of Iowa.

semantic or meaning varieties of the words are not recorded. Even investigations of basic concepts in social studies usually test but one of many important meanings. This deficiency is not serious in spelling, where the form of the word is the matter of chief concern, but it is crucial in reading, where meaning is essential. For example, *order* is among the first five hundred words in the Thorndike list, yet it has very different meanings in the following contexts: *Franciscan Order, order in the classroom, in order to qualify, an order for goods,* and *in alphabetical order.* Connotations vary even within narrower limits; *a large field of wheat* is one thing in Vermont and quite a different thing in Nebraska. To make a mechanical check, therefore, against a mere alphabetical list of word forms is to ignore not only the significance of meaning varieties but also the fundamental importance of the relationship of the words in the sentences and paragraphs in which they are found.[24]

Simple words, although high in frequency in the vocabulary lists, are sometimes a source of serious difficulty because students, knowing one meaning of a word, are unaware that the meaning required by the special context in which the word occurs is unknown to them. In testing the comprehension of a selection on pioneer lighting, for example, Dewey found "aside from the fireplace," in the sentence, "Aside from the fireplace, the candle was the chief source of light," to mean:

It wasn't the fireplace, it was other things besides the fireplace
The candle was sitting by it (the fireplace)
Away from the fireplace
Aside means better, the candle was better than the fireplace

[24]See Dale, *Familiarity of 8000 Common Words,* and Buckingham and Dolch, *Combined Word List.*

Beside the fireplace—right close to it
Fireplace gave the most light in the room but away from it they had to use the candle
In addition to the fireplace
Well, like this would be the fireplace, and over here to one side would be away from the fireplace—fire would be in one place and candle would be sitting away from the fire on the table[25]

"Aside" is in the third thousand of the Thorndike list, yet it actually proved very troublesome to eighth-grade children. Investigations of comprehension in reading abound in examples of confusions of this sort.

Technical words constitute an important problem in teaching the social studies.[26] Words found in the textbooks of a given field but not in the Thorndike list are ordinarily classified as special or technical words. This criterion has definite limitations, for there are words in the Thorndike list that are used with unusual or technical meanings in social sciences, and there are words not in the Thorndike list that cannot properly be deemed technical. Nevertheless, this and other lists, supplemented by critical judgment, have been of unmistakable value. It is clear from the evidence that textbooks are heavily loaded with technical terminology, much of which is needless. In any subject, however, there are many words that are indispensable to the student's present and future understanding in the field. Pressey and others, with the assistance

[25]Dewey, Joseph C., *A Case Study of Reading Comprehension Difficulties in American History.* Doctor's dissertation, State University of Iowa, Iowa City, 1931, p. 241. An abstract of this thesis has been published in University of Iowa *Studies in Education* X (No. 1), State University of Iowa, Iowa City, 1935.

[26]For a discussion and bibliography bearing on this problem, see Kelley, Truman L., and Krey, A. C., *Tests and Measurements in the Social Sciences,* especially Chaps. I and III. Charles Scribner's Sons, New York, 1934.

of teachers and scholars in the field, have assembled lists of such words.[27] Tests on the understanding of these terms show very unsatisfactory achievement.[28]

Specific and systematic attention should be given to the development of accurate understanding of the terminology basic to the social studies. Apparently, however, drill upon the words, isolated from context, does not bring the desired results.[29] All terms should be taught in the contexts that identify the meaning to be stressed.

Investigations of the effects of simplifying vocabulary leave some doubt as to the extent to which a selection may be made easier by attention to this factor alone. Common sense would indicate that unknown words should not be used to express an idea when known words are equally satisfactory. Most textbooks would undoubtedly be made more readable by the judicious use of easier words. West has shown that different selections with equally difficult vocabularies as measured against the Ogden list may vary in the ease with which they are read.[30] Clarke,[31] using selections from a primary textbook on Indian life; Foster,[32] using selections from a third-grade

[27]For the method of determining these words, see Pressey, Luella Cole, "The Determination of the Technical Vocabulary of the School Subjects," *School and Society* XX (July 19, 1924), pp. 91–96. For examples of the lists, see Pressey, Luella Cole, *The Special Vocabularies of the Public School Subjects,* Section 5 (American History) and Section 9 (Geography). Public School Publishing Company, Bloomington, Illinois.

[28]Kelley and Krey, *Tests and Measurements,* Chap. III.

[29]Newburn, Harry K., "The Relative Effect of Two Methods of Vocabulary Drill on Achievement in American History," University of Iowa *Studies in Education* IX, No. 3. State University of Iowa, Iowa City, 1934.

[30]West, Swenson, and others, *Critical Examination of Basic English.*

[31]Clarke, Katherine, *The Effect on Comprehension of Simplification of Social Science Reading Material in a Second Grade.* Unpublished master's thesis, State University of Iowa, Iowa City, 1933.

[32]Foster, Charlotte, *The Effect upon Reading Comprehension of Paraphrasing Elementary Historical Material into the Spoken and Written Vocabulary of Children.* Unpublished master's thesis, State University of Iowa, Iowa City, 1931.

history book; and Kueneman,[33] using selections from a fourth-grade geography text, simplified the vocabulary by substituting, as far as possible, words taken from the spoken vocabulary of kindergarten children. In each case it was found that the rewritten material was read more rapidly, but that the total effect upon understanding, while somewhat beneficial, was not great. Some parts of the adapted selections were more easily understood, while other parts were made no easier and indeed in some cases more difficult. Nolte simplified the vocabulary of three short selections (1) by means of the Ogden vocabulary, and (2) by using words from the first 2500 of the Thorndike list. The original and the adapted versions were read by children in grades six, seven, and eight. Neither form of adaptation was significantly easier to read, as a whole, than the original.[34]

If their potential contributions are to be realized, the various vocabulary lists must be used with great discrimination and their limitations must be kept in mind. It is easy to show that these lists cannot be used in a mechanical fashion. For example, on the basis of the hypothesis that words occurring in the first twenty-five hundred of the Thorndike list should be intelligible to fourth-grade children, the following sentence should be easy to understand: *The square of the sum of two numbers is equal to the square of the first added to twice the product of the first and second added to the square of the second.* All of these words are among the two thousand of highest frequency in the Thorndike list. On the other hand, the following sentences should be quite unintelligible: *Daddy*

[33]Kueneman, Huberteen, *A Study of the Effect of Vocabulary Changes on Reading Comprehension in a Single Field.* Unpublished master's thesis, State University of Iowa, Iowa City, 1931.

[34]Nolte, Karl F., *The Effect of Simplification of Vocabulary on Comprehension in Reading.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1936.

helped me with my arithmetic until bedtime. I got a bracelet, a toy dresser, and some gum for Christmas. Brother got a baseball and a sled. It is evident that the difficulty of a word in any sentence is not to be determined by the frequency with which the printed form of the word has been recorded but by the probability that the appropriate meaning has been associated with it by the reader. Even if this probability be estimated by available data on the percentage of students who know the required meaning, large individual differences in vocabulary at any grade level cannot be ignored. To limit a selection to words known by 90 per cent of the students in any grade may operate to the serious disadvantage of the superior students in that grade.

The simplification of vocabulary cannot go very far without involving other structural elements that have been found to be significant influences in determining reading difficulty. Many words are relatively difficult, according to vocabulary lists used as the basis of reference, and yet are concise expressions of ideas that would otherwise require a phrase, or at least more than one word. To simplify the vocabulary without increasing the difficulty of other elements, such as the length of sentence, is never easy and is sometimes impossible. Nor is it merely the other structural elements that must be considered, for when the ideas are intrinsically complicated and unrelated to the student's background of knowledge, these factors of difficulty cannot be removed by merely tinkering with structural elements. Nevertheless, it is clear that a selection can be made substantially easier to read by simplifying the structural elements, provided the ideas are not too difficult.[35]

[35]Gray and Leary, *What Makes a Book Readable,* Chaps. IV to VIII; Dale and Tyler, "Factors Influencing Difficulty of Reading Material"; Ayer, Adelaide M., *Some Difficulties in Elementary School History.* Contributions to Education, No. 212, Teachers College, Columbia University, New York, 1926, Chaps. V and VI.

The foregoing discussion of structural elements is more elaborate than is warranted by their importance in relation to other factors that make a selection hard to read. Its purpose is to offset certain undesirable trends in using the data on these elements. Because more data are available on structural elements than on other matters, and because these data are easier to use in making and appraising books, they tend to distract attention from other elements of equal or greater importance. And even if their subordinate position be pointed out and their limited validity explained, their apparent objectivity, although somewhat illusory, is a temptation, irresistible to many, to use them as the principal basis for the selection and rejection of text and reference books. It is but another illustration of the perennial tendency to try to solve educational problems through formal and mechanical procedures.

The careful consideration of the theory and evidence on various factors pertaining to reading difficulty leads to the following conclusions:

1. The most important factors are the number and inherent difficulty of the concepts, the lack of pertinence to the experience and interests of the prospective reader, the author's failure to define explicitly the large ideas that the reader is to obtain, and the meagerness of treatment. All of these factors exert important influences on the qualities of style.

2. Another source of great difficulty is an absence of those elements of style, so elusive to analysis, that distinguish great literature from slipshod and prosaic writing.

3. Both evidence and common sense indicate that the skillful and judicious simplification of structural elements, such as vocabulary and length of sentence, contributes somewhat to readability. The more these elements are studied, however,

the more apparent it becomes that their significance lies not so much in their intrinsic importance as in their reflection of more fundamental factors with which they are associated. Thus difficulty of vocabulary is tied up with the remoteness of the concepts from the reader's experience; and a large number of different words and long involved sentences are related to the complexity of the ideas presented.

4. The discriminating substitution of known for unknown words adds significantly to speed of reading and ease of understanding. The most important criterion in the selection of words, however, must always be the degree to which they express the exact meaning that the reader is expected to get.

5. Only to a limited extent can the vocabulary difficulty of a selection be estimated by comparison with the word forms reported with greatest frequency in studies of adult reading and writing. It must be determined by comparison with the meanings, pertinent to the context, known to be understood by the students who are to do the reading.

6. While no formulæ should be used rigidly in determining the number or distribution of difficult words, it is clear that new words, technical words, and words used in unusual connotations should not appear at too short intervals. Thorndike's suggestion of one such word in two hundred running words seems reasonable. Yet in many textbooks really difficult words occur more frequently than one in fifty.

7. The use of any of the data on structural elements should not be allowed to obscure the large individual differences that exist in the abilities of students. For example, the range of vocabulary in any grade is enormous, and the limitation of selections to words known by all of the students, or even by 75 per cent of them, may destroy the interest and hamper the development of superior students. On the other hand,

there must be selections that are easy enough to be understood by the poorest readers.

8. There is reason to believe that students of low intelligence require more cues in the way of details to incite thought. For these students, as well as for students of higher intelligence, the simplification of a selection will often demand that it be greatly expanded in order to include the necessary detail and illustrative material.

9. In the production and appraisal of texts and collateral readings, the attention to structural elements should not be allowed to obscure other factors, such as those given under 1 and 2 above, or the worth and authenticity of the content. It is quite possible for a selection to be easy, according to any of the formulæ that have been suggested, while in reality, because of the concepts with which it deals or because of the meagerness of the treatment, it is very difficult. It is also possible for a selection to be petty, unauthentic, or utterly stupid and still be acceptable according to the criteria that make up these formulæ. This emphasis on the restricted uses that these formulæ serve is not meant to imply that they are of no value; it is merely a reminder that they should be used cautiously, with full knowledge of all the limitations pointed out by those who have been most concerned with their development and application.

DIFFICULTIES INHERENT IN THE LIMITATIONS OF THE READER

The preceding section deals primarily with difficulties that are attributable to the nature of the material that is read. Yet the writer of a selection, no matter how explicit he may be, does not say the same thing to each of the thirty pupils in a typical class. More likely he says thirty things, because of the way in which differences in interest, experience, in-

telligence, and reading ability are combined. The ideas obtained vary markedly even when the content of a selection is relatively simple and concrete. In an experiment by Rhynsburger, for example, students were asked to make a rough sketch of a pioneer fireplace as described in the following paragraph:

"The big fireplace would be among the first things to attract attention. Above it, resting on a shelf, or mantel, would be seen a candle, a clock and one of the housewife's most beautiful plates. Within the fireplace fastened to one side would be seen the crane upon which a kettle was hanging over the blaze."

No two drawings were exactly alike. Only a few were essentially correct, and even these differed in details. Many were almost wholly erroneous. One child, for example, drew a bird for the crane.[36] In an earlier experiment graduate students were required to make a sketch to illustrate the same paragraph. Similar variations and misconceptions were shown. For example, a very considerable number of these drawings included the familiar Big Ben as an example of a pioneer clock.[37]

All of the factors that, in the preceding chapter, were shown to influence the formation of constructs on the part of the student also condition the constructs that the student makes when he reads a given selection. The principal factors, it will be recalled, are language ability, intelligence, interest, and the background of experience. All that was said in the discussion of the relation of these factors to the acquisition of meaning holds also for comprehension in reading and is assumed in the following discussion, in which their influences are traced more specifically.

[36]Rhynsburger, Amelia H., *A Study of Comprehension in Silent Reading.* Unpublished master's thesis, State University of Iowa, Iowa City, 1930.

[37]Horn, Ernest, "A Constructive Program in Silent Reading," *Journal of Educational Research* III (May, 1921), p. 338.

DIFFERENCES IN GENERAL READING ABILITY

A clear understanding of the great differences in general reading ability at any grade level is fundamental in planning instruction in the social studies. These differences should be taken into account in the making of assignments, in the utilization of texts and collateral readings, in the supervision of study, and in class discussions. Yet some writers in the field of reading, who ought to know better, still talk about the reading ability of third-, or sixth-, or ninth-grade students in a way that gives the impression of great homogeneity rather than an insight into the great diversity that really exists. When such an erroneous view is held, lockstep methods are fostered and the individual needs of students are neglected.

The enormous variations in reading ability at any grade level and the large overlap between the reading scores of students in one grade with those of students in adjacent grades were pointed out in an earlier chapter.[38] The data there cited were based on the test scores made by over 6000 pupils in each of grades six, seven, and eight. The range of reading ability of the students of any grade in one school system or even in a single large class is often nearly as great. In one sixth grade of forty pupils, for example, in which the median accomplishment on the New Stanford Reading Test was approximately a year below the established norms, the total range of ability was over seven years. One pupil was below the second-grade norm, and two pupils were at the eighth-grade norm. And while all levels of ability are much higher in schools where reading is well taught, the range remains very great. In one such school, for example, twenty-one out of twenty-eight pupils in a sixth-grade class were above the norm for their grade on

[38]See Chap. II, "The Identification and Classification of Pupils for the Purpose of Teaching," pp. 45–47.

the Gates Advanced Reading Test. Yet the range in reading grade scores was seven years. Three pupils were below the fifth-grade norm, while six were at or above the eleventh-grade norm.

It is clearly impossible that any given selection, literary or otherwise, will be read with equal understanding in the same amount of time by students who differ so widely in reading ability. The problem cannot be solved by allowing the poor readers more time, since most of them are so lacking in all of the abilities that enter into reading that they cannot, in any practicable extension of time that can be allowed under school conditions, understand selections suited to best readers.

The reading ability of students in general is inexcusably low. It is certainly safe to say that, both in private and in public schools, the reading ability of students of any grade beginning with grade four is, on the average, at least one year below the level that it is practically possible to achieve through the application of modern methods; it is even lower in schools where certain modern educational theories have exerted their undermining influences. That this deplorable condition is unnecessary is indicated by the fact that in schools where the reading program is exceptionally well organized, the median scores are much higher than the norms for the country at large.

The phenomena of wide range and extensive overlap are no less marked in high school and college. In one university, for example, the median freshman was found to read no better, as measured by a given test, than the best 15 per cent of ninth-grade students. Only 10 per cent of these university freshmen surpassed the best 1 per cent of ninth-grade students. Ten per cent of the university freshmen could not read as well as the median ninth-grade student. Very few of the students in the lower 10 per cent in reading ability will

graduate and a large proportion of them will fail in their courses in the social sciences during the first semester. The reading disabilities of students now in high school and college should have been apparent even in the primary grades. It is crucial that these deficiencies be removed in the earliest years. Otherwise, reading development will be retarded and the student will accumulate a burden of failure and frustration in all of his study in which reading is involved.

THE RELATIONSHIP OF INTELLIGENCE TO READING

The great variation in the intelligence of pupils at each grade level has already been pointed out.[39] It seems reasonable to assume a close relationship between intelligence and reading comprehension; yet the reported correlations between intelligence and reading ability, while positive, are not high.[40] Only at the lower levels do intelligence scores predict reading ability with reasonable certainty. There is very little likelihood that students who are exceedingly low in intelligence will attain much facility in reading. Many pupils with intelligence quotients as low as eighty, however, give very satisfactory answers, within the limits of their experience, to questions on what they read in the social studies. Indeed, an examination of the records of personal interviews with such children in the investigations by Dewey,[41] Stolte,[42] and others indicates that, in comparison with intelligence, the influence of interest, training in reading, and a background of accurate knowledge may have been underestimated. This is especially true when

[39]See pp. 44–46.

[40]Gray, *Summary of Investigations Relating to Reading.*

[41]Dewey, Joseph C., *Reading Comprehension Difficulties in American History.*

[42]Stolte, Helen B., *The Ability of Fourth Grade Children to Comprehend Certain Geographical Concepts.* Unpublished master's thesis, State University of Iowa, Iowa City, 1935.

the items tested deal with practical matters of life. On the other hand, a high score on an intelligence test does not guarantee that a student will achieve a satisfactory understanding of what he reads. Many bright students, adept in the manipulation of language, are clever at putting up a good front with very little knowledge and are quick to utilize any lead or crutch in poorly constructed tests. This cleverness constitutes a real problem in schools in which the chief emphasis falls upon the achievement of marks rather than upon a sincere attempt at understanding. Students of superior intelligence, however, who conscientiously attempt to form adequate ideas, often make "howlers" instead, and they apparently cherish their misconceptions as persistently as do the less gifted of their fellows.

One measure of adequate understanding is the consistency of responses on different types of tests of reading comprehension. One would expect that students of high intelligence, as compared with students of low intelligence, would be less likely to make responses on one test that are incompatible with answers on the same items in other tests. Dewey found a regular increase in consistency as intelligence increases, although the difference in the percentage of consistent answers was not so great as might be expected, being on one test 66.09 for pupils with I.Q's of 120 to 129 and 53.04 for students with I.Q's from 80 to 89.[43]

THE RELATION OF INTEREST TO READING

The pertinence of any selection to the interest, needs, and purposes of the reader is one of the most important factors

[43]Dewey, Joseph C., *Reading Comprehension Difficulties in American History*, p. 62. This material is found on p. 33 of the published abstract of Dewey's thesis.

in determining how well the selection is understood.[44] Differences in interests among students are consequently very significant. It is a matter of common experience that students who are much interested in a problem will get meaning out of a selection that bears upon it even though the selection appears too hard to be read by them. A boy who is interested in the construction of a radio, for example, will read books and articles that are intrinsically far more difficult and technical than any of his textbooks. When, on the other hand, the selection has little bearing on the student's interests, the likelihood of an aggressive search for meaning is decreased, the conditions for the effective association with past experiences are lacking, and the student is deprived of a basis for evaluating, selecting, and organizing the ideas that the selection presents. Investigations of adult reading habits lead one to suspect that the great majority of adults would not even attempt, of their own free will, to read selections on some of the topics now generally included in books on the social studies.[45] This apathy may reflect either a lack of pertinence of these topics to the life of the common man or a failure of the school to have made the pertinence apparent. Aiding students to develop worth-while interests in the social studies, therefore, would appear to be one of the most important steps toward increasing the quantity and improving the quality of reading.

RELATION OF EXPERIENCE TO READING

The principles of apperception apply with peculiar force in reading. For the words of the printed page, as has been pointed out, are wholly symbolic. Only in so far as they are related to the experience of the reader can they either convey

[44]Gray and Leary, *What Makes a Book Readable*, Chap. II.
[45]*Ibid.*, pp. 47 ff.; Waples and Tyler, *What People Want to Read About*.

correct ideas or stimulate their construction. Unless so related, even statements of the simplest and most concrete matters are unintelligible. "To him that hath shall be given." For example, the sentence, "He lost his way in a blizzard" must of necessity have limited meaning for one who has spent his whole life in Florida. When the words or statements in the text are familiar to the reader and stand for ideas that he has previously evolved from his experience, the recall of these ideas is relatively easy. Frequently, however, the reader has neither formulated the idea for which the words stand nor experienced the elements out of which it may be built. Sometimes, indeed, he may not have the vaguest ideas of what the words themselves mean. In the social studies, moreover, most of the statements do not express ideas related to experiences that are either concrete or familiar; rather, they deal with generalizations that the average student has not made, and because of the poverty of his experience is unable to make. Such statements cannot be understood, therefore, until students have acquired elsewhere the necessary background that the book fails to give.

No mere hodgepodge of superficial ideas, casually accumulated, can furnish the needed apperceptive background for reading; what is required is a body of clear, accurate, and well-organized ideas. Dewey, the avowed enemy of formalism and pedantry in instruction, is insistent in his emphasis on the need of precision and system in one's concepts.[46] Vagueness and errors in the background pertinent to any selection are certain to be reflected in the meanings that are obtained. The most important difference between the concepts of good and poor readers is that those of good readers are clearer, more ac-

[46]Dewey, John, *How We Think* (new edition). See especially Chaps. IX, X, and XI.

curate, and better organized.[47] This superiority is due largely to the formation of concepts of high quality in the past, and it leads to the building of progressively better concepts in future reading. The importance of depth and system in the apperceptive background deserves special emphasis. Under the theory of apperception, indeed, organization, generalization, and application were the culmination of instruction. All this suggests that the mediocre reading ability displayed in many schools hostile to the thorough learning of systematized bodies of knowledge may be attributable to this very antagonism, which is frequently reflected in intellectual disorder, in habits of shallow thinking, and in a distaste for vigorous effort. Poor reading is an effect as well as a cause of poor learning in the social studies.

These differences in reading ability, as well as differences in intelligence, interest, and background of knowledge, obviously require adjustments in the quantity and nature of the reading assignments. The most important approach to the solution of this problem is through the provision of books that have a range of difficulty commensurate with the distribution of the reading abilities of the students. There should be some that can be read by the poorest readers and others that are a challenge to the best. When this provision is adequately met, pupils tend to find and use the books best suited to their abilities. The best readers select those that enable them to go more deeply and more completely into their problems. The poor readers seek those that give them the satisfaction of attaining at least a small degree of understanding. Serious misconceptions are prevalent, however, as to the types of books that are adapted to poor readers. It is a common prac-

[47]Murphy, Paul G., "The Rôle of the Concept in Reading Ability," University of Iowa *Studies in Psychology*, No. XVII, State University of Iowa, Iowa City, 1933. In *Psychological Monographs* XLIV, No. 3, pp. 21–73, 1933.

tice, for example, to place in their hands books in which the discussions are so brief and so general as to lose all color and vitality. Quite the contrary practice should be followed. The poor reader should have books that are rich in well-selected details, pictures, and illustrative anecdotes, for it is through these more concrete elements that his interest is aroused and his thinking stimulated. Even with these aids, many students can deal effectively with only the simpler problems in the social studies.

THE EFFECT OF A SINGLE READING

A considerable proportion of students, according to investigations of study habits, limit their study largely to a single reading of the texts or references assigned.[48] In many cases this reading is undoubtedly a very casual affair. When the selection that is read contains new concepts, and particularly when these concepts are difficult, it is not to be expected that the student will get an adequate grasp of all of the important ideas. Students at any grade level vary enormously, however, in the amount that they understand or remember as a result of one reading. This is to be expected from the wide differences that have been shown to exist in every factor entering into reading ability.

How much an average student at any grade level obtains from a single reading of a selection is dependent upon many factors, including the complexity and the newness of the concepts presented, the adequacy of the printed account, various aspects of the author's style, the general reading ability of the student, the time allowed for reading, and the purpose for which the reading is done. Scores reported in experiments are influ-

[48]Yoakam, *Reading and Study*, Chap. VIII.

enced by all of these factors, and also by the nature of the test that is used.

Yoakam, as a result of the extensive investigation of the effects of a single reading of factual materials, estimates that, "The net effect of the single reading would seem to be to give power to retain from one-fifth to one-third of the ideas on immediate recall and from approximately one-twelfth to three-twentieths on delayed recall." This statement is based on average results obtained from a variety of selections, ranging from 687 to 1900 words.[49] The small effect of a single reading has been confirmed in many other experiments.[50] When much of the content of a selection is new to the children of any grade, even though it has presumably been written for them, an average score as high as 50 per cent on a single reading is probably rare. This is true even when the pupils are credited with a good deal of information that they possessed before reading. When the effect of previous knowledge has been subtracted from the test score, the increase in new ideas probably does not exceed, on the average, the amount suggested in Yoakam's statement quoted above. In fact, many cases have been reported in which the students, having some previous knowledge, knew less after reading than they did before.

A second reading, moreover, unless guided and motivated by questions or a trial recall, adds little to what is gained from a single reading. Yoakam reports that the average superiority of two readings of the selections used in his experiments, as compared with one, was about 6 per cent when measured by

[49]*Ibid.*, p. 199.

[50]See, for example, Young, *Reading Comprehension and Retention*, pp. 247–49. See also Dietze, Alfred G., and Jones, George Ellis, "Factual Memory of Secondary School Pupils for a Short Article Which They Read a Single Time," *Journal of Educational Psychology* XXII (November–December, 1931), pp. 586–98, 667–76.

immediate recall and 8 per cent when measured by delayed recall.[51] Germane found that summarizing, under the guidance of directive questions, was superior to re-reading.[52] Holmes reports significantly superior results, both on immediate and delayed recall, for reading guided by questions as compared with careful reading and re-reading.[53] All available evidence indicates that mere passive re-reading is an inefficient practice and should be supplanted by critical reflection, guided summarizing, and by the more active and selective reading that is focalized by trial recall.

That the low scores made upon immediate recall after a single reading and after re-reading are not due wholly, or even chiefly, to a failure to remember what was read is indicated by the results of a number of investigations in which students were allowed to answer questions with the printed selections before them, and with instructions to refer to the selections as often as they wished. Dewey, for example, found eighth-grade pupils to be very deficient in their ability to understand typical selections from textbooks commonly used in that grade. The paragraphs that he tested varied in difficulty from a simple treatment of lighting in pioneer times to a rather condensed statement of the weaknesses of the Articles of Confederation. The students were given an opportunity to show their understanding both on written tests and in thirty-minute personal interviews. The written tests, unusually clear and straight-

[51]Yoakam, Gerald A., "The Effects of a Single Reading," University of Iowa *Studies in Education* II, No. 7, 1924, Chap. VII. For a general discussion of the effects of re-reading, see, by the same author, *Reading and Study*, Chap. IX.

[52]Germane, Charles E., "Outlining and Summarizing Compared with Re-Reading as Methods of Studying," *Twentieth Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1921, pp. 108–112.

[53]Holmes, Eleanor, "Reading Guided by Questions Versus Careful Reading and Re-Reading Without Questions," *The School Review* XXXIX (May, 1931), pp. 361–71.

forward, were very searching. They included (1) a true-false test requiring the citation of supporting data, (2) a multiple-choice test, (3) a free-expression inference test requiring the citation of supporting data, (4) a true-false inference test with the citation of supporting data, (5) a map test, and (6) a picture-choice test. Great deficiencies were shown on each form of the test. Moreover, the percentage of consistent responses to the same item on different tests was low, averaging less than 67 per cent even in the case of superior students.[54]

Knight and Franzen investigated the ability of pupils in grades four and five to read selections taken from five textbooks in beginning geography. They report that about five sixths of the material is too hard for the average child in grade four to understand. They estimate also that average sixth-grade pupils are not able to understand more than one half of the matter presented in the various textbooks meant for that grade.[55]

Ayer, in an investigation of the ability of students to read certain paragraphs selected from fifth-grade texts, estimates that sixth-grade ability is required to be able to answer correctly 25 per cent of the questions that she asked and seventh-grade ability to be able to answer correctly 50 per cent of the questions. The students, with the questions before them, were allowed to read the paragraphs as often as they wished. Even after the paragraphs were greatly simplified, it required sixth-grade ability to answer half of the questions.[56] Although the paragraphs that she selected seem more difficult than the average of those found in fifth-grade books, yet the tests, which

[54]Dewey, Joseph C., *Reading Comprehension Difficulties in American History.*

[55]Franzen, R. H., and Knight, F. B., *Textbook Selection.* Warwick & York, Inc., Baltimore, 1922.

[56]Ayer, *Difficulties in Elementary School History.*

were not so searching as those used by Dewey, probably aided the students in making scores that overestimated the amount of knowledge that they really obtained. On a free-expression test the fifth-grade results were as follows:

Correct responses	23 %
Incorrect responses	19.1 %
No responses	37.8 %
Responses not paraphrased [Copied verbatim from text]	20.1 %
Total	100.0 %

It is impossible, of course, to determine the amount of understanding under the last two headings. Students who did not respond at all may have achieved some meaning, and students who merely gave the words of the text without paraphrasing may or may not have understood the significance of the statements they made.

Many additional investigations could be cited to show that the understanding that a student gets from the single reading of a selection, from re-reading, or even from reading under the guidance of questions, is far from satisfactory.[57] The data from all of these investigations support Thorndike's conclusion: "It appears likely, . . . that many children fail in certain features of these subjects [content subjects] not because they have understood and remembered the facts and principles but have been unable to organize and use them; or because they have understood them but have been unable to remember them; but because they never understood them."[58]

Well-formulated questions exert a definitely advantageous

[57]Examples of additional studies are given in the footnotes on pp. 186–192.
[58]Thorndike, *Reading as Reasoning*, p. 331.

influence not only on the first reading of a selection but also upon its subsequent study. The use of such directive and motivating questions has come to be a recognized part of exercises for the improvement of reading ability. The more difficult the selection the more desirable it is to have the reading done under such guidance. Thoughtful questions raised and organized by students and teacher in planning the attack on a new problem undoubtedly have a very favorable effect upon study, as well as upon the subsequent discussion. In fact, highly motivated assignments probably contribute as much to the improvement of reading as any other single exercise. This excellent procedure, however, can be mechanized with the same undesirable results that accompany all formal methods.[59] To be most effective the questions should be limited in number, should be stated from the point of view of the student, if not indeed by him, and should differentiate central aspects of the problem from subordinate matters of detail.

The percentages of correct answers reported in investigations in which typical short-answer tests were used undoubtedly overestimate the amount of understanding that the student really obtains. There are a number of indications of this fact. First, tests in which the student is expected to use ideas obtained from reading or to relate them to other concepts always show lower results than those based on the identification or reproduction of the ideas alone.[60] Second, students often make what is apparently a satisfactory response in an oral report or upon typical multiple-choice, true-false, and completion tests and yet show, in personal interview, very little knowledge of

[59]Wilcox, Myron J., *The Effect of a Corrected Inventory Test.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1932.

[60]Krey, A. C., and Wesley, Edgar B., "Does the New-Type Test Measure Results of Instruction in the Social Studies?" *The Historical Outlook* XXIII (January, 1932), pp. 7–21.

the ideas thus tested. Third, responses made on the same items in different tests are inconsistent.[61]

The effects of reading such selections as are included in typical textbooks may be classified as follows: (1) a relatively small number of ideas that are approximately correct, within the limits of what can reasonably be expected from the meager statements given; (2) a few statements memorized verbatim or in slightly paraphrased form; (3) a seeming absence of any impression whatever; and (4) definitely erroneous ideas. This classification holds, in a general way, whether a selection is read once, re-read, or read as often as desired in answering questions upon it.

Some answers given by students are neither wholly erroneous nor mere verbal statements; they vary from answers that are reasonably satisfactory to those that are decidedly hazy and incomplete. It is difficult to appraise the amount of understanding manifested in verbatim or paraphrased statements; even the latter are often very little more than verbalisms. Failure to respond in any way is indicative in most cases of either complete absence of understanding or of so little understanding as to make the reading fruitless for any practical purposes. Definitely erroneous responses, because their shortcomings are evident, are usually easier to deal with than those that are vague or verbalistic. Nevertheless, they deserve special attention not only because they are frequent and must be corrected in the process of instruction but also because they throw light on the nature of the difficulties that thwart students in their attempts to read with adequate understanding. Some of these

[61]Dewey, Joseph C., *Reading Comprehension Difficulties in American History,* Chap. VIII (this material is found in Chap. VII of the published abstract of Dewey's thesis); Stolte, *Ability of Fourth Grade Children;* Herbers, Sister M. Benigna, *Comprehension Difficulties in a Third Grade Reader.* Unpublished master's thesis, State University of Iowa, Iowa City, 1935; Rhynsburger, *Comprehension in Silent Reading.*

difficulties, it will be recalled, are attributable to the newness or complexity of the ideas; some to the form in which these ideas are presented in books; and some to limitations in the abilities of the student himself.[62] The following examples, selected from a large number of investigations of comprehension in reading, illustrate the errors into which students fall because of one or more of these three sources of difficulty.

EXAMPLES OF INADEQUATE AND ERRONEOUS CONCEPTS

The erroneous ideas that students get through reading are strikingly illustrated in the results of investigations in which understanding has been probed by the use of objects, pictures, and searching questions in personal interviews, as well as by ingenious pencil-and-paper tests. One of the most extensive of these investigations is that by Dewey, to which reference has already been made. Among the selections that he used was the following: "Since there were no matches in 1763, the most primitive way of starting a fire had to be used. A piece of very hard stone, called flint, was struck against a bit of steel. This produced a spark, which was caught in tinder or in soft, dry cloth." In the clause, "the most primitive way of starting a fire had to be used," *primitive* meant to various pupils: *the only way, the easiest way, the most important way, the best way they could think of, the most used method, the usual way, the most dangerous way,* and *a new way.*

In a picture test representing this and three other primitive methods of fire making, many students could not identify the picture representing the method to which the selection refers. When confronted, in personal interview, with a variety of objects, among which were those mentioned in the selection,

[62]See pp. 156–160 and pp. 169–179.

students were found who could not select the necessary implements for making a fire; and when flint, steel, and tinder were placed before them, could not show how to strike the steel against the flint to make a spark or how to ignite the tinder. Yet some of these students did well on true-false and multiple-choice tests on the selection.[63]

Even in the case of simple stories having geographical and historical content, the meanings that students get from reading show a very startling deviation from the sense that the authors intended to convey. Herbers, using both controlled and free-expression tests, supplemented by individual interviews, made an intensive study of the ideas that thirty third-grade children obtained from reading a story about the adventures of a Lapland family in search for new pastures for their reindeer. The students had great difficulty in getting a sufficient appreciation of the details of the story to make it intelligible. For example, on the free-expression test only four of the thirty children gave a reasonably correct explanation of what a pasture in Lapland is like. Most of the students described it in terms of a plot of ground with a fence around it. In answer to the question, "What is a rein?" (referred to in the story as a part of the harness), such erroneous answers as the following were given: *When some water comes down. A rein is a sled. A long belt with a harness on. A bell that hangs on the reindeer's strap. A rein is some horns.*[64]

The selections used by Dewey and Herbers deal with concepts that are relatively simple and concrete. It is to be expected that more serious shortcomings will be manifested when

[63]See pp. 182–183. The illustrations here described are taken from Dewey, Joseph C., *Reading Comprehension Difficulties in American History*, Chaps. V and VI. This material is not given in the published abstract of Dewey's thesis.

[64]Herbers, *Comprehension Difficulties.*

the concepts are more subtle and complicated. Ayer, as already noted, found that children got nearly as many incorrect as correct ideas from reading paragraphs selected from textbooks in common use. Figurative language, as in the following paragraph, was especially troublesome.

"Daniel Webster said of Hamilton, 'He smote the rock of national resources, and abundant streams of revenue burst forth. He touched the dead corpse of public credit and it sprang upon its feet.' "

Among the responses to free-expression tests on this selection were these:

Daniel Webster said that Hamilton a plenty of Government has burst forward. He put his hand on the dead people and free to everybody and it grew to its feet.

When he touched the dead they would spring to their feet.

Daniel Webster said of Hamilton, "He stopped mother nature and fake rivers came instead. He stopped public credit and it was returned to him."

Hamilton tried to break up the nation.[65]

Such "howlers" are not to be attributed solely to figurative language, however. If the reader is not already familiar with the early financial history of the United States, a single short paragraph, no matter how simply written, cannot possibly give him an adequate idea of the effects of Hamilton's policy.

Hundreds of examples of misconceptions could be cited from investigations of reading in social studies, but two additional types must here suffice—those pertaining to quantity and those pertaining to latitude and longitude. Very few of the important concepts in geography and the social studies can be understood unless the student is able to deal intelligently with quantitative aspects. Yet students are seriously deficient

[65]Ayer, *Difficulties in Elementary School History*, pp. 36–37.

in this ability. Especial difficulty is found when amounts are stated in such relative and indefinite terms as *large, far,* and *many.* Among the sentences read by seventh-grade students in an experiment by Short was this one: "There were few newspapers in these early days of which we have been reading (about 1775); mail was slow and very irregular; and railroads and telegrams undreamed of." The meanings attached to the word *few* ranged from one to six hundred. Among the answers to the question, "How long do you think it took to get mail from Boston to New York?" were the following: *Two days, one week, two weeks, two months, train didn't go at a high rate of speed.* The question, "What do you understand is meant by the statement that the mail was 'very irregular'?" elicited: *It didn't always get there. Trains would get broken down. It does not come all the time. It went in a straight line. Half the time the mail would come about a week slow. The mail zigzagged all over. No regular route. When it snowed it was stopped until the snow melted.*[66] Bedwell reports that "a great deal," in the sentence, "we grow a great deal of flax in our country," meant to various students, *10 bushels, 10,000 bushels, 125,000 bushels,* and *70,000,000 bushels.*[67] Included in an investigation by Stolte is the statement, "Most of Greenland is covered with a thick cap of ice and snow which never melts away." This thickness was judged by various students to be: *one inch, three feet, fifty feet, one hundred feet, one-half mile, three thousand feet,* and *thousands and thousands of feet.*[68] Ryan found that "many people," referring to the number en-

[66]Short, Harry C., *Concepts of Certain Quantitative Terms Used in Seventh Grade Social Science Materials.* Unpublished master's thesis, State University of Iowa, Iowa City, 1933.

[67]Bedwell, Margaret, *Comprehension of Concepts of Quantity in Third Grade Social Studies Reading Material.* Unpublished master's thesis, State University of Iowa, Iowa City, 1932.

[68]Stolte, *Ability of Fourth Grade Children.*

gaged in the fishing industry in Alaska, meant *50, 100, 1000, 10,000, one half of all the people,* and *as many as Chicago has.*[69]

Students are commonly deficient in their understanding of large numbers and unable to interpret units of measurement in terms of their personal experience. Ryan found that "ten square miles" meant to various pupils *about the size of Chicago, about the size of the State of Iowa, about the size of Washington Park, as large as ten acres, about one lot, here to Key West in a straight line.*[70]

The amounts expressed by such words as *thick, many, few, long,* and *far,* are always relative to the matter with which they are associated. Numerous investigations show that many students cannot approximate the author's meaning closely enough to make an intelligent judgment of quantity, whether given in indefinite or in specific terms. Specific statements have the advantage, however, of giving the student something to work on, whereas the more indefinite terms, such as *few* and *many,* afford little clue as to the amounts that the author has in mind.

Misconceptions in reading selections that require an accurate background of geographical knowledge are very common.[71] For example, students from elementary school to college have been shown to have little understanding of statements in which reference is made to latitude and longitude and to be unable to secure the requisite information from

[69]Ryan, Grace M., *A Study of the Comprehension of Quantitative Terms in Geography at the Fifth Grade Level.* Unpublished master's thesis, State University of Iowa, Iowa City, 1935.

[70]*Ibid.*

[71]Greene, Harry A., "Measuring Comprehension of Content Material," *Twentieth Yearbook,* Part II, National Society for the Study of Education, Chap. VIII; King, Mary Helen, *Pupil Comprehension of Place Location Data in Junior High School American History.* Unpublished master's thesis, State University of Iowa, Iowa City, 1934.

For examples of boners, see pp. 143–144.

maps.[72] How seriously these deficiencies may influence the ideas obtained from reading is shown in the investigation by Short, involving all of the twenty-seven pupils in one seventh-grade class. After reading the sentence, "The Missouri Compromise of 1820 established the parallel of thirty-six thirty between the slave and free territory," the students were asked, "What is meant by the parallel of thirty-six thirty?" Answers were written and were followed by a personal interview in which additional opportunity was given each student to explain his ideas more fully. The variant answers are given below. The numbers to the right of the answers show the rank of the pupils in reading on the Stanford Achievement Test.

That the slave and free states were evenly populated and were the same in strength	1
Boundary line between slave and free states was 36° north latitude and 30° north latitude	2 and 17
Latitude	3 and 7
The latitude and place	4
The two lines of the year thirty-six	5
The line drawn between the slave and free states	6
Well, they kept it even,—the same amount of territory for slave and free	8
Degrees	9
It means a certain place on the globe which is 36° west longitude, 30° north latitude	10

[72]Lord, Francis E., *The Ability to Make Geographical Uses of the Ideas of Longitude and Latitude.* Master's thesis, University of Chicago, Chicago, 1928; Lindquist, E. F., *Summary Report of Results of the Iowa Every-Pupil Testing Program for Grades 6, 7, and 8, 1935.* State University of Iowa, Iowa City; Howe, George F., "A Study of the Ability of Elementary-School Pupils to Read Maps," *Thirty-second Yearbook,* National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, pp. 486–492.

Means half and half between slave and free territory	11
The Year of 1836	12
Around 36 and 30	13
The year 336	14
The slave and free territories were equal	15
I think the parallel of thirty-six thirty means half and half	16
It was on the 36th year and on the 30th day	18
Even numbers	19
Even	20
I don't know (in conference the pupil said something about lines on a map)	21
They were half and half	22
The north had so much and so did the south	23
That's when they—Mr. Lincoln and Congress—made the parallel line on the map—all of them sat around a big table and Mr. Lincoln drew the line and read the Emancipation Proclamation	24
About this many slaves in all north, south, and west and east	25
It means they established—put in homes—that many people	26
I haven't the slightest idea	27[73]

Haziness and misconceptions regarding latitude and longitude are not confined to the elementary school. Aitchison reports that students in college as well as those in the elementary school are sadly deficient even in their concepts of zones.[74] The knowledge of many other aspects of geography

[73]Data reclassified from Short, *Concepts of Certain Quantitative Terms.*

[74]Aitchison, Alison E., *Thirty-second Yearbook,* National Society for the Study of Education, pp. 483–485.

is equally hazy. That the serious shortcomings revealed by investigations should persist into college suggests that much of the teaching in both geography and history is exceedingly superficial.

Even when selections deal with matters closely related to the student's experience, understanding is by no means easy to achieve. Thorndike, for example, tested the ability of sixth-grade students to read the following paragraph:

"In Franklin, attendance upon school is required of every child between the ages of seven and fourteen on every day when school is in session unless the child is so ill as to be unable to go to school, or some person in his house is ill with a contagious disease, or the roads are impassable."

Students were instructed to read the selection as often as necessary in answering questions upon it. Yet, in reply to the question, "What is the general topic of the paragraph," 79 per cent gave unsatisfactory responses, including such statements as: *It was a great inventor. School days of Franklin. An excuse.* A large percentage of incorrect answers were given to detailed questions on the paragraph. In commenting on the results of this experiment, Thorndike says:

"It appears likely also that a pupil may read fluently and feel that the series of words are arousing appropriate thoughts without really understanding the paragraph. Many of the children who made notable mistakes would probably have said that they understood the paragraph and, upon reading the questions on it, would have said that they understood them. In such cases the reader finds satisfying solutions of those problems which he does raise and so feels mentally adequate; but he raises only a few of the problems which should be raised and makes only a few of the judgments which he should make."

He concludes:

"In educational theory, then, we should not consider the reading of a text-book or reference as a mechanical, passive, undiscriminating task, on a totally different level from the task of evaluating or using what is read. While the work of judging and applying doubtless demands a more elaborate and inventive organization and control of mental connections, the demands of mere reading are also for the active selection which is typical of thought. It is not a small or unworthy task to learn 'what the book says.' "[75]

Such misconceptions as have been cited above should occasion no surprise. They are precisely what is to be expected from the attempt to construct, from words alone, ideas that are new as well as difficult. Under these circumstances the most gifted students, with the richest background of experience, succeed only indifferently, and students of low intelligence, limited experience, and poor reading ability face a task that is quite impossible. It is not surprising, therefore, that many readers either take refuge in verbal memorizing or make constructs that are seriously in error. Erroneous ideas, it must be kept in mind, are built up in the same way as are correct ideas; that is, out of the reader's experience and by the exercise of constructive imagination, and are just as satisfying as right ideas, so long as he is unaware of their deficiencies. As Postgate says, in his preface to Bréal's *Semantics,* "There is no gulf fixed between mythological concepts and other concepts. My conception of any serpent which I have never seen but believe to exist, does not differ fundamentally from my conception of the sea-serpent in whose existence I disbelieve completely."[76] The student who has read and believes the dubious episode

[75]Thorndike, *Reading as Reasoning,* p. 332.

[76]Postgate, J. P., in the preface to Bréal, Michel, *Semantics.* Henry Holt & Co., New York, 1900, p. 332.

of John Smith and Pocahontas has a concept that is no different in subjective quality from his concept of any well-authenticated episode in John Smith's life.

A recognition of this double relationship of a word, that is, to its context and to the reader's experience and set of mind, is of basic importance. Even when words or sentences embody the author's thought reasonably well, they are significant to the reader only in so far as they are related to his purposes and experience. Words as symbols have no such definite uses as do the symbols of mathematics. Most of them, as has been pointed out, have many meanings; the simple word *run* has over a hundred. In reading, the meaning to be attached to any word is determined by its sentence context, yet the idea expressed in the sentence is in itself in process of formation. The student may not have any meaning of a word at all, he may have a vague or distorted idea of it, he may know some other meaning but not the one required, or knowing the correct meaning, he may fail to use it in reading the sentence.

In familiar circumstances even the young child selects the right meaning of a word and fits it easily into context. One three-year-old girl was found to use *get* in thirty-five different meanings, among which were: *Get up,* in playing horse. *It is time to get up,* meaning *get out of bed. You get up first,* referring to climbing a ladder. *If you don't get up, I'll bite you,* addressed to a playmate who was sitting on her. In each case she knew precisely what she was saying, and those to whom she addressed her remarks knew precisely what she meant.[77] The situation is very different in most of the reading done in the social studies. The ideas are strange, and only to a limited extent can the context assure that the meanings appropriate to it will be selected.

[77]Horn, Madeline, *The Meaning Varieties of Words in the Vocabulary of a Girl Three Years Old.* Unpublished study.

The persistent emphasis, in this and in other chapters, upon the accuracy and definiteness of ideas may seem to some readers to be too strong, particularly when the ideas deal with matters of detail. What difference does it make, it may be asked, whether the student obtains an accurate knowledge as to the number of people in Alaska who engage in fishing or the detailed process of making fire by flint and steel? There are several answers to this question. In the first place, if details are not significantly related to some important large idea, they should be omitted from the texts and reference books that the student is required to study. It is true that there are many details in school books that are either irrelevant or of low value in relation to the problems discussed; yet, as has been pointed out, well-chosen details are indispensable, for it is only through them that large concepts themselves are intelligible. In the second place, teachers cannot afford to encourage students to be careless or supercilious about matters of fact. In the third place, admitting the desirability, or even the necessity, of reading with a purpose and of selecting details pertaining to that purpose, the student is unable to decide upon the pertinence or lack of pertinence of matters of detail without a much higher degree of understanding than is now, on the average, obtained. Nor is it matters of detail that are most erroneously conceived; the larger the idea, the more marked are the misconceptions.

Inadequate understanding is not limited to the reading of words; it is found also in reading other symbols, such as graphs and maps. For example, on the 1935 edition of the *Iowa Every-Pupil Tests of Basic Skills,* administered to approximately eight thousand pupils in each of grades six, seven, and eight, the average scores in each grade were lamentably low. "Howlers" were frequent. Thus, in a test on a map of

Rumania, the following answers were given: *A line through the middle of the map is the equator. Upstream means north or toward the top of the map. Altitude means how far north.* Marked deficiencies were shown also in the ability to locate information. One part of the test required judgments as to the type of reference book to which one should turn to answer each of a number of questions, such as the following: "What body of land is closest to the North Pole?" "How do you pronounce 'affiliate'?" "How are diamonds mined?" Six questions unmistakably required the use of an atlas, yet only 54 per cent of the children in grade six, 56 per cent in grade seven, and 57 per cent in grade eight chose the atlas as the probable source of information. The judgments on the use of the encyclopedia were, on the average, no better.

Another section of the test included a typical index page, such as might appear in a geography. The pupils were required to identify, in this index, the pages pertaining to such questions as: "In what parts of Canada is irrigation practiced?" "Beginning on what page can you find the longest passage about corn?" In the case of the first of these questions the percentages of correct answers for children of grades six, seven, and eight were, respectively, 48, 49, and 53, and in the case of the last, 15, 21, and 31.[78] Yet both the questions and the form of the index were relatively simple. Both the low scores on these tests and the lack of progress from grade six to eight are very disturbing, for they reflect a failure to habituate students to the use of essential reference material.

While "howlers," verbalisms, and other deficiencies in reading cannot be entirely prevented, their number can be ma-

[78] *Iowa Every-Pupil Tests of Basic Skills.* State University of Iowa, Iowa City, 1935. For a brief summary of the results on one part of this test, see Anderson, Howard R., "Testing Basic Skills in the Social Studies," *The Elementary School Journal* XXXVI (February, 1936), pp. 424–435.

terially reduced: (*a*) by a clear recognition of the problem by both teacher and pupils; (*b*) by providing easier and more detailed reading materials; (*c*) by utilizing other sources of experience, such as pictures; (*d*) by the establishment of purposes that provide the most favorable condition for the utilization of experience in interpreting what is read; (*e*) by leading the student to test the adequacy of his ideas by critical reflection; (*f*) by encouraging him to inquire into the significance and import of what he reads; (*g*) by requiring him to use his ideas for some important purpose; and (*h*) by leading him to look forward to the recitation as an opportunity to correct, clarify, and enrich the ideas that he has attempted to form through independent study.

TIME REQUIRED FOR READING

All that has been said of the nature of reading points to the fact that it takes time as well as thoughtful and persistent effort to achieve adequate ideas. An emphasis on speed of reading *per se* is therefore ill-advised. Even the attempt to follow continuously the presentation of the author's thought is an active rather than a passive process and cannot be hurried. There should be time for clarifying, perfecting, and organizing one's ideas, as well as for making sure that what has been read can be recalled. "To read without reflection," Burke is quoted as saying, "is like eating without digesting." As a matter of fact, speed of reading has no practical significance except in terms of the expeditious accomplishment of the purposes for which reading is done. The habit of reading so rapidly that no time is allowed for critical thought, for assimilation, and for using the ideas makes accurate comprehension impossible and is a detriment rather than a benefit. One is reminded of a comment made by a member of the

administrative staff in an eastern city whose pupils, in a survey of instruction in arithmetic, were found to be very high in speed of computation but very low in accuracy. He said that he understood this to mean that the pupils of that city took less time to make a mistake than did the pupils of other communities. There is undoubtedly more need at the present time for emphasizing the importance of obtaining clear, accurate, and well-organized ideas than there is for stressing speed.

The emphasis upon speed of reading is not so great as it was a few years ago when it was not uncommon to set up, in terms of words per minute, standards for speed of reading that were often independent of the results obtained. It was discovered, however, that the speed with which any given individual reads varies with the purpose of the reading and with the nature of the material. While there is a positive correlation between the speed with which a selection is read by various students and the amount understood, differences in the speed in such instances are more an effect of the ease of comprehension than a cause of it. Students in schools in which speed is subordinated to other more important purposes make, on tests, speed scores as high as or higher than those reported in experiments, such as that of O'Brien,[79] in which an increase in speed was the chief objective. They make, moreover, much higher scores on comprehension.

THE IMPROVEMENT IN READING IN THE SOCIAL STUDIES

Since students who cannot read well are seriously hampered in their efforts to understand the text and references in the social studies, it is clear that the removal of this disability is a matter of primary importance. Crucial as it is, however, it can

[79]O'Brien, John A., *Silent Reading*. The Macmillan Company, New York, 1921.

be considered here only in its broad outlines. An entire volume, and a very large one, would be required for an adequate discussion of the various problems involved in the improvement of reading ability. There are many excellent books to which the teacher may turn for guidance.[80] Extensive annotated bibliographies of modern books and articles are available, also, both for reading[81] and for study.[82] The references cited in these bibliographies contain descriptions of methods for the improvement of reading ability. A number of investigators have shown that at every level from elementary school to college it is possible to increase greatly the general reading ability of students and that this improvement is reflected in higher scholarship. The evidence indicates that the more closely exercises in reading are integrated with the fields in which the reading is to be used, the more beneficial the results will be. There is in some quarters, however, an unfortunate tendency to view remedial work too narrowly, emphasizing peripheral matters, such as eye movements,[83] to the neglect of central thought processes and motivation. The

[80]See, for example, Yoakam, *Reading and Study;* Gates, Arthur I., *The Improvement of Reading* (revised edition). The Macmillan Company, New York, 1935; McKee, Paul, *Reading and Literature in the Elementary School.* Houghton Mifflin Co., Boston, 1934.

[81]Gray, *Summary of Investigations Relating to Reading.* Supplementary summaries by the same author have appeared regularly in *The Elementary School Journal.* See also *Review of Educational Research* V, No. 1 (February, 1935), Chap. VII.

[82]For the bibliographies on study, see Woodring, Maxie N., and Flemming, Cecile W., "Problems in Directing Study of High School Pupils," *Teachers College Record* XXIX (January, 1928), pp. 318–333, and by the same authors, "A Partial Bibliography on Study," *Teachers College Record* XXIX (February, 1928), pp. 417–444; Flemming, Cecile W., and Woodring, Maxie N., "A Survey of Investigations on Study," *Teachers College Record* XXIX (March and April, 1928), pp. 527–549 and 605–617; Woodring, Maxie N., and Flemming, Cecile W., "A Third Bibliography on Study," *Teachers College Record* XXXVI (February, 1935), pp. 397–408.

[83]For a discussion of this problem and a bibliography, see Anderson, Irving H., *Studies in the Eye-Movements of Good and Poor Readers.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1935.

classroom teacher needs to be concerned with movements of the eyes little more than with the movement of the bones of the inner ear. In the case of the great majority of students, even those in the lower 10 per cent of reading ability, attention should center rather upon essential processes involved in the study of actual lessons. Both the interest and proficiency of poor readers are increased by the extensive reading of easy selections. Nevertheless, some students have serious specialized difficulties that must receive technical clinical treatment.[84]

The improvement of reading is a responsibility that must be accepted by the teacher of social studies and in the social studies class, even though another teacher has been designated the teacher of reading or another period has been called the reading period. Every aspect of reading essential to the intelligent attack upon problems in the social studies is best developed in relationship to those problems. The stimulation of interests—so basically important in reading—the raising of problems, the suggestion of references, the guidance of the student's efforts to understand what he reads and to appraise and organize the data that he secures—all of these demand a teacher who has a scholarly grasp both of the methods of thinking and of the subject matter in these fields.

As a matter of fact, the steps in instruction—the assignment of lessons, the direction of study, and the conduct of the class discussion—motivate, practice, and test every important type of reading. There is perhaps no other single aspect of instruction

[84]Gates, *Improvement of Reading*, pp. 179–402; Gates, Arthur I., "Diagnosis and Treatment of Extreme Cases of Reading Disability," *Thirty-sixth Yearbook*, Part I, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1937, Chap. XIII; Monroe, Marion, "Diagnosis and Treatment of Reading Disabilities," *Thirty-fourth Yearbook*, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1935, Chap. XII; Betts, Emmett Albert, *The Prevention and Correction of Reading Difficulties*. Row, Peterson and Company, Evanston, Illinois, 1936.

that makes a greater contribution to the improvement of reading than does a well-planned assignment.[85] It develops motives and right attitudes, aids the pupil to set up specific purposes, and leads him to discover references suited to his level of reading ability. Each of these factors has been shown to exert a very favorable influence upon reading. The study period is chiefly a reading period and affords unusual opportunities for remedial work. For example, the extensive reading of easy materials, under the guidance of specific questions, is one of the recognized methods of improving the reading ability. The recitation or class discussion, properly directed, will do much in and of itself to develop reading ability, since it enables the student to correct, clarify, and organize the ideas he has obtained from reading. In fact, the skillfully conducted recitation may include many procedures that are actually reading exercises, such as requiring the student who has made an inaccurate statement to read aloud the passage from which he obtained his data, and leading him to discover the source of his difficulty. When the students' efforts are frustrated by poor reading ability, the teacher cannot use part of the class period in social studies more profitably than in the removal of these disabilities. Both evidence and common sense indicate that time thus spent, far from detracting from scholarship, increases accomplishment in the subject itself. This is to be expected, for as the student grows in his ability to read, his study becomes more effective.

So intimately is reading bound up with learning in the social studies that inferior reading ability on the part of students who have completed courses in these fields is clear evidence of the slovenliness of the teaching of the subjects themselves. For the efficient teaching of the social studies requires, and to a

[85]Yoakam, Gerald A., *The Improvement of the Assignment*. The Macmillan Company, New York, 1932.

considerable extent will develop, all of the four main types of abilities indispensable to the efficient use of references: (1) the location of information; (2) the understanding, appraisal, and selection of data; (3) the organization of what is read, especially when several sources are used; and (4) the provision for future use.

This does not mean that there is not a place for occasional periods in which attention is focused primarily upon skills and abilities in reading that are universally needed in the use of books. That one cannot depend upon the ordinary teaching of social studies to develop the reading abilities essential to accomplishment in these subjects is indicated by the fact that students who have completed both the elementary and secondary courses in these fields have, on the average, a rather low level of reading ability. Even teachers who are otherwise superior often fail to give as much attention as they should to this important aspect of their work. Special periods are therefore useful not only to serve as a reminder of the importance of such skills but also to practice them intensively. These periods may be set aside out of the time assigned to the social studies or they may have a separate place in the program. In either case, the exercises should be closely integrated with the work in the social studies; that is, they should be motivated by needs made apparent in the social studies class, and such abilities as are developed should be immediately reapplied. When related in this manner and when properly conducted, these special periods bring about a steady improvement of all of the reading involved in learning the social studies.

Many schools, particularly those with large enrollments, sometimes assign a special teacher, often from the English department, to teach remedial reading. This teacher should work in close co-operation with the teachers of the subjects

to which the reading is applied. For reasons already noted, however, such special teachers work at a disadvantage as compared with the teacher of the social studies. There is a real danger, moreover, that the teacher of social studies, knowing that these remedial efforts are being made by some one else, will relax his efforts. To the extent that this occurs, the special teacher is more of a liability than an asset, for the chief responsibility for the development of skill and intelligence in the use of references in the social studies must always rest on the shoulders of the teachers in these fields.

The early discovery of reading disabilities and a description of individual differences are so important that it is desirable to give a reading test at the beginning of each year. The more descriptive the test is of all the important skills needed in the use of books, the better. In addition, teachers should be constantly alert to detect difficulties that have their source in carelessness or incapacity in reading. Neither teachers nor pupils, however, should take a fatalistic attitude regarding reading; both should realize that skillful reading can be developed, and their attention should be centered upon improvement.

Chapter VI

THE TEXTBOOK AND COLLATERAL READING

The limitations of language in depicting reality, as well as the difficulties manifested by students in understanding either what is read or what is heard, have been pointed out in the two preceding chapters. Yet in spite of these limitations and difficulties, language will doubtless continue to be, as in the past, the chief means through which the student obtains knowledge of the conditions, developments, and problems of society. This conclusion seems inevitable not alone from a consideration of the nature of instruction in schools; it is dictated as well by the fact that language is the instrument of thought and the further fact that social knowledge is preserved in books and in the minds of men.

Both theory and practice in America show a marked predilection for instruction through books rather than through the spoken word. Oral teaching is more prominent in Europe. While the more thorough training of European teachers, on the average, makes oral instruction more generally practicable for them, the American preference for the printed page is chiefly accounted for by the conviction that the pupil should develop the ability to study independently. Yet oral instruction, either as a supplement to books or as an occasional substitute for them, is common in American schools in the form of questioning, of comments, of elucidations of the text, and of more systematic and prolonged talks that may appropriately be called lectures. Instruction through books utilizes two types of materials: the text and collateral readings. Perhaps the

present vogue of workbooks should be mentioned also. It is the purpose of this chapter to discuss the use of textbooks and collateral readings. Oral instruction will be treated in a later chapter.

THE PREVALENCE OF THE TEXTBOOK METHOD

The textbook has been a dominant factor in the schools of the United States for more than a hundred years.[1] A survey of the pedagogical writings throughout this period will reveal defenses of the textbook, as well as unfavorable criticisms, and will furnish unmistakable evidence of its pre-eminence in instruction.[2] The widespread use of the textbook has, in fact, been so generally recognized that European writers sometimes label it the American method as contrasted with the oral teaching that receives larger emphasis in their own schools.[3]

[1]Kepner, Tyler, "The Influence of Textbooks upon Method," *Fifth Yearbook*, National Council for the Social Studies. McKinley Publishing Company, Philadelphia, 1935, pp. 143–172.

[2]Typical statements are to be found in Russell, William F., "Early Methods in Teaching History in Secondary Schools," *The History Teacher's Magazine* VI (January, 1915), pp. 14–19; Page, David P., *Theory and Practice of Teaching*. Hall and Dickson, Syracuse, 1847, pp. 106–109; Hall, G. Stanley (ed.), *Methods of Teaching History*. D. C. Heath & Co., Boston, 1883, p. ix.; Bagley, William C., "The Textbook and Methods of Teaching," *Thirtieth Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1931, pp. 8–10.

[3]Johnson, Henry, *Teaching of History in Elementary and Secondary Schools*. The Macmillan Company, New York, 1928, p. 287; Learned, William S., "The Quality of the Educational Process in the United States and in Europe," The Carnegie Foundation for the Advancement of Teaching, Bulletin No. 20, 1927, pp. 13–14. The degree to which textbooks are recommended and used in European schools seems to have been underestimated; there is an increasing emphasis abroad on both texts and collateral readings. See: Jaeger, Oskar, *The Teaching of History* (translated from the German by H. J. Chaytor). A. C. McClurg and Co., Chicago, 1915; "Das Buch im Unterricht," *Die Deutsche Schule* XXXV (1931), p. 233; Sussams, T. W., "Choosing and Using a History Textbook," *The Journal of Education* (London), LXVI (December, 1934), pp. 747–49; Happold, F. Crossfield, *The Approach to History*. Christophers, London, 1928, Chap. IV; Drummond, H. Ann. *History in School: A Study of Some of Its Problems*. George G. Harrap & Company, Ltd., London, 1929, Chap. VII; Shropshire, Olive E., *The Teaching of History in English Schools*. Contributions to Education, No. 671, Teachers College, Columbia University, New York, 1936.

The traditional importance attached to the textbook in this country may be explained in part by the educational conditions of earlier periods. In the great majority of schools, the teachers were poorly trained, the reference equipment was meager or non-existent, and formal or memoriter conceptions of education prevailed. In many communities a student was fortunate to have a textbook.

Various national committees have criticized the textbook and the methods of teaching that accompany it, but their reports always end with the admission that the textbook is essential under our conditions. The Committee of Ten, which, in 1892, condemned "the dry and lifeless system of instruction by text-book," concluded, nevertheless, "that text-books must continue to be used, but that they should be carefully selected, and that the pupil should have the constant use of at least two different books; that the recitations upon them should not consist of an historical catechism, but should be made up of suggestive questions requiring a comparison and combination of different parts of the pupil's material. . . ."[4]

Subsequent committees, while stressing increasingly the need of collateral reading and other aids to learning, have advised the retention of the textbook as an essential part of instructional equipment. The report of the Committee of Seven recommends the use of the text in conjunction with other materials: "Without the use of a text it is difficult to hold the pupils to a definite line of work: there is danger of incoherence and confusion. While, therefore, we strongly advise the use of material outside of the text, we feel that the use of the topical method alone will in the great majority of instances result in the pupils' having unconnected information.

[4] *Report of the Committee of Ten on Secondary School Studies.* Published for the National Education Association by the American Book Company, New York, 1894, pp. 167, 192.

They will lose sight of the main current; and it is the current and not the eddies which they should watch."[5] Edmonson, chairman of the committee which, in 1931, prepared a report on "The Textbook in American Education," concludes, "In view, then, of the importance of the textbook in our scheme of education, it is apparent that one of the most effective ways for improving the content and method of instruction is to place better textbooks in the hands of teachers and pupils."[6]

In spite of all the criticism that has been directed against textbooks, the great majority of teachers continue to use them either alone or with varying amounts of collateral readings. The evidence for this conclusion is convincing. A large number of investigations of current teaching practice have shown that some form of the question-and-answer recitation, based largely on the textbook, is still *a* dominant, if not *the* dominant, factor in teaching in American schools.[7] Kimmel, after a recent extensive survey of the teaching of social studies in secondary schools, concludes that the textbook is "still the most potent factor in the teaching process in the social studies among the rank and file of teachers. There are, however, an increasing number of school systems, as indicated by the available courses of study, in which the textbook is regarded as an introductory manual to be used with classroom libraries and other equipment."[8]

Regardless of the merits or demerits of common practice, one

[5]"The Study of History in Schools," *Report to the American Historical Association by the Committee of Seven*, Andrew C. McLaughlin, chairman. The Macmillan Company, New York, 1899, p. 91.

[6]Edmonson, J. B., in the *Thirtieth Yearbook*, Part II, National Society for the Study of Education, p. 2.

[7]Backlund, Elliot, *An Analysis of Classroom Activities in the Teaching of American History in Chicago High Schools.* Master's thesis, Northwestern University, Evanston, 1931; Bagley, W. C., in the *Thirtieth Yearbook*, Part II, Chap. II.

[8]Kimmel, W. G., from an unpublished manuscript.

needs to be romantically optimistic to expect that the use of textbooks will vanish in this generation. A statement by Tryon, made in 1921, holds good today: "We are a textbook-using people, and there are no indications that we shall change our system in the near future. . . ."[9] The absence or meagerness of library equipment and the inferior training of the poorer half of teachers in the schools of the country indicate that the text must be the basis of instruction until better teachers are secured and more adequate references provided. Nor is the use of the textbook limited to schools that are inferior in their teaching staff and library facilities. Investigations of the methods used by gifted teachers of social studies show that a high type of discussion or of question-and-answer recitation, based in some degree upon textbooks, plays a leading rôle in the practice of most of them.

THE LIMITATIONS OF TEXTS

The value of a textbook depends upon its character, which varies both in type and in quality. Johnson classifies history textbooks into three groups according to their relative brevity or fullness: (1) a bare skeleton of facts, "sometimes little more than an outline or syllabus" (called in France, *précis*); (2) a fuller treatment (*manuel*), which intentionally leaves room for further development; and (3) "books that aim to be self-sufficient" (*cours*).[10] Most of the textbooks in the social studies have been of the *manuel* type, which, for purposes of instruction, is probably inferior both to the outline and the expanded treatment. Moreover, a single brief book may constitute almost the sole basis for the work of one year and sometimes for that of two years. The present tendency, however, is clearly

[9]Tryon, Rolla Milton, *The Teaching of History in Junior and Senior High Schools.* Ginn and Company, Boston, 1921, p. 58.
[10]Johnson, *Teaching of History,* Chap. XI.

in the direction of the expanded text. The arrangement of the largest books and the recommended reading lists included in them indicate, however, that the authors assume the necessity of collateral readings.

If adequate reference equipment were available, it is conceivable that the best form of text would be one much smaller than any now in vogue, the function of which would be to raise problems and to afford an outline of the course of study. The progress that has been made in the last forty years in securing adequate library facilities is not, however, very encouraging. It seems likely that the chief dependence, especially in schools with very limited financial support, will continue for some time to be upon the textbook, which should therefore be as self-sufficing as it can be made. If the text is to be the chief source of knowledge, the treatment of the various topics must be expanded to include a greater number of essential details and various types of illustrative aids. This can be accomplished by decreasing the number of different topics, by increasing the number of pages, or by both methods. There is undoubtedly a limit to the size beyond which a book seems formidable to the reader, but there is no reason why a year's course could not be presented in a series of several volumes. Indeed, one series now in wide use provides two books to the year, each more ample than texts of the past.

Since the use of textbooks is so widespread, it is important to understand what these books can and cannot do.[11] From the time of the *Report of the Committee of Ten,* and even earlier, critics have charged that in practice the use of the

[11]For a discussion of the strengths and weaknesses of textbooks, see Johnson, *Teaching of History,* Chap. XI; Tryon, *Teaching of History,* Chap. III; Wilson, Ella M., "Difficulties in Using Geography Texts," *Thirty-second Yearbook,* National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, pp. 475–479.

text usually leads to no better result than its unthinking memorization. Whether or not the effect of the text is thus limited depends upon how it is used, and especially upon the degree of its elaboration, either by the teacher's oral comments, by collateral readings, or by other instructional agencies. Nevertheless there are several deficiencies in the textbooks now in common use:

1. As shown in the preceding chapters, textbooks, in general, are inadequately comprehended by the average student in the grades for which they are intended.[12] This is due in part to the poor general reading ability of students and in part to limitations in the texts themselves, including the difficulty of the concepts, the excessive number of different topics, and the brevity and abstractness of the treatment. These last three factors are closely related. Many of the topics contained in textbooks are inherently too difficult to be mastered by immature students. Even intelligent adults find such subjects as Rousseau's philosophy, the Federal Reserve System, and the League of Nations hard to grasp, and it is not surprising that elementary and high school pupils should be baffled by them. In addition to being too difficult, the concepts are too numerous to be mastered in the time allowed. A single textbook may contain as many as two thousand topics. As a result, the amount of space that can be devoted to the presentation of any one topic is very limited. It is simply impossible for the student, regardless of his general reading ability or intelligence, to make a satisfactory construct of a complicated idea from brief statements such as those that characterize the great majority of texts in the social studies. ". . . a textbook," as Tryon points out, "is of necessity what it purports to be, a *text,* dealing primarily in generalizations and statements to be

[12]See Chaps. IV and V of this volume.

elaborated and made concrete."[18] It may be urged that, if used as a summary after reading more detailed and concrete sources of information or after other preparatory experiences, textbooks will be more adequately comprehended, but the fact remains that with the sort of teaching and equipment now provided in most schools, they are understood to only a limited extent.

2. In spite of great improvements in recent years, textbooks are still commonly deficient in maps, pictures, and other visual aids, and those that are provided are often ineffectively related to the reading matter. Textbooks in geography, in general, are far better in these particulars than are those in history.

3. The textbook used alone offers little opportunity for the development of the ability to study social problems independently. In so far as problems are treated, the solutions are ready made. The typical textbook is limited to generalizations in which disputed and unsettled questions are summarily disposed of as if there were only one accepted solution for them. Rarely does the author indicate to students either the evidence or the method by which his conclusions were reached. In so far as they carry meaning and conviction, they have the immediate effect of indoctrinating the student with particular points of view and they tend to prevent his learning the methods by which social problems are attacked. The student thus develops no defense against future propaganda. Judicial-mindedness and a knowledge of the methods of social inquiry are worthy objectives of the social studies, but textbooks alone in their present form are little likely to accomplish them.

Textbooks are sometimes criticized also on the ground that

[18]Tryon, *Teaching of History*, p. 57. See also Rugg, Harold, "Do the Social Studies Prepare Pupils Adequately for Life Activities?" *Twenty-second Yearbook*, Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1923, pp. 10–21.

they are identified solely with the teaching of traditional school subjects. Yet they may be made to meet the needs of any sort of curriculum, whether organized according to modern conceptions of school subjects or on the basis of units, problems, or activities. As a matter of fact, publishers have long furnished all of these types of books. Basic textbooks have been provided for many types of organization that are given labels different from those attached to traditional school subjects. On the other hand, traditional school subjects have often been taught on a non-textbook basis.

INFLUENCES DETRIMENTAL TO THE PRODUCTION OF GOOD TEXTS

The blame for weaknesses in textbooks should not be put solely, or even chiefly, at the door of publishers and authors; the deficiencies are due in large part to the conditions under which books are produced and marketed and to a lack of an intelligent and persistent demand on the part of teachers and supervisors for content and treatment which, in nature, in extent, and in difficulty, are properly adjusted to the needs and capacities of students. Publishers who make serious attempts to meet these needs often encounter considerable sales resistance, not merely because of the inescapable increase in the cost of the books but also because of a lack of appreciation of the improvements that have been made.

Authors and publishers could and undoubtedly would make far better books than are now provided were it not for conditions that are almost wholly beyond their control. Among the most discouraging influences are the variety, faddishness, and instability of local courses of study; the absence of library equipment; the inadequate training of teachers; the operation of pressure groups; and state adoptions.

Local courses of study have been produced by the thousands

in the last few years; one institution is reported to have on file a collection of over 35,000 of them. And in spite of much borrowing back and forth among those responsible for their construction, courses of study are so diverse and unstable that publishers find it difficult to produce and distribute profitably the necessary instructional equipment. The existing diversity cannot be justified either on the grounds of local needs or on the basis of the competency of local groups to make courses of study. The first steps in securing better textbooks, therefore, would seem to be a reasonable consensus as to the content and methods of the social studies, the removal of unnecessary divergencies, and a greater degree of stability.

If authors could be assured that adequate references would be made available and would actually be used, they could then make textbooks that would more nearly attain their potential instructional advantages. This desirable condition is met, however, by but few schools. The authors of textbooks must constantly include illustrative content that would be better presented elsewhere and must suggest collateral readings in the hope, rarely realized, that the recommended books will somehow be found and used. Authors, moreover, are well aware that many teachers cannot be counted upon to elaborate and reinforce the text, and that a book is likely to prove unpopular if it moves too far, in organization or in method, from the training and customary practice of the average teacher.

A further deterrent to the production of good textbooks is the aggressive effort of pressure groups to dictate what shall and shall not be taught in the schools.[14] These groups represent

[14]Knowlton, P. A., "Politicians, Teachers, and Schoolbooks," *Scribner's Magazine,* XCV (June, 1934), pp. 421–24; Raup, Bruce, *Education and Organized Interests in America.* G. P. Putnam's Sons, New York, 1936, pp. 33–36, 69–72; Whipple, Guy Montrose, "Are the Contents of Textbooks Dictated by Propagandists?" *The Nation's Schools* XII (October, 1933), pp. 21–24.

the greatest variety of partisan interests, some professedly patriotic, some religious, some philanthropic, some political, and some industrial. Serious divergencies are found among their views as to the content and methods of instruction. A book that pleases one group antagonizes another. Neither the truth nor the basic importance of the treatment of a topic is a sufficient defense against partisan attacks. The more militant groups attempt to intimidate publishers by opposing the selection of books that are offensive to them, and make trouble for the school system that selects such books. Manuscripts are evaluated and amended with these possible emergencies in mind. One well-known publishing company includes in its Guide to Authors a list of types of prejudices that must be kept in mind in preparing manuscript.[15] Both publishers and teachers have recently shown great courage in combating this unwarranted interference with the functions of the school, and in this they have, in general, been given public support.

Of the influences that hamper the production of superior textbooks and their proper use, perhaps none is more detrimental than the state adoption of uniform textbooks. While only about half of the states have uniform adoptions, the possibilities of securing business in these states react upon the production of books for the country as a whole. This is not the place to enter into an extended discussion of the advantages and disadvantages of state adoptions.[16] Briefly stated, the arguments advanced in favor of state adoptions are: (*a*) lower prices for books, (*b*) a saving of time and money in the

[15]Whipple, "Are Contents of Textbooks Dictated?" p. 22.

[16]Henry, Nelson B., "Value of State Textbook Adoptions Is Debatable," *The Nation's Schools* XII (December, 1933), pp. 19–24; Henry, Nelson B., "Unfavorable Outcomes of State Textbook Adoptions," *The Nation's Schools* XIII (February, 1934), pp. 27–30.

case of students who move from place to place, (*c*) a more expert selecting agency, and (*d*) the facilitation of a uniform course of study. It is now generally conceded that these alleged advantages do not actually accrue in practice and that there are many serious objections to this method of selecting books. The judgment of the members of the teaching profession, as well as of the leading publishers of school books, is therefore overwhelmingly against it.

The most serious disadvantages are: (*a*) the selecting agencies are political or semi-political and the size of the state contract has proved an irresistible temptation to every sort of vicious manipulation; (*b*) it is much more difficult under such a plan to adopt books on their merits; (*c*) experimentation in the improvement of books is discouraged; (*d*) local initiative and interest are stifled; (*e*) teachers are disheartened by having poor books foisted upon them; and (*f*) every sort of undesirable influence that partisan groups can exert through political pressure makes itself readily felt. An important step, therefore, in encouraging publishing companies to produce better textbooks is to abandon the practice of state adoption.

It is evident that the improvement of textbooks depends upon the co-operation of the teaching profession and the publishers in solving their common problems. The deficiencies of current textbooks, however, can easily be overemphasized. In comparison with typical courses of study, the average textbook is superior in scholarship, pedagogical arrangement, and the methods of teaching that are recommended. From any of these points of view, the best textbook is probably better than the best existing course of study, and certainly the poorest is far less objectionable than the worst course of study.

THE USE OF THE TEXT

The use that is made of the textbook depends upon its character and adequacy in relation to the course of study. If the text differs widely from the course of study in either content or organization, it becomes merely one of many references, with no distinctive function; *i.e.,* it ceases to be a textbook. In most schools, however, it determines the course of study either as a whole or in part. In fact, the fundamental conception of its construction is that it should serve as a pupils' guide to the course of study. Texts, as already pointed out, are made to fit any curriculum pattern that is desired by a sufficiently large number of schools.

Most discussions of the use of the textbook assume that there is close relationship between it and the course of study and that instruction follows the order of the topics in the textbook rather systematically. Under these conditions, which undoubtedly hold in the majority of schools, there are several potential contributions that the text, at its best, can make.[17]

First, the textbook furnishes to both teachers and pupils an outline of the course of study as a whole. It keeps each unit of work in perspective with regard to what has gone before and in relation to what is to follow. For this reason, it helps to assure that the time spent on various topics or problems will be commensurate with their importance.

Second, it gives an overview of the topic or problem that is being studied and furnishes each member of the class with a certain amount of information about it. To the degree that the discussion in the text is comprehended, it will be service-

[17]For a discussion of the use of the text, see Johnson, *Teaching of History,* Chap. XII, and Tryon, *Teaching of History,* Chap. III. See also Stormzand, Martin James, and Lewis, Robert H., *New Methods in the Social Studies.* Farrar and Rinehart, Inc., New York, 1935.

able in showing the scope of the problem. And even statements that are inadequately understood may be a challenge and a guide to further reading. It must be kept in mind that ideas are not formed all at once and that general statements, even though imperfectly grasped, may afford a sort of framework to be filled out and perfected as the student proceeds in his learning.

Third, it makes possible definite and systematic assignments. Orderliness is encouraged by the arrangement of the text itself; many texts set up valuable lists of questions and also help the students to raise questions for themselves; most texts contain suggestions for collateral readings. This last service, if well performed, is particularly important, because of the ease and effectiveness with which suggestions for collateral readings can be related to the topics of the text.

Fourth, it is useful for purposes of summary and review. After more detailed references have been read, after class discussions, or after other exercises, such as an excursion, a constructive activity, or the viewing of a motion picture, the text should prove a valuable aid to the student in the final validation and organization of the conclusions that he has reached. The summary statements of the text cannot, of course, take the place of the generalizations reached by the student himself; nevertheless, statements that were dry and barren in the first reading now become interesting and charged with meaning.

The teacher should understand, however, that these four functions are limited in their operation because of the hazy, partial, and erroneous ideas that children commonly get through reading the text. He should recognize that skillful questioning during the discussion period is indispensable in testing the adequacy of the ideas obtained, in leading to their

clarification, and in showing the need of securing further information.[18] Teachers who are competent to do so, moreover, can render a great service by amplifying and explaining matters that are shown by the students' questions or statements to be inadequately understood. The value of comments and other forms of oral instruction, including the lecture, have been underestimated. They are valuable even when an excellent reference list is available, and when such equipment is absent, they are the principal source of concrete information through which the text may become intelligible.

The emphasis in the preceding discussion upon the need of amplifying the general statements of the textbook should not lead to the belief that these statements, even when not elucidated, are wholly without value. Consider, for example, the following: *There was a rapid development of philanthropic and cultural interests during the first half of the nineteenth century: the establishment of hospitals and asylums, the improvement of the conditions in prisons, the growth of the public schools, the rise of anti-slavery sentiment, and the improvement of educational opportunities for women.* Such a statement, if remembered, serves a useful though limited purpose; *i.e.,* an intelligent student may make some use of it even without the supporting data that give it deeper significance. It is true, of course, that such generalizations are more meaningful, more interesting, and more likely to be remembered if made by the student himself as a result of rich experiences obtained from reading and from other sources.

WORKBOOKS

The flood of workbooks published in the last few years constitutes one of the most striking modern trends in the

[18]See Chap. VIII.

production of instructional equipment. The ideas lying back of these books are, of course, very old. They are embodied in the questions, guides, exercises, and references that have long appeared in textbooks, as well as in separate sheets and pamphlets used for tests, reviews, and cramming for examinations. None of these devices, however, is comparable in elaborateness with modern workbooks, which sometimes bulk as large as the texts themselves. An examination of over a hundred of these workbooks, all published since 1920, shows that they vary in purpose, in type, and in the quality of exercises that they provide. A general evaluation is therefore difficult.

In appraising the value of workbooks in teaching the social studies, one should inquire not only into the evidence and opinions regarding their effectiveness but also into their relative value as compared to other types of equipment of approximately the same cost. The results of investigations of the instructional values of workbooks and of such related materials as job sheets, study guides, and "contracts," are not consistent in indicating whether or not these devices aid learning.[19] Such differences as are shown, either positive or negative, are, in most cases, too small to be significant. The inconsistency and inconclusiveness of the reported investigations are doubtless due to variations in the quality of the

[19]Bane, Loren, *Analysis of the Every-Pupil Test in United States History of the 1932 Iowa Academic Contest.* Unpublished master's thesis, State University of Iowa, Iowa City, 1932; Crawford, C. C., and Hamren, Lloyd Herbert, "An Experiment with the Use of Printed Study Guides," *Educational Method* IX (June, 1930), pp. 541–544; Faust, Alvin G., *An Experiment to Determine the Value of Study Guide Sheets in the Learning of Problems of Democracy.* Master's thesis, University of Pittsburgh, Pittsburgh, 1930; Ross, Russell Conwell, *An Analysis of the Data Secured from the Iowa Academic Test in World History.* Unpublished master's thesis, State University of Iowa, Iowa City, 1932; Stadtman, Charles C., *The Relative Values of Teaching Social Science by the Study-Discussion Method and the Job-Sheet Method.* Master's thesis, Washington University, St. Louis, 1930.

specific workbooks or study guides used in the experiments, as well as in the instructional procedures with which they were compared; to the different degrees in which experimental procedures were controlled; and to a lack of validity and reliability in the tests that were used. The general conclusion reached on the basis of the evidence of these experiments is that workbooks either do not aid learning or facilitate it to a very limited degree.

Varying opinions have been expressed as to the value of workbooks in the social studies.[20] The arguments most frequently advanced for their use are that they aid the teacher in making assignments, make the course more definite, afford valuable drill exercises, facilitate individual instruction, assist the teacher in diagnosing and evaluating pupils' work, develop better habits of study, and in general are a boon to inexperienced, incompetent, or overworked teachers. An inspection of workbooks in the social studies, however, leads one to suspect that many of these claims arise out of formal and mechanistic conceptions of teaching.

The objections most frequently raised against the use of workbooks are their tendency to obscure the larger purposes of instruction, their cost, the formal and trivial character of many of the exercises, the encouragement of mechanical and superficial methods of study, the poor organization and gradation of the exercises, the deteriorating effects of detailed guidance of the crutch variety, and the usurpation of time and effort needed for more fundamental methods of study.

Workbooks vary enormously in the degree to which either these alleged benefits or limitations apply. Very few of them,

[20]See, for example, Goodrich, T. V., "Is the Workbook a Necessity or a Luxury?" *School Executives Magazine* L (April, 1931), pp. 359–361, 396. Crawford and Hamren, "Experiment with Printed Study Guides"; and Wesley, Edgar Bruce, "Workbooks in the Social Studies," *The Historical Outlook* XXII (April, 1931), pp. 151–153.

however, merit the claims that are made for them or are free from the objectionable features that have been enumerated. Their per-pupil cost is large, since the exercises checked or written by one pupil make a book useless for others. All are time-consuming. Most of them contain many exercises that are little better than busywork. One, for instance, requires high school students to color a page of small American flags, which are printed in outline. Few of the exercises are likely to stimulate either careful reading or critical reflection. Many, such as the filling out of completion blanks and the checking of true-false or multiple-choice items, require only a superficial skimming of the text in order to locate a word or phrase that is the key to the correct response. It seems likely that, with very few exceptions, the workbooks in current use tend to increase rather than to offset the formalism and verbalism that, in the past, have pervaded the teaching of the social studies. And even the few that have made serious attempts to escape these weaknesses should not be purchased until adequate reference books and other fundamental instructional equipment have been provided.

COLLATERAL READING

Dynamic teaching centers upon ideas rather than upon books. This emphasis, which was perhaps the greatest contribution of the topical method, is still more marked in the problem method. Problems are the vital element in thinking, and their solution requires the subordination and supplementing of the text in each of the following steps: the appreciation of the situation out of which the difficulty arises, the definition of the difficulty and the statement of the problem, the formulation of tentative hypotheses, the elaboration and testing of each hypothesis by thought and by the further collection of data, and

the achievement of the final solution.[21] The focus upon a problem is almost certain to drive the student beyond the limits of a single text, and the more compelling his interest in the problem, the more likely it is that the questions that he raises will require data that cannot be found in the abbreviated and general statements of the textbook. Among the sources of additional data are: visual aids, field trips, objects, constructive activities, elaborations by the teacher, and more detailed readings. The uses of collateral reading are discussed in the remainder of this chapter; other sources of experience are treated elsewhere.[22]

The term *collateral reading,* which is here used to describe the various types of references other than textbooks, is not wholly satisfactory. Kimmel and others have objected to it, as well as to the term *supplementary reading,* because both terms imply inferiority and subordination to the text.[23] Among the designations that have been suggested as substitutes are: *reading program in the social studies, library reading, reference reading,* and *laboratory method.* Since *collateral reading* is the term most generally used, and since there seems to be little difficulty in adjusting its meaning to newer conceptions of teaching, it is here retained. It seems definitely superior to the more recent term *laboratory method,* which has connotations that are very misleading. The matter of terminology is not so important as the clear recognition that such readings are a basic necessity in the social studies.

Collateral readings cover the whole area of printed records. They range in time from the inscription on the Palermo Stone

[21] *Cf.* Dewey, John, *How We Think* (1910 edition). D. C. Heath & Co., Boston, 1910, Chap. VI.

[22] See Chapters VII, IX, X, and XI.

[23] Kimmel, William Glenn, *The Management of the Reading Program in the Social Studies.* Publications of the National Council for the Social Studies, No. 4, McKinley Publishing Company, Philadelphia, 1929, pp. 61–62.

to the political platforms of 1936; and in type from Madison's *Journal of the Federal Convention* to *Hail, Columbia,* from the *Report of the Committee on Social Trends* to *Main Street,* from the *Atlas of the Historical Geography of the United States* to *Cook's Voyages,* and from the *Statesman's Yearbook* to Thoreau's *Walden.* Journals, biographies, travels, novels, essays, letters, poems, and songs, as well as learned treatises, are utilized by the social scientist in arriving at and in portraying the truth. All are valuable for the student.

THE DEVELOPMENT OF COLLATERAL READING

The values of collateral reading, as well as the limitations of the textbook, were recognized by a few writers even in the first half of the nineteenth century.[24] There seems to have been little systematic use of collateral reading, however, until after the Civil War. With the growing interest in the teaching of history that followed the war, and with the trend of college instruction in history toward European models, there was a gradual increase in collateral readings in public school instruction. A few of the textbooks began to list suggested readings in the appendix. The pedagogical literature of the 70's, 80's, and 90's shows that there was considerable controversy at that time concerning the merits and defects of "supplementary" reading.[25] In 1887 Professor A. B. Hart published an article in which he described the status of the teaching of history and

[24]Russell, W. F., *The Early Teaching of History in the Secondary Schools of New York and Massachusetts.* McKinley Publishing Company, Philadelphia, 1915.

[25]Philbrick, John D., "City School Systems in the United States," *Circulars of Information of the Bureau of Education,* No. 1, 1885, p. 68; Parker, Francis W., *Notes of Talks on Teaching.* E. L. Kellogg and Co., New York, 1883, pp. 147–8; *Report of the Quincy School Committee,* 1879, p. 11; West, W. M., "The Purpose and Scope of History in the High Schools," *Journal of the National Education Association* (1890), p. 649; C. H. L., "Further Suggestions on Teaching History," *Educational Weekly* (May 31, 1877), p. 260.

geography in the United States.[26] His data were obtained from a circular inquiry sent to "about ninety principals or teachers of high and preparatory schools; and also a hundred and seventy-five statements made by students of history in college." The replies represented, in his judgment, better than average schools, since "it is presumable that a large number of those who failed to answer had little to tell, . . ." and "the circular to students was laid only before those who had sufficient interest in the subject to elect a course in history in college."[27] He reports that, "The text-book method is by far the most frequent. . . .[28] Perhaps a fourth of the reporting schools have put into operation some form of topical recitation; . . ."[29] And it is chiefly in connection with the topical method that the use of collateral reading, including "current events," was found. As earlier noted, topics and subsequently problems, units, and "activities" have unquestionably been powerful influences for the introduction of collateral reading.

In this and in a subsequent article,[30] Professor Hart appraises the situation and makes suggestions for its improvement. He recommends that after reading "some brief books . . . to cover the whole ground," standard works should be used to broaden insight. "One may read history in one author; one can study history only by a comparison of various authors. . . ."[31] "It is very easy to overdo the comparison of standard writers; but no historical study is complete without the experience and flavor of original material which come from using sources; . . ."[32] He points out that class discussion "is hardly

[26]Reprinted as Chapter V in Hart, Albert B., *Studies in American Education.* Longmans, Green and Co., 1895. Page references here given are to this book. The original article was in *Academy* (Syracuse), September and October, 1887.

[27]*Ibid.*, p. 93. [28]*Ibid.*, p. 97. [29]*Ibid.*, p. 98.

[30]*Ibid.*, Chap. IV. This chapter is a reprint of an article in the *Chautauquan*, October, 1893.

[31]*Ibid.*, pp. 83–84. [32]*Ibid.*, p. 89.

to be expected from those who have only the foundation of the text-book, . . ."[33] and suggests that the textbook be supplemented by pictures, "news of the day," biography, and library work. He is enthusiastic about the topical method, but adds, "The topical system, and good teaching of any sort, is dependent on books of reference."[34]

Although forecast by these earlier trends, the modern period in teaching social sciences in America is often regarded as beginning in 1894, the date of the publication of the report of the Committee of Ten.[35] This report includes recommendations for the teaching of history, civil government, political economy, and geography. It is made for both elementary grades and high school. Eight of the ten resolutions on methods in history suggest, directly or indirectly, the use of collateral readings. These eight resolutions are:

"*Resolved,* That it is desirable that in all schools history should be taught by teachers who not only have a fondness for historical study but who also have paid special attention to effective methods of imparting instruction.

. . . . . .

"*Resolved,* That after the first two years a suitable text-book or text-books should be used, but only as a basis of fact and sequence of events, to be supplemented by other methods.

"*Resolved,* That pupils should be required to read or learn one other account besides that of the text-book, on each lesson.

"*Resolved,* That the method of study by topics be strongly recommended, as tending to stimulate pupils and to encourage independence of judgment.

"*Resolved,* That the teaching of history should be intimately connected with the teaching of English: first, by using historical works or extracts for reading in schools; second, by the

[33] *Ibid.*, p. 109. [34] *Ibid.*, p. 114.
[35] *Report of the Committee of Ten on Secondary School Studies.*

writing of English compositions on subjects drawn from the historical lessons; third, by committing to memory historical poems and other short pieces; fourth, by reading historical sketches, biographies and novels, outside of class work.

. . . . . .

"Resolved, That the study of history should be constantly associated with the study of topography and political geography, and should be supplemented by the study of historical and commercial geography, and the drawing of historical maps.

"Resolved, That in all practicable ways an effort should be made to teach the pupils in the later years to discriminate between authorities, and especially between original sources and secondary works.

"Resolved, That a collection of reference books, as large as the means of the school allow, should be provided for every school, suitable for use in connection with all the historical work done in that school."[36]

Collateral reading and the topical method are strongly recommended also in the resolutions pertaining to civil government and geography.

The insistence on the necessity of adequate collateral reading was repeated by the Committee of Seven, reporting in 1899: "The library should be the centre and soul of all study in history and literature; no vital work can be carried on without books to which pupils may have ready and constant access."[37] Various committees reporting since that time have reiterated and exemplified the use of collateral readings.[38]

[36] *Ibid.*, pp. 164–165.

[37] *Report to the American Historical Association by the Committee of Seven,* p. 97.

[38] *Report to the American Historical Association by the Committee of Eight,* James Alton James, chairman. Charles Scribner's Sons, New York, 1909; *Report to the American Historical Association by a Committee of Five,* Andrew C. McLaughlin, chairman. The Macmillan Company, New York, 1911; *Report to the American Political Science Association by the Committee*

In spite of the unanimity in the recommendations of these committees and of the leading writers on methods in the various social studies, schools have lagged seriously in providing proper equipment for teaching the social studies. This is shown clearly in the 1921 report of the Mississippi Valley Historical Association[39] and in later studies by Bain,[40] Miller,[41] and Swindler.[42] There are today very few schools, either elementary or secondary, that have equipment to meet the standards set up forty years ago.

FUNCTIONS OF COLLATERAL READING

In serving the general purposes of making the social studies understandable, of creating conditions favorable to thinking, and, consequently, of combating formal and verbalistic learning, collateral reading makes several specific contributions. Among the most important of these are: (*a*) to give vividness, atmosphere, and a sense of reality; (*b*) to furnish specific information; (*c*) to give inspiration and to develop present and continuing interests; (*d*) to give a knowledge of general references, such as encyclopedias, atlases, yearbooks, and other standard works, and to train in their use; (*e*) to introduce the student to the classic writings in social sciences; (*f*) to encourage the discriminative reading of imaginative literature in re-

on Instruction, Charles G. Haines, chairman. The Macmillan Company, New York, 1916; "The Teaching of Geography," *Thirty-second Yearbook,* National Society for the Study of Education, A. E. Parkins, chairman.

[39]"Final Report of the Committee on Standardizing Library Work and Library Equipment for History in Secondary Schools," Howard C. Hill, chairman. *Proceedings of the Mississippi Valley Historical Association* X (November, 1921), p. 386.

[40]Bain, Read, "The Teaching of the Social Studies in Washington High Schools," *School and Society* XXVI (December 10, 1927), pp. 754–758.

[41]Report of the North Central Association's Special Committee on Libraries, Edwin L. Miller, chairman. *North Central Association Quarterly* III (September, 1928), pp. 246–88.

[42]Swindler, Robert E., *Social Studies Instruction in the Secondary Schools.* Prentice-Hall, Inc., New York, 1933.

lation to the social studies; (*g*) to acquaint students with the periodical literature that is most useful in keeping abreast with modern developments; and (*h*) to give training in the use of the fundamental methods of thought in the various social sciences.[48] These eight functions are not mutually exclusive but closely interrelated; a single reference may serve several of them. Nevertheless, each of them must be definitely provided for in the reference equipment.

The first two functions are so closely related that they may be discussed together; a valid and vivid sense of reality is impossible without specific and detailed information. To the extent that these two functions are fulfilled, mere verbal and formal learning is avoided. Verbal memorizing arises, as pointed out in the two preceding chapters, from the inherent difficulty and complexity of concepts, from the inadequacy of the language in which they are presented, or from limitations in the interests and abilities of the student. The last two of these obstacles to understanding are less serious in collateral reading than in the text; the larger space makes it possible to include the essential details about a topic, and these details, by their nature and number, are at once more interesting and more readily related to the students' experience. Only to a limited degree can meaning be attached to abstract and general statements when read by students whose experience does not include the concrete and specific details out of which the generalizations may be built. A knowledge of the details that are essential to the formulation of an idea is the *sine qua non,* and in furnishing this knowledge, collateral readings take an important, if not the pre-eminent, place. A volume may be devoted to a topic that the textbook treats in a chapter or even in a paragraph, so that it is possible to expand

[48]Adapted from Johnson, *Teaching of History,* p. 330.

the discussion greatly, as well as to include authentic incidents, anecdotes, pictures, maps, and diagrams for which space cannot be found in the abbreviated text.

Neither vividness nor detailed information is likely to result when the additional reading is limited to other textbooks, for the shortcomings that are found in one textbook are remedied little, if at all, when two or more are used. Johnson rightly calls this practice "the climax of futility,"[44] as far as any real supplementing of the class textbook is concerned. While the use of two or more textbooks may do something to offset the memorization of the pattern of the presentation in a single book, it does not provide the richness of detail that is necessary to give understanding and a sense of reality. "The choice, then, is not between one book and more than one; it is between elaboration by the teacher and elaboration by means of collateral reading."[45]

One of the greatest contributions of collateral reading is the stimulation and development of present and continuing interests. The text, as Robinson points out, is likely to be very deficient in this respect. "When one has gone through a text book and safely weathered the examination he rarely has any further use for it. This is not because he has really absorbed it and so need not refer to it again. On the contrary, it is associated with a process alien to his deeper and more permanent interests."[46] The interests of adults are presumably more mature and more rational than those of children. Yet there are few textbooks that most men and women would read, even from a sense of duty. Best sellers rarely, if ever, include so many topics as does the typical textbook, for it is impossible to treat interestingly so many complex ideas in a

[44]Johnson, *Teaching of History*, p. 326. [45]*Ibid.*, p. 329.
[46]Robinson, James Harvey, *The Humanizing of Knowledge*. George H. Doran Company, New York, 1923, p. 84.

single brief volume. If a book is to receive a hearty welcome, it must deal with a more delimited field or with a single aspect of a subject.[47] Only in this way can it give interest, a sense of reality, and the materials for thought.

Standard general references, such as dictionaries, general and special encyclopedias, yearbooks, almanacs, atlases, and government bulletins, are the backbone of the reference equipment in the schools.[48] While it is true that most of these are published for adults, those to which the average intelligent citizen may be expected to refer are suitable for the high school; a great many of them may be used in the junior high school and even in the higher intermediate grades. There are, moreover, dictionaries, encyclopedias, school atlases, and bulletins that are expressly made for elementary school students. The training received in the use of the best of these simpler general references is readily transferred, as a student matures, to the use of larger and more adequate books.

There is conclusive evidence that most students in elementary and junior high schools have not been given adequate training in the use of these general references.[49] Similar deficiencies are shown at the senior high school and college levels. Ignorance of these fundamental references, as well as the lack of ability to use them, is a serious matter in view of the necessary part they play in the careful study of social problems. Teachers and students cannot be much blamed for these shortcomings, however,

[47]Waples, Douglas, and Tyler, Ralph W., *What People Want to Read About.* American Library Association and the University of Chicago Press, Chicago, 1931.

[48]For a helpful discussion of the types of general references and how to use them, see: Mudge, Isadore Gilbert, *Guide to Reference Books.* American Library Association, Chicago, 1935; Alexander, Carter, *How to Locate Educational Information and Data.* Bureau of Publications, Teachers College, Columbia University, New York, 1935, Chap. V.

[49]Anderson, Howard R., "Testing Basic Skills in the Social Studies," *The Elementary School Journal* XXXVI (February, 1936), pp. 424–435.

since even the minimum reference equipment is rarely provided.

It is questionable whether the term "intelligent citizen" should be applied to any one who has not read at least a few of the great classics of social thought. Yet it is possible for students to complete the course of study in social studies in public or private schools without reading a single great book in these fields. The substantial contributions of scholars in history, sociology, economics, political science, and geography are generally ignored. Studies of the use of college libraries indicate that, except in the case of advanced students, the classics in social studies are little read.[50] At the end of the general courses in history, many college students, for instance, cannot name one example of great historical scholarship. Surely it is not too much to expect that the student who has completed the course of study in American history in high school or college should have spent considerable time in reading a few of the great histories of the United States, such as those by Bancroft and McMaster; works dealing with special periods or aspects, such as Adams' *History of the United States of America,* 1800–1817, Bryce's *The American Commonwealth,* Rhodes' *History of the United States from the Compromise of 1850,* Turner's *The Frontier in American History,* and Charnwood's *Abraham Lincoln;* and such sources as *The Federalist,* Ford's *The Writings of Thomas Jefferson,* Madison's *Journal of the Federal Convention,* Tom Paine's *The Crisis,* and Lewis and Clark's *Original Journals of the Lewis and Clark Expedition.* There are many great classics in social science, such as the works of Parkman, which can be read as a whole or in part by students at the junior high school

[50]Johnson, B. Lamar, "The School Library," *Thirty-sixth Yearbook,* Part I, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1937, pp. 255–274.

level, and excerpts may be read by or to students even in the intermediate grades. To fail to bring students into contact with the great contributions to social thought is to deprive them of their rightful educational heritage. The loss cannot be made up by any amount of other instructional materials of a pedagogical nature in the way of textbooks, workbooks, and the like.

The proper utilization of imaginative literature in the collateral reading program is especially important for several reasons: the dominance of fiction and poetry in the reading of both children and adults; the high place that contemporary literature takes among the historical monuments of any period; the significant insights gained from the literature of any country; and the wealth of social interpretation in fiction, poetry, and the drama. The functions and limitations of imaginative literature in relation to the social studies and geography are discussed in a later chapter.[51] Where adequate library facilities exist for the study of literature itself, they furnish much that is useful to the student of the social studies. Nevertheless, duplicate copies of some books may need to be purchased and, in addition, many important books not found on the reading lists in literature but contributing materially to insight in the social studies may need to be provided.

Periodical literature, including magazines and newspapers, has been accorded an increasingly prominent place in recent years in the teaching of social studies. This literature is a valuable source of knowledge and thought about present and past times, for the present age, like the ages that have gone before, writes itself down in its newspapers and magazines. Much of this periodical literature, however, is disturbingly low in quality. There is consequently a serious need to develop

[51]See Chaper VII.

the ability to make discriminating choices among the great number of magazines and newspapers. Good taste and critical power must also be developed if the student is to reap the benefits from these sources and is to be protected against the erroneous ideas and debasing effects of their lower forms. These needs suggest the systematic and judicious use of well-selected newspapers and magazines as a regular part of the collateral reading program.[52]

Training in the *methods* of arriving at truth and understanding in the various social studies can be given only to a very limited degree through textbooks alone. It demands the critical use of the materials and intellectual disciplines of these fields. Johnson's statement of the elements in historical method is applicable in principle to other social studies. "In the end the pupil should recognize with some degree of clearness at least that there are different kinds of sources, that there are definite processes of criticism, that the facts established vary in degree of probability, that there are different ways of selecting and combining facts, and that there is a special apparatus in the form of tables of contents, indexes, footnotes, and systematic bibliographical guides to aid him in finding out quickly what a book is about, what it has to say on this or that topic, what its chief authorities are, and what books or articles have been written on any historical subject which he may be directed to look up or in which he may be interested."[53] Only to the extent, then, that collateral readings, along with other supplementary materials, are available and utilized is the teaching of social studies likely to develop the ability to do independent, critical thinking.

[52]See Fargo, Lucile F., *The Library in the School.* American Library Association, Chicago, 1930, pp. 190–201.

[53]Johnson, *Teaching of History,* p. 335.

SOURCE STUDY

No matter how extensive the reading program in the social studies may be, it is inadequate unless it includes the study of original sources.[54] The need for this type of work was strongly emphasized in the last quarter of the nineteenth century when the reaction against memoriter learning set in. The advocates of the source method proposed that students select and organize the facts of history from extracts of documents, letters, diaries, memoirs, and other source materials.[55] Obviously this method could not be utilized with any degree of success in most elementary and high schools, for the requisite equipment was lacking. The numerous source books, soon published by various advocates of this plan, did something to improve the situation, but the selections were so short as to be of little use for serious study. It is self-evident that one cannot "establish the facts" of Homeric religion on the basis of three pages of reading. As in the case of most pedagogical innovations, this method was often carried to the extreme. Today sources are generally regarded merely as collateral readings.[56] This is unfortunate, for while, as Johnson points out, "the greater part of school history must be presented as ready-made information, . . . there should be illustrations of the historical method sufficient to indicate the general nature of the problems behind organized history, and sufficient to give some definite training in the solution of such problems."[57]

[54]Hart, *Studies in American Education*, p. 89.

[55]Hilleman, Raymond U., *The Use and Supply of Historical Sources in High School History*. Master's thesis, University of Chicago, Chicago, 1930, p. 70.

[56]Fling, Fred Morrow, "The Use of Sources in History Teaching During the Last Decade (1909–1919)," *The Historical Outlook* X (December, 1919), pp. 507–508; and Hilleman, R. U., "The Source Method in the Teaching of History," *Fifth Yearbook*, The National Council for the Social Studies, pp. 64–71.

[57]Johnson, *Teaching History*, pp. 360–361.

The general aims of source study remain much the same as when the method was at the height of its popularity: (1) to increase the interest in history; (2) to stimulate thinking and the formation of judgments; (3) to aid in the visualization of history; and (4) to engender love of truth for truth's sake.[58]

These objectives cannot be fulfilled with most of the source books available. The selections in those most widely used are, in general, dry and lifeless, hardly calculated to vitalize the past. They are primarily of a political or military nature. Documents, such as treaties and decrees, are frequently reprinted in full, while diaries, personal letters, and accounts of everyday life are ignored. The few books that are exceptions to the rule are not in common use.[59]

In addition, the extracts in the great majority of source books are far too short to give the richness of detail that collateral readings ought to supply. Usually there is only one volume of sources, or at most two, for a year's study. Representative selections for a period of several hundred years cannot possibly be included in so small a space, particularly since the books are not confined to a few large topics but cover the whole range of the period. The result is that the extracts are cut down so much that they can be read with understanding only by a person who has a rich historical background. Certainly very little can be learned about the intrigues at the Congress of Vienna from two selections of one page each. Nor can the Achæan League be adequately explained in eight pages. If source study is to create an interest in history, the selections must be much more copious.

A further defect of source books is that their introductions to the sources from which the selections are taken are sketchy,

[58]Hilleman, "The Source Method in the Teaching of History," p. 65.

[59]An excellent example is Nevins, Allan, *American Social History as Recorded by British Travellers.* Henry Holt and Company, New York, 1923.

at best. A scholar, reading the memoirs and letters of Talleyrand, is fully aware of the fact that the clever bishop of Autun did not permit the truth to interfere with his reports of his own activities and that, therefore, his accounts must be carefully checked with those of his contemporaries. No hint of this is given in the source books. For all the student knows, Talleyrand may be as reliable an authority as Franklin or John Adams. Then, too, the various writers are not adequately described. Who were Samuel Curwen, William Heath, Strabo, Pasquier, Madame de Sévigné, and Frances Trollope? Were they qualified to write the accounts presented? Were they disinterested observers, or were they dominated by prejudices and passions? How were their writings preserved? The teacher may know the answer to these questions, but he probably will not, even if he has had an excellent training; indeed, no one but a specialist would be familiar with the names of some of the obscure individuals whose writings are included in source books. Furthermore, it is improbable that the teacher or the pupils can get the necessary information from the meager references of the average school library. Yet such knowledge is essential to the most elementary exercise in methodology.[60]

It is evident, then, that source books in their present form do not meet the requirements for the study of original works. They must be altered considerably if they are to fulfill their functions. It is imperative that they be enlarged. Six to ten volumes for a year's study would not be too many, and these ought to include pertinent selections on a few important topics instead of the haphazard collections in vogue at present. On the question of American neutrality during the early period of

[60]Langlois, C. V., and Seignobos, C., *Introduction to the Study of History* (translated from the French by G. G. Berry). Henry Holt & Company, New York, 1932.

the World War, for example, extracts might be included that show the attitude of the following groups: the government officials, the diplomats, the commercial classes, the farmers, the laborers, foreigners in the United States, and Americans living abroad. Each of these selections should be of sufficient length to have meaning for the student, and the origin and history of each should be included.

THE EFFECTS OF COLLATERAL READING UPON LEARNING

The values that have been enumerated for collateral reading are substantial. No real teaching of the social studies, no real preparation for intelligent citizenship, is possible without their attainment. There is no evading the fact, however, that they are achieved with difficulty and then only by the most careful and systematic planning. The most serious obstacles to be overcome are (*a*) the possibility of confusion and discouragement from working with many and varied sources of information, (*b*) the small amount of time available for study, and (*c*) the poverty of essential instructional equipment. These difficulties are stubborn, but they are not beyond solution. They have been overcome or their force alleviated by thousands of gifted teachers at all levels of instruction.

The values listed above as constituting the larger contributions of collateral readings must either be rejected as unworthy or impractical, or the type and quantity of collateral references necessary to their accomplishment must be used. There is no alternative. Yet this essential program of collateral reading is not so elaborate as might first appear. It represents a gradual evolution from the primary grades to college. Nevertheless, it must be managed with great discrimination if the student is not to be confused and discouraged. "Often supplementary readings," says Beard, "instead of reenforcing the general

outline, confuse it by covering it with bewildering details."[61] Even when the reference equipment is most adequate, considerable skill is required to use it effectivly. The student must not only read each reference with understanding; he must select some facts and reject others, and organize into an intelligible pattern the ideas that he has gained. The data on any problem, moreover, may be scattered through a variety of books and embedded in a mass of unrelated detail. As a result, the average student reads a large amount of material that does not bear on the problem at hand. While all this may give training in the use of references, it consumes time that might otherwise be given to the enlargement of understanding of the problem itself.

A reasonably clear and valid idea, gained from reading one reference, may be broken down or confused through reading another. Especially is this true when there is a lack of agreement among the references as to fact, organization, or conclusions. If the ideas presented by any reference vary widely from those already held, or if the reference is shallow, inaccurate, or badly organized, the student may actually know less after reading it than he did before. Yet these are hazards that necessarily accompany the serious study of social problems both in school and in the world at large. It is very unlikely, moreover, that any confusion resulting from the use of many references will be as objectionable as the frustration that the student experiences in the attempt to solve complicated problems through the use of the textbook alone.

Perhaps the best plan would be for the student to spend most of a given study period in reading a single volume that presents, with rich supporting detail, a unified discussion of the problem or topic that is being considered. For example,

[61]Beard, Charles A., *The Nature of the Social Sciences.* Charles Scribner's Sons, New York, 1934, p. 193.

it is possible that Davis' *A Day in Old Athens* would, if read alone, result in clearer and more adequate ideas than would be obtained from reading a variety of references for the same length of time. There is much to be said for the expanded text in which two or more volumes in series present the work of the course, and for the suggestion made in a recent report on the teaching of geography that materials from a variety of sources might well be assembled into a single volume.[62]

Even in the case of classical writings, it would be very helpful to have extended excerpts from the various fields of social studies woven into a discussion that would interpret them and keep them in perspective. A treatment similar to that in *The Historians' History of the World*[63] but briefer and more suited to immature students seems practicable. While a reference of this type would not take the place of reading the classical works in entirety, it would be an excellent introduction to them. It would also be more within the limits of the abilities of the average student, and much more economical in time and money. Neither the expanded textbook nor the volume of assembled references, no matter how elaborate they might be, would constitute an adequate reading program, however; for one of the important aims in teaching social studies is to develop a knowledge of the most valuable sources of information and skill in their use.

The term "intensive" reading is sometimes applied to procedures that approximate the verbal memorizing of the textbook as well as to processes of vigorous and critical reflection. "Extensive" reading is applied to the reading of two or more textbooks in the place of one, to the reading of detailed

[62] *Thirty-second Yearbook*, National Society for the Study of Education, pp. 155–156.

[63] Williams, Henry Smith (ed.), with the collaboration of many specialists, *The Historians' History of the World*. The Times, London, 1908.

presentations instead of those that are more general, and to wide and cursory reading. These terms should be defined in the light of the nature of the selection or selections read and in relation to the purpose for which the reading is done. One may determine by experiment, for example, the effect, for a given unit of time, of reading the treatment of a topic in two textbooks as compared with re-reading the treatment in a single text. One may likewise experiment with the effectiveness, per unit of time, of reading and re-reading a generalized statement of the text as compared with reading a statement containing, in any given degree, the detail that is deemed to be essential to these generalizations. These are only two of many possible problems into which the general question of the merits of extensive and intensive reading may be broken up.

Critics of collateral reading have charged that students are habituated to superficial habits of work by the use of many different references. It is better, they say, to "master" the text than to develop superficial habits of study through wide reading. This claim for the text and the charge against collateral reading set up straw men. Students cannot "master" the text except in the sense of verbal memorizing, and, on the other hand, extensive reading need not be superficial. One of the best general answers to the charge of these critics is afforded by the evidence from experiments on the relative effectiveness of intensive and extensive reading. The latter has been consistently shown to bring superior results in knowledge and in interest, as well as in the improvement of reading ability. It is true that the terms intensive and extensive have been defined somewhat loosely and from different points of view by those who have sought to determine the relative efficacy of the two methods. The most elaborate experimental study is that by Good, who compared (*a*) the effect of reading

200 pages versus sixteen pages, (*b*) the effect of spending the same total amount of time on three pages as upon one page, and (*c*) two readings of one page versus one reading.[64] He concludes, on the basis of the measures used, that extensive reading brings superior results in terms of information, ability to solve problems, ability to outline, and the amount retained. He interprets his data, however, as suggesting that a combination of the textbook and collateral readings is better than either used alone.[65]

The superiority of extensive reading has also been reported by other investigators.[66] The case for collateral reading should not be rested, however, with a blanket recommendation to read extensively, for wide reading may, in specific instances, result in harm as well as good. The decision as to what and how much to encourage the student to read, or how the references are to be utilized, should be based on what is specifically required to facilitate his learning. Formal and routine requirements as to amount of reading should be replaced by assignments that discriminate among readings, both with reference to the problems under discussion and to the needs of the individual student.

[64]Good, Carter V., *The Supplementary Reading Assignment.* Warwick and York, Inc., Baltimore, 1927.

[65]*Ibid.*, Chap. XVI.

[66]Earlier experiments are reviewed in Good, *Supplementary Reading Assignment.* See also Coryell, Nancy G., *An Evaluation of Extensive and Intensive Teaching of Literature.* Contributions to Education, No. 275, Teachers College, Columbia University, New York, 1927; Curtis, Francis D., *Some Values Derived from Extensive Reading of General Science.* Contributions to Education, No. 163, Teachers College, Columbia University, New York, 1924; Weaver, Robert B., "Extensive and Intensive Methods in History," *The Historical Outlook* XXIII (October, 1932), pp. 292–296; Gray, William Scott, *Summary of Investigations Relating to Reading.* The Department of Education, The University of Chicago, Chicago, 1925; Rice, R. S., *Extensive Reading versus Intensive Textbook Study as a Means of Acquiring a Knowledge of Scientific Facts.* Penn State Studies in Education, No. 14. Pennsylvania State College, State College, Pa., 1936.

THE SELECTION OF REFERENCES

The selection of an adequate working library in the social studies is difficult, and the more limited the funds of the school, the more crucial it is that the books be chosen with the utmost care. Just what selection is made in any school will be determined, of course, by the curriculum and by the dominant conceptions of method. One may justly view with suspicion, however, any curriculum or any method that does not necessitate the use of the standard references in the various fields, for acquaintance with these books should be an essential objective of any course of study. At the present time the responsibility for selection is thrown upon the classroom teacher or upon curriculum committees, who, from the knowledge of the literature of their field and within the limits of the budget, must select the books that seem likely to be of greatest service. Here, as elsewhere, is made evident the need for supervisors and teachers of the highest scholarly qualifications.

The literature of any field is so extensive, however, that even the most competent teacher welcomes assistance in the discovery and selection of references on the various problems that he teaches. The less competent the teacher, of course, the more necessary it is that aid be given. Among the sources to which the teacher may turn are the recommendations given in the class textbook, in books on methods of teaching, in guides to the literature in various fields, and in the reports of special committees that have dealt with this problem.

One might expect that the bibliographies in textbooks written expressly for elementary and high school students would contain references that can be read by these students, that are most useful in expanding the treatment of the text, and that, in number and in cost, are within the possible resources of the school. Some modern texts do give very helpful advice

to students as to minimum and extended assignments in collateral reading, and the references cited are usually related explicitly to the topics or problems with which they deal. The lists in many textbooks, however, seem to have been made without the limitations of either the budget or the abilities of students in mind. One recent text on modern history, for example, gives forty-two references on Napoleon alone, most of them beyond the reading ability of the great majority of high school students, many of them exceedingly expensive, and some of them out of print. There is, moreover, astonishingly little agreement among texts in any field as to the books that students should study. In one investigation, only one reference was found to be recommended in all of twenty-two texts in American history that were examined, and only sixteen references were mentioned in seventeen or more texts.[67] A similar lack of agreement has been shown among the books recommended by teachers and in courses of study.[68] The lack of agreement among textbooks in the books that they recommend cannot be explained wholly by differences among texts in the need of amplification, nor that among teachers by differences in their curricula. They may be due, in some degree, to differences of opinion as to the worth of books at the levels at which recommendations are made, but they are apparently to be explained chiefly by lack of care in selecting sources and in appraising requirements of immature students.

Books on methods of teaching often contain short lists that are useful, although they are not usually annotated. Teachers should also make use of the bibliographies that appear from

[67]McReynolds, Olin L., *A Study of American History References for Senior High Schools.* Master's thesis, University of Chicago, Chicago, 1928.

[68]*Ibid.* See also Tryon, R. M., "The History Library and Its Use in One Hundred Public High Schools in Illinois," *School and Home Education* XL (May–June, 1921), pp. 161–6.

time to time in *Social Education* and in *The Journal of Geography*. The standard guides should, of course, be consulted, although most of them have been prepared for the advanced student, are very extensive, and do not in general indicate how a minimum selection can be made from the books that are listed.[69] A valuable bibliography of bibliographies in history, exceedingly useful to the teacher, is Coulter and Gerstenfeld's *Historical Bibliographies*.[70] Few guides to readings in the social studies have been prepared with the needs of high school or elementary school students in mind.

Notable exceptions are *A Bibliography of History for Schools and Libraries*, by Andrews, Gambrill, and Tall,[71] of which there is no recent edition; and the sections on social sciences, geography, biography, history, and travel in *1000 Books for the Senior High School Library*.[72]

Valuable suggestions are to be found in several general guides to children's reading. In Terman and Lima's *Children's Reading*, each bibliographical item is annotated and the age

[69]See, for example, Allison, William Henry, Fay, Sidney Bradshaw, Shearer, Augustus Hunt, and Shipman, Henry Robinson (editors), *A Guide to Historical Literature*. The Macmillan Company, New York, 1931; Griffin, Grace Gardner, *Writings on American History*. Government Printing Office, Washington; Channing, Edward, Hart, Albert Bushnell, and Turner, Frederick Jackson, *Guide to the Study and Reading of American History* (revised ed.). Ginn and Company, Boston, 1912; Bacon, Corinne, *Standard Catalog; Social Science Section*. The H. W. Wilson Company, New York (annual supplements); Burchfield, Laverne, *Student's Guide to Materials in Political Science*. Henry Holt and Company, New York, 1935; Wright, John Kirtland, *Aids to Geographical Research*. American Geographical Society, New York, 1923.

[70]Coulter, Edith M., and Gerstenfeld, Melanie, *Historical Bibliographies: A Systematic and Annotated Guide*. University of California Press, Berkeley, California, 1935.

[71]Andrews, Charles M., Gambrill, J. Montgomery, and Tall, Lida Lee, *A Bibliography of History for Schools and Libraries*. Longmans, Green, and Co., New York, 1911.

[72]*1000 Books for the Senior High School Library*. Compiled by a Joint Committee of the American Library Association, National Education Association, and National Council of Teachers of English, Mary Elizabeth Foster, chairman. American Library Association, Chicago, 1935.

range to which it is suited is estimated.[73] General finding lists should also be used.[74]

Brief lists have occasionally been recommended by committees in special fields.[75] It is evident that competent committees could render an invaluable service by constructing, after due deliberation, minimum and expanded lists of books that are most valuable for the various units or problems in the social studies. In any such list, each item should be carefully annotated, indicating the level of ability to which it is adapted and the way in which it is to be used. It should also have a critical statement of its authenticity by a competent scholar in the field.

PRACTICAL PROBLEMS IN THE MANAGEMENT OF COLLATERAL READINGS

THE ASSIGNMENT

The success with which collateral readings are utilized is conditioned largely by the assignment.[76] Among the most

[73]Terman, Lewis M., and Lima, Margaret, *Children's Reading.* D. Appleton and Company, New York, 1931, Chap. XV. See also Washburne, Carleton, and Vogel, Mabel, *Winnetka Graded Book List.* American Library Association, Chicago, 1926; Wilkinson, Mary S., chairman, *The Right Book for the Right Child.* The John Day Company, New York, 1933.

[74]A guide to general finding lists for both elementary schools and high schools is Fargo, *Library in the School,* Chap. VII. An excellent guide to finding lists for elementary schools is *Twelfth Yearbook,* Department of Elementary School Principals, Washington, D. C., 1933, Chap. X. See also *Eighth Yearbook,* Department of Supervisors and Directors of Instruction of the National Education Association. Bureau of Publications, Teachers College, Columbia University, New York, 1935, Chap. III and Appendix.

[75]See, for example, the Report by Joint Committees of the New England History Teachers' Association, the History Teachers' Association of the Middle States and Maryland, and the Teachers' Section of the Mississippi Valley Historical Association, Herbert D. Foster, chairman. *The Historical Outlook* XV (October, 1924), pp. 306–313.

[76]For general references on the assignment, see Yoakam, Gerald Alan, *The Improvement of the Assignment.* The Macmillan Company, New York, 1932; Woodring, Maxie N., and Flemming, Cecile White, "Directing Study through the Assignment," *Teachers College Record* XXXIII (May, 1932), pp. 673–695.

important matters to be decided in this step in teaching are: (*a*) how the problems are to be raised, and particularly the part that pupils take in setting them up; (*b*) the way in which the readings, including the text, are to be subordinated to the problem under consideration; (*c*) the amount to be read; (*d*) the provision for individual differences.

a. Raising the problems.—The efficient use of collateral readings is enormously facilitated by assignments that raise and sharply define the problems with which the readings are concerned.[77] It is also necessary to set up the most important subsidiary problems. The pupil should have a large share in discovering and stating the problems that are to be attacked, for the ability to state a problem clearly is the best evidence that students are ready and competent to work upon it. The teacher, out of his fuller knowledge, however, should guide the students in planning their attack and should suggest important problems that may otherwise be overlooked.

b. Subordination of the references.—Pupils should be led to see that the problems are the end and the references the means. When this is clearly understood, the readings are more highly motivated, the bases of intelligent selection and organization of data are provided, and students evaluate their problems not in terms of the docile reading of required references but in terms of the adequacy of their thought about the problems that have been raised. Unless the readings are subordinated and intelligently related to these problems, study is likely to be little better than a routine chore.

An important part of the plan for the study of a problem is to decide what sources of data are to be used. This part of the

[77]Holmes, Eleanor, "Reading Guided by Questions versus Careful Reading and Re-Reading without Questions," *The School Review* XXXIX (May, 1931), pp. 361–371. Yoakam, *Improvement of the Assignment.*

assignment serves the double purpose of directing students to specific pages in books that bear on the problem and of developing the ability to find references independently. A balance must be maintained between these two values. If thrown completely on their own resources, students often spend so much of the brief study period in the attempt to find books that bear on their problems that there is little time left for study. Marshaling data from a variety of references is no mean task in itself, and it is the solution of the problem that maintains morale in study. Nevertheless, students must develop a knowledge of the principal sources of information and the ability to discover and use them independently. While avoiding a set procedure, many teachers follow the general practice of (*a*) giving specific page references to the most important books that bear on the problem, (*b*) naming some books without page references, in order to develop the ability to skim, and to use the table of contents and the index, (*c*) in the case of some subordinate problems, usually those of lesser importance, encouraging the pupils to find data independently, and (*d*) giving over occasional class periods to specific training in the discovery and use of sources of information.

c. How much students should be expected to read.—Before undertaking to decide how much collateral reading students should do, it may be well to review the status of present practice. There are no available data on the typical practice in elementary schools, and the evidence for high schools is meager. Koos, in 1916, reported that the median number of pages read per semester in high schools of the North Central Association varied from 250 pages in ancient history to 350 pages in American history. The total range in ancient history

was from 0 to 3500 pages and in American history, from 25 to 1500 pages.[78] In 1921 a committee of the Mississippi Valley Historical Association, as a result of questionnaires received from 520 secondary schools, reported that a large proportion of the schools required from ten to thirty pages of collateral reading a week. Many schools were found to make no requirement.[79] Kimmel, in a study made in 1929, reported that the average amount read in high schools of different enrollments in New York State varied from 500 to 900 pages.[80] In the National Survey of Secondary Education, Kimmel points out wide differences in practice, but concludes that collateral reading is apparently not regarded as an integral part of most courses in the social studies.[81] There is no evidence to show that the requirements for collateral reading have increased during the last few years. Nothing but formal and verbalistic teaching is likely to result when reading is limited to the textbook and to the small number of additional pages indicated in these estimates of median practice. Certainly, under these circumstances the values claimed for collateral reading would be realized to a very small degree.

The amount that students can be expected to read is limited, of course, by the time at their disposal. For example, the average weekly time allotment for geography in grade six in

[78]Koos, Leonard V., "History in North Central High Schools," *The History Teacher's Magazine* VII (December, 1916), p. 350. The same data are reported in Koos, L. V., *The Administration of Secondary-School Units.* Supplementary Educational Monographs, Vol. I, No. 3, The University of Chicago Press, Chicago, 1917, p. 101.

[79]Report of the Committee of the Mississippi Valley Historical Association on "Standardizing Library Work and Library Equipment for History in Secondary Schools," Howard C. Hill, chairman, *The School Review* XXIX (February, 1921), pp. 135–150.

[80]Kimmel, *The Management of the Reading Program in the Social Studies,* Chap. XXXII.

[81]Kimmel, William G., *Instruction in the Social Studies,* Bulletin 1932, No. 17, National Survey of Secondary Education, Monograph No. 21. United States Department of the Interior, Office of Education, Washington, 1933.

444 cities is 164 minutes.[82] This, in a crowded weekly program, is the time available for both recitation and study at school. Assuming half of this time to be devoted to the recitation, there remain eighty-two minutes a week for the study of both textbooks and collateral readings. A serious study of the text alone would require more time than this. Little more school time is available for collateral readings at the junior and senior high school levels,[83] probably no more than is needed for a cursory reading of the small number of pages commonly required. For while the time allotment in social studies is larger in junior and senior high schools than in the elementary school, the discussion periods are longer and the texts are larger and more difficult.

No satisfactory estimates can be given of the average rate at which students at each grade level may be expected to read. Wide differences have been shown to exist among students in the rate at which any selection is read for a given purpose. There is really no such thing as a rate of reading for any individual, but rather a large number of rates depending upon many factors, the most important of which are the nature and difficulty of the material and the purpose for which it is read.

In the case of experiments where typical social science material has been read with the knowledge that tests were to be given at the close of the reading, the average reading rates have, in most cases, ranged downward from 250 words

[82]Mann, C. H., *How Schools Use Their Time.* Teachers College Contribution No. 333, Teachers College, Columbia University, New York, 1928, p. 142. For data on time allotment, see Caswell, Hollis L., *Program Making in Small Elementary Schools.* Field Study No. 1, George Peabody College for Teachers, Nashville, Tennessee, 1930; Ayer, Fred C., *Time Allotments in the Elementary School Subjects.* City School Leaflets No. 19, United States Department of the Interior, Bureau of Education, Washington, D. C., 1925.

[83]Puckett, Roswell C., "The Length of the High-School Day," *The American School Board Journal* LXXXIV (May, 1932), p. 52; Koos, Leonard V., *The Junior High School.* Ginn and Company, Boston, 1927, pp. 178–179.

a minute, even at the twelfth-grade level. In one experiment, a sixth-grade class of superior reading ability as measured by standard tests read selections from geography, history, hygiene, and literature at an average rate of 199 words a minute, with a range of from 70 to 329.[84] One group of a hundred college students, told to read a typical reference at the rate at which they would normally read such material, read at an average rate of 235 words a minute. Ten per cent of the students read 350 words a minute or faster, and 10 per cent read 175 words a minute or slower.[85] The rate scores on some of the standard tests, such as those of the older edition of the Iowa Silent Reading Tests, have sometimes been used as measures of reading rate. The ninetieth percentile, the median, and the tenth percentile scores on this test are given below.

Words Read per Minute in Grades VII to XII						
PERCENTILE	7	8	9	10	11	12
90	298	300	303	307	314	318
50	210	215	223	232	240	247
10	147	155	164	176	183	189

While the rate scores on such a test may be useful in identifying students who read very rapidly or very slowly, they should not be taken as indicative of the rate at which students may be expected to read typical assignments in texts or collateral readings. A teacher may get serviceable estimates of the reading rate and comprehension of the different members of his

[84]Crawford, Isabel, *A Study of the Variability of Reading Rates.* Unpublished master's thesis, State University of Iowa, Iowa City, 1936, p. 23.

[85]From unpublished data kindly furnished by Doctor Irving Anderson, State University of Iowa.

class by recording their rates and the accuracy of their comprehension on typical selections read for specified purposes. Such estimates are indispensable, for it is futile to assign more pages than students can read in the time available.

The teaching of the social studies has apparently reached an impasse. There is not time under present conditions for a respectable minimum of collateral readings; yet without these readings, most of the topics and problems included in the course of study cannot be understood. One of the first steps to be taken is a radical decrease in the amount to be taught, for there is no possibility of making adaptations that will enable the pupils to study effectively ten or fifteen difficult topics in a single study period. At the elementary school level there is a tendency to increase greatly the time given to the social studies, and this should be encouraged. There is reason to believe that a radical reduction in the time given to formal subjects would not greatly decrease the efficiency with which abilities in these fields are acquired, providing full use be made of opportunities to develop these abilities as they are needed in the study of the content subjects. For example, if the reading required for the social studies is properly directed, it, in and of itself, will do much to motivate, practice, and maintain the general skills in reading. The problem is not so simple at the high school level where, because of departmental teaching and the rigidities of the requirements of accrediting agencies, the integration between subjects is not so readily made. At this level especially there must be a vast reduction of the topics treated; an increase, if possible, in study time; and a utilization of some of the regular recitation periods for reading and study. Without these adjustments, the teaching of social studies must of necessity be a formal and relatively fruitless undertaking.

Whether or not students should study at home has long been a debated question. Recent as well as earlier investigations have indicated wide variations in practice among schools and among individual students. Regardless of school policy concerning the requirement of home study, many students do study at home. The National Survey of Secondary Education reports that, in the case of over eight thousand pupils in selected schools, the average amount of daily home study, for all subjects, was one hour and thirty-one minutes.[86] Home study is also common at the elementary school level, although the average number of minutes is less.[87] A careful survey of investigations in this field disclosed no data regarding the amount of time spent in the study of social sciences at home. Whether or not home study is definitely required as a policy, a capable teacher may stimulate his students to read the equivalent of several books pertinent to a given course. Biography, travel, historical and contemporary fiction, and interesting detailed accounts of a particular period or problem are especially appropriate for home study. The vitality of instruction in the social studies may be gauged to a considerable extent by the amount and quality of the books that students read outside of school hours.

d. Provision for individual differences.—The range of difficulty and fullness of treatment in the collateral readings used by any class should be commensurate with the range of reading ability, interest, and knowledge of the pupils in that class. As pointed out in the discussion of classification of pupils,

[86]Loomis, A. K., Lide, Edwin S., and Johnson, B. Lamar, *The Program of Studies,* Bulletin No. 17, 1932, National Survey of Secondary Education, Monograph No. 19, United States Department of the Interior, Office of Education, Washington, D. C., 1933, pp. 332–3.

[87]Heck, W. H., "A Study of Home Study," *The School Review* XXIII (November, 1915), pp. 577–606. A number of small studies show that home study is still common at the elementary school level.

there is no provision for individual differences that is so effective and so readily made as this one. The most gifted students should have access to books that are a challenge to their best efforts, and the poorest students should be provided with those that are within their comprehension. Students tend to seek their own level in choosing collateral readings, but the teacher, with his knowledge of the competence of the various students, can be of great service in advising each one regarding the books most likely to be profitable to him. The greater the interest, knowledge, and ability of the student, the more he sees in a problem and the more questions he raises about it. The greater is his need, therefore, for extensive sources of information. The weaker students, however, frequently raise questions that require information not contained in the books they are able to read. One of the most serious needs in instruction in the social studies at all levels, from first grade to college, is the production of books that, while rich in content, are within the reading ability of average and below-average students. This need is especially crucial in the intermediate and primary grades of the elementary school. While it is possible that two or more textbooks of different levels of difficulty might be used advantageously to provide for individual differences among students, better adjustments to these differences can be made by supplying collateral readings appropriate to the various levels of ability.

An illustration of adequate provision for individual differences is given in the following description of an assignment made in a fifth-grade class. According to scores on a standard test, the class ranged in reading ability from fourth- to twelfth-grade norms. The specific problem, a part of a unit on the settlement of the Far West, was: How was California reached by land? The main subordinate problems were: 1. How did

the discovery of gold affect the movement of people into California? 2. By what routes did the people reach California? 3. What were the journeys like? In addition to general references, such as the text, Compton's *Pictured Encyclopedia, The World Book,* and the *Pageant of America,* the following books were available:

Kelty, *The Growth of the American People and Nation.*
Barstow, *Westward Movement.*
Faris, *Real Stories from Our History.*
Burnham and Jack, *Story of America.*
Riegel, *America Moves West.*
Nida and Webb, *Our Country Past and Present.*
Bass, *Stories of Early Times in the Great West.*
Faris, *On the Trail of the Pioneers.*
McMurry, *Pioneers of the Rocky Mountains.*
Branch, *Westward.*
Paxson, *The Last American Frontier.*
Clark, *Westward to the Pacific.*
Webster, *Gold Seekers of '49.*
Eggleston, *Stories of American Life and Adventure.*
Wright, *Children's Stories of American Progress.*

The reference most sought by superior members of the class was Riegel, *America Moves West,* because, as stated by one of these students, it gives the most and best information. This is a college reference. At the low extreme of reading ability, three pupils chose Kelty, *The Growth of the American People and Nation,* and Clark, *Westward to the Pacific.* These books are among the least difficult in the list.

METHODS OF APPRAISAL

In the books and articles on the use of collateral reading, a great deal of attention is given to methods of checking or ap-

praising the reading that the students have done.[88] Among the methods most frequently reported are: oral reports in class, discussion in class, written reports, notebooks, card indices, quizzes in class, written examinations, outlines or digests, and themes. When mechanical or formal appraisals, such as card indices, digests, and written reports, are emphasized too strongly, there is a tendency for the reading to become a mere task to be gotten out of the way as quickly as possible in order to satisfy the requirements of the course. They are less likely to relate the readings to the thinking of the pupils with respect to the content of the course than are those types of appraisal that require the pupil to make use of the data gathered from his reading in the formulation of satisfactory concepts, in contributions to the class discussion, or in written reports in which the readings are subordinated to the treatment of some problem. Formal methods of checking should, therefore, be reduced to a minimum.

THE CRISIS IN INSTRUCTIONAL EQUIPMENT

Teachers cannot be expected to achieve the purposes set up to guide the development of intelligent citizens unless the equipment essential to that development is provided. Yet every investigation of instructional equipment in the social studies has shown that the library facilities in most schools, both rural and urban, and at all levels from the primary grades through high school, are far below the irreducible minimum that is necessary if instruction in the social studies is to be more than a sham and a formality.

In spite of its crucial importance, instruction in social studies fares badly in the school budget. The amount spent on it is

[88]Koos, "History in North Central High Schools," p. 350; Kimmel, *The Management of the Reading Program in the Social Studies*, pp. 42–43; Koos, *The Administration of Secondary-School Units*, p. 103.

ridiculously low in proportion to its importance, the difficulty of the task, and the amount spent for other types of training. The per-pupil expenditures for teaching social studies are among the lowest of all subjects in terms of salaries, maintenance, and equipment. The classes are generally larger than those in science, home economics, or commercial training, the rooms less elaborate, and the equipment decidedly more meager. In one state, for example, the per-pupil cost of instruction in history in 390 high schools, in terms of teachers' salaries, is only slightly more than one seventh of that in vocational agriculture, less than a third of that in manual training, and about three fourths of that in Latin.[89] In many schools, the cost of typewriters alone exceeds the total investment for library books pertaining to the social studies. There is no possible justification for the relative paucity of present expenditures for teaching in this field.

Instructional equipment in the schools of the United States has long been pitifully inadequate, both in quantity and in quality. The *Biennial Survey of Education* for the period 1928–30 shows that the total expenditure for free textbooks and other instructional supplies in all subjects was but 2.9 per cent of the total school budget, excluding the payments on bonds.[90] Because of the way in which budgets are organized, it is difficult to identify the expenditures for various types of instructional equipment, including free textbooks, library books, apparatus, and other supplies, such as paper, ink, and crayon. In many schools, moreover, the item of instructional supplies is apparently a sort of incidental fund; in one instance it was

[89]Evans, A. W., "High-School Costs in Texas in 1924," *The School Review* XXXIV (February, 1926), pp. 100–101. See also Cross, H. A., *Teacher Cost per Pupil for Subjects Taught in Iowa High Schools.* Unpublished master's thesis, State University of Iowa, Iowa City, 1926.

[90]U. S. Department of Interior, *Biennial Survey of Education,* Bulletin No. 20, Washington, D. C., 1931, Vol. II, p. 78.

found to include refreshments for the Parent-Teachers Association.

Obviously the expenditure for library books is but a part of the total expenditure for instructional supplies. The amount spent for these books is absurdly low, either from the point of view of the needs of learning or from the point of view of the amount assigned to other items in the budget. Data are not available for appropriations for reference equipment in social studies alone, but the amount must be insignificant, since the total expenditure for library purposes is very small. Strayer reported that in twenty-four eastern cities, ranging in population from 50,000 to 425,000, the median expenditure for libraries was ten cents a pupil, the range of the middle 50 per cent of these cities being from nothing to forty-eight cents.[91] Slater found that the per-pupil expenditure for library books in the State of Iowa, computed on the average daily attendance, was but thirty-five cents for the year 1921–22, which falls in the era of prosperity. This was less than half of one per cent of the total budget.[92] Wallace reports that the expenditure for 1931–32, ten years later, in the same state was but .23 of one per cent of the total disbursements, not including fifteen cents per child in the school census, which was received from the state for library books.[93] Even with this amount added, however, the total expenditure for library books for all subjects would be less than one half of one per cent of the budget, and only a small part of this pittance is set aside for the purchase of books in the

[91]Strayer, George D. (director), *Report of the Survey of Certain Aspects of the Public School System of Springfield, Mass.* Board of Education, 1924, p. 133.

[92]Slater, Clarence Paul, *The Distribution of a School Budget Based on Average Daily Attendance in the Schools of Iowa.* Unpublished master's thesis, State University of Iowa, Iowa City, 1924.

[93]Wallace, Vaughn Cedric, *A Financial Appraisal of the Present School District Organization in Iowa.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1933.

social studies. Little argument should be required to show, first, that these insignificant expenditures per pupil will not buy a sufficient amount of reference equipment; and second, that the amounts are niggardly as compared with other items in the budget. Schools would still be badly underequipped if they spent three times as much as is now annually appropriated for library books.

Annual expenditure, however, is only one measure of the adequacy of the provision for reference equipment; one must know what books are actually available—the accumulation from past purchases. Although the general library facilities are reported to be fairly adequate in a few schools, both elementary and secondary, those of the average school are exceedingly meager.[94] English teachers, rather than teachers of social studies or of other subjects, are likely to play the dominant part in the building of the school library. Swindler concludes, from the returns of question blanks sent to representative school systems, that only a small percentage of schools have anything like an adequate number of books in the social studies, and that in many cases more than half the scanty supply of books are "dead timber."[95] The best existing evidence indicates that very few schools possess library equipment that makes possible even a modest fulfillment of the eight essential functions of collateral readings that were earlier discussed.[96]

The impoverished equipment in social studies cannot be attributed solely to retrenchments made necessary during the

[94]Johnson, B. Lamar, *The Secondary-School Library,* National Survey of Education, Monograph No. 17, United States Department of the Interior, Office of Education, Washington, D. C., 1933, p. 105; *Twelfth Yearbook,* Department of Elementary School Principals, Chap. II.

[95]Swindler, R. E., "The High School Library and Reading Problems in the Social Studies," *The Historical Outlook* XXII (December, 1931), pp. 407–416. See also Kimmel, *Instruction in the Social Studies,* Chap. VII; Swindler, *Social Studies Instruction in the Secondary Schools,* Chap. VI.

[96]See pp. 229–243.

depression period, for, as has been shown, the expenditures during the era of prosperity were only a fraction of what is required for sound teaching. There have been, of course, many schools in which necessities or policies of retrenchment made it impossible for teachers to secure adequate equipment. In some localities, not even textbooks could be provided, and in others, the schools were actually closed. Not infrequently, however, expenditures for books were eliminated not because the money was not available but because the teachers or administrative officers preferred to spend it in other ways. During the worst years of the depression, publishing companies reaped a golden harvest from the sale of workbooks in social studies, which, at their best, serve a very limited purpose, and at their worst, frustrate rather than facilitate instruction. In some cases, expenditures for workbooks exceeded those for all other instructional supplies aside from textbooks. Money was also diverted, during the depression, for many other purposes. In one system, where the salaries of teachers had been shamefully reduced and where the expenditures for reference equipment were nil, an ornamental fence, costing several thousand dollars, was built around the school grounds. The expenditures for other needs, admittedly important but far less crucial than library equipment, were much less curtailed and in some instances actually increased. The superior library equipment found in a few schools as compared with the impoverished facilities of others of like income suggests that this equipment is primarily a matter of a long-time intelligent policy.

POLICIES WITH REGARD TO LIBRARY PURCHASES

Since funds for library purchases are very limited in most schools, it is necessary to have a well-defined policy as to the way in which the money is expended. The purchases of paral-

lel texts and workbooks can hardly be justified until other more essential needs have been satisfied. If the budget permits, it is well to have duplicate copies of the most important collateral readings, but if it is limited, it is probably better to have a larger list of individual copies than duplicates of a few. Even if only a single copy of a valuable book is available, important parts may be read aloud by the teacher or by members of the class. The time taken from either the study period or class discussion for such reading is easily justified. For example, during the study of the early years of the national government, a half-hour devoted to reading aloud the accounts that travelers gave of George Washington will be well spent.[97]

The library policy should certainly include a long-time plan for purchasing general references, such as yearbooks, atlases, and encyclopedias. The need of materials on different levels of difficulty has already been pointed out. Any plan for providing for collateral readings that does not meet this requirement is seriously deficient.

There is considerable waste involved in the purchase of a whole book, much of which is of little use, in order to get a few pages that bear on some problem. This difficulty may be met in two ways: first, by publishing small books or pamphlets that contain the essential treatment of a single unit, and second, by publishing volumes of assembled references, as earlier suggested. The former plan probably allows for more elastic adjustment to instruction; the latter is probably more systematic and economical. Neither of these plans is new. The publication of books or booklets on small units has gone on steadily for many years, and is receiving new impetus.[98]

[97]Excellent selections are given in Nevins, *American Social History*, pp. 28–35; 54–56.

[98]Note the pamphlets put out under the auspices of the American Council of Education, under the direction of Doctor Charles Judd.

Assembled references, such as source books, readings, and geographical or historical readers, have long been used, but most of these books are deficient in completeness and systematic arrangement.

The library facilities of the school may be greatly expanded by co-operation with city, county, and traveling libraries. The many forms of co-operation that are in common use in cities cannot be discussed here.[99] Very helpful plans have also been inaugurated to meet the needs of rural schools.[100]

A great variety of procedures are followed in making books available to pupils within the school itself.[101] The practice of placing books in the classrooms, either as a permanent library or during the study of the unit to which they pertain, should be definitely encouraged. No other plan so greatly facilitates the integration of collateral reading with instruction. It should not exclude, however, the regular use of the central school library and the public library, where these exist, since the development of the ability to utilize library facilities is an important objective in teaching the social studies.

The availability of instructional equipment is one of the most important items to be considered before making any change in a curriculum. The more radical the change, the more this is true. It is inevitable and desirable that the curriculum should be reconstructed from time to time as a result of re-appraisals of the social heritage in the light of present and probable future values; but to attempt to put any change of content or organization into effect until adequate instruc-

[99]For a description of the most common patterns, see *Thirty-sixth Yearbook*, National Society for the Study of Education, Chap. VI. See also Johnson, *The Secondary-School Library*, Chap. X, and the *Twelfth Yearbook*, Department of Elementary School Principals, Chap. V.

[100]*Twelfth Yearbook*, Department of Elementary School Principals, Chap. VIII.

[101]See Johnson, *The Secondary-School Library*, Chap. VI; *Twelfth Yearbook*, Department of Elementary School Principals, Chap. VI.

tional equipment has been made available is exceedingly wasteful. Unless such material is provided, teachers and pupils flounder and learning is likely to be superficial both in content and in method.

To neglect the factor of equipment is to invite disaster. The most restricted list of educational objectives in the social studies cannot be attained with the impoverished equipment that exists in the great majority of our schools. The total cost of teaching the social studies, as well as expenditures for equipment, has been shown to be low in comparison with most other fields of the curriculum. Yet both from the standpoint of the quality of teaching demanded and from the standpoint of the equipment needed, social studies rank second to none. Perhaps teachers in this field have not seen with sufficient clearness the impossibility of teaching their subjects without adequate library and other facilities. A teacher of social studies can no more attain his objectives without adequate library facilities than the teacher of music can develop an orchestra without instruments. Instructional equipment should be one of the first and most important things to be considered in making up the school budget, and certainly this item should be among the last to be curtailed in an enforced economy program. Intellectual honesty demands either that we cease pretending that we are accomplishing the purposes set up to guide instruction in the social studies or that we provide the requisite equipment.

Chapter VII

THE USE OF IMAGINATIVE LITERATURE

Systematic instruction in history and other social studies is but one of many agencies that mold the character and determine the nature and quality of social intelligence. It may be either supplemented or offset by instruction in other subjects, by the spirit of organization of the school, by the impingement of the intellectual and moral climate of a community, and by the out-of-school activities of the individual. Teachers of social studies must view in this perspective their opportunities and responsibilities for broad social education.[1]

The influence of general reading is a case in point. Of all the subjects not traditionally included under the social studies, none is more intimately affiliated with them than literature. This close relationship is particularly significant because of the large amount of time given to literature in the school program. Add to this the dominance of fiction in the leisure-time reading of both children and adults, and the potential force of the ideas gained from imaginative literature is clearly apparent. Moreover, the intellectual diet of the average reader—either immature or adult—contains little social knowledge that is substantial or scholarly.

These conditions are a challenge to the teacher of social studies and cannot safely be ignored. He must reckon with ideas, interests, and attitudes developed through literature and general reading. He must realize that the average reader

[1]It was brought out in the deliberations of the Commission, of whose reports this volume is one section, that all subjects are, in a broad sense, social studies.

could not, even if he saw the reason for it, unscramble from the social ideas secured from fiction, those obtained from history itself. He must decide what literary selections, if any, he will include among the suggested or required readings. He must determine what use to make of the books read in the literature class that bear on the ideas and attitudes he is seeking to develop. He must establish some standards for selecting and appraising imaginative writings with respect to their historical as well as their literary value.

The use of literature in teaching geography, history, and other social studies has been generally accepted in both American and European schools. It was recommended by the Committee of Ten, in addition to the Committee's strong emphasis on the need for the study of sources and for extensive collateral reading. It was stimulated also by various theories, which have been very prominent in American education for more than thirty years, advocating a closer relationship between various school subjects. No doubt some teachers were led to turn to literature because they recognized the meagerness, barrenness, and lack of color in textbooks and were faced with a dearth of suitable reference materials. Perhaps they sensed, also, the elements of common purpose in literature and social science—an affinity that becomes greater when the classics of literature at their best and the classics of social science at their best deal with social life and culture.

RELATIONSHIP BETWEEN HISTORY AND LITERATURE

The following discussion deals chiefly with history and fiction, partly because of the marked attention that has been given to the relationship between them, and partly to secure simplicity of treatment. The major issues of this relationship, however, are similar to those that are involved in the rela-

tionship between fiction and the other social studies, and between drama or poetry and any of the social studies.

Many of the great works of history are also great literature, and one part of the study of literature is its history. Biography, memoirs, travels, letters, journals, and diaries are at once history and the materials with which the historian works. Such literary monuments are not merely helpful but essential in the study of social studies, and they are rightly included, as shown earlier, among collateral readings at all levels of instruction. There is no disagreement as to the value of such source materials; the controversies center around the use of such imaginative writing as drama, poetry, and especially prose fiction.

From earliest times history has been closely related to literature.[2] Until the scientific movement of the nineteenth century turned the attention of historians to new purposes and to new methods, history, according to James Harvey Robinson, had been considered for the most part merely "a branch of general literature, the object of which has been to present past events in an artistic manner, . . ."[3] But while it is true that literature and history have much in common, there has been, nevertheless, a distinction between them in the minds of the writers in both fields. Herodotus, who has been called the father of history, was not averse to telling a good tale, but he was critical of matters of fact to a degree that was in marked contrast to the credulity of his time. A distinction between literature and history was more explicitly shown in the theory and prac-

[2]Shotwell, James T., *An Introduction to the History of History.* Columbia University Press, New York, 1923.

[3]Robinson, James Harvey, *The New History.* The Macmillan Company, New York, 1918, p. 27. Benedetto Croce, in his *History, Its Theory and Practice* (Harcourt, Brace & Company, New York, 1923, pp. 34–41), makes an interesting distinction between true history and poetical history in which the imagination is given freer play.

tice of Polybius, who insisted that, ". . . an historian's object should be not to amaze his readers by a series of thrilling anecdotes, nor should he aim to produce speeches which *might* have been delivered, nor to study dramatic propriety in detail, like a writer of tragedy. On the contrary, his function is, above all, to record with fidelity what was actually said or done, no matter how commonplace it may be."[4]

Yet it should not be assumed that history tells the truth while literature does not; the difference is rather in the kind of truth that is told and in the art of telling it. Even before Polybius' time, Aristotle wrote, "The poet and the historian differ not by writing in verse or in prose. The work of Herodotus might be put into verse, and it would still be a species of history, with metre no less than without it. The true difference is that one relates what has happened, the other what may happen. Poetry, therefore, is a more philosophical and a higher thing than history: for poetry tends to express the universal, history the particular. By the universal I mean how a person of a certain type will on occasion speak or act, according to the law of probability or necessity. . . . The particular is—for example—what Alcibiades did or suffered."[5] The historian does not, of course, limit his writing to the relating of events—to particular truth in the Aristotelian sense. Most of what he writes deals with relationships, causes, conditions, and evaluations; *i.e.*, with general truth.

Fidelity to life has remained a major canon of literary criticism; it is even more significant as a criterion for ap-

[4]Quoted by Robinson, *The New History*, p. 28.

[5]Aristotle, *Poetics*, Part IX, Articles 1 to 4. Translation by Butcher, S. H., *Aristotle's Theory of Poetry and Fine Art*, Fourth Edition, Macmillan and Co., Ltd., London, 1932, p. 35.

The exact interpretation of this much-quoted statement has been the subject of much controversy. This way of contrasting history and literature has been sharply criticized in Teggart, Frederick J., "Prolegomena to History," *University of California Publications in History* IV (1916–1917), pp. 190–195.

praising the contribution of literature to history. For if the reader is to sense the atmosphere of a place and period, to live in imagination with the people, to feel the drama of their lives, to understand their thoughts, and to achieve a sympathetic insight into their attitudes and emotions, it is imperative that the portrayal be authentic. Whatever license may be permitted a novelist, poet, or dramatist from the point of view of literature, there must be reasonable fidelity to truth in all selections that are to be used for purposes of instruction in history. A novelist's description may be clear and vivid and yet be true neither to fact nor to life. His narrative of a period may give a compelling sense of atmosphere and yet that atmosphere may be quite false. He may create an impressive picture of the life of some remote time, but a picture that in detail and in general effect is wholly erroneous. Herein lies the danger in the use of fiction in teaching history. The crux of the whole problem seems to be the degree to which fiction tells the truth.

For an evaluation of the adequacy of fiction in portraying social life, it is fitting that we turn chiefly to the historian, the critic, and the literary artist, all of whom differentiate between fiction in which the writer, consciously or unconsciously, deals with what is going on in his own time, and that in which he reconstructs or refers to the events, persons, or manners of a former time. The former is called contemporary fiction; the latter, historical fiction. Thus, *Uncle Tom's Cabin* is contemporary fiction, and *Ivanhoe* is historical fiction.

CONTEMPORARY FICTION

The best contemporary fiction, as well as other forms of contemporary literature, is gaining recognition not only as acceptable historical source material but also as a means of

enriching the teaching of history in the schools. Literary critics and historians are agreed that literature reflects, of necessity, the life, thought, and attitudes of the period in which it is written. Indeed, a writer cannot shake off entirely the influence of his generation even by conscious effort. So inescapable is this influence that the interpretations of other ages, whether in the form of historical treatises or in the form of fiction, often throw more light on the time of the author than on the period about which he writes. As Brander Matthews observes, ". . . no man can step off his own shadow."[6]

Since contemporary fiction is here examined for its contribution to history, it is well to consider first the opinions of historians. Trevelyan values it highly:

"Just because Homer, Shakespeare, and Fielding copied from the life of their own day, their work, as historical evidence, has a value entirely lacking to the historical novel proper. They give evidence, not indeed as to particular events, but as to the manners, thought, and customs which they knew so well, revealing just those psychological shades in which chronicles and legal or economic records are deficient. . . .

"The views not only of ordinary readers but of historical specialists have been deeply affected by Smollett, Fielding, and Miss Austen, as regards the manners of the squirarchy and other classes in South England in the early and late eighteenth century, respectively."[7]

Robinson writes in a similar vein: "Matters can not at this late date be arranged to suit the historian's needs, but it is

[6]Matthews, Brander, *The Historical Novel and Other Essays.* Charles Scribner's Sons, New York, 1901, p. 13.

[7]Trevelyan, George M., "History and Fiction," *The Living Age* CCCXIII (June 3, 1922), pp. 568–569.

clear that the lack of novelists through the ages is a fact he must mourn. As matters are, I prefer Chaucer to Stubbs's *Select Charters,* and Shakespeare to Gee and Hardy."[8]

Using Whitman and Emerson as examples of writers who embody the spirit and aspiration of their time, Curti asserts, "There is thus indelibly inscribed in Whitman and Emerson the spiritual counterpart of our western movement, of the economic process of our country's development. . . . Yet it is but one example of the correlation of literary expression with history."[9]

Rhodes concurs with this idea in referring to a near-contemporary novel:

"What I have attempted in the way of colour when touching upon South Carolina and Charleston has been completely and artistically done by Owen Wister in 'Lady Baltimore.' Every student of the South during the period of Reconstruction will have his knowledge clarified and his judgment informed by a study of this delicate portrayal of the people of Charleston. Through the charm of a skilfully constructed story, he will be made to see life as it is and as it was."[10]

York Powell is quoted by Trevelyan as saying that "Balzac's novels form the best history of 1830." Commenting on this statement, Trevelyan adds, ". . . I should not call Balzac an historian. But he has certainly left us a great historical document on France in the thirties."[11] These selected quotations from historians are typical of many more examples that could be cited.

[8]Robinson, James Harvey, "The Newer Ways of Historians," *The American Historical Review* XXXV (January, 1930), p. 255.

[9]Curti, M. E., "Literature in the Synthetic Study of History," *The Historical Outlook* XIII (April, 1922), p. 129.

[10]Rhodes, James Ford, *History of the United States from the Compromise of 1850,* Vol. VI. The Macmillan Company, New York, 1910, p. vii.

[11]Trevelyan, "History and Fiction," pp. 569–570.

The historian is not alone in recognizing the contribution of contemporary fiction to history. In the opinion of Baker, who has produced one of the best guides to historical fiction, "The inclusion of Fielding's, Jane Austen's, and George Eliot's novels, and other contemporary or nearly contemporary portrayals of life and manners, requires no defence: these are, of course, the finest histories of society available for the periods to which they belong, and the student who neglects them will have a very lifeless and imperfect knowledge of his subject."[12]

In the introduction to his well-known *History of English Literature,* Taine writes:

"It was perceived that a work of literature is not a mere play of imagination, a solitary caprice of a heated brain, but a transcript of contemporary manners, a type of a certain kind of mind. It was concluded that one might retrace, from the monuments of literature, the style of man's feelings and thoughts for centuries back. . . .

"Pondering on these modes of feeling and thought, men decided that in them were embalmed facts of the highest kind. They saw that these facts bore reference to the most important occurrences, that they explained and were explained by them, that it was necessary thenceforth to give them a rank, and a most important rank, in history."[13]

Nor can the historian overlook the significance of the tone or mood of a period, which the poet catches and reflects in the heightened colors of verse. The large number of available anthologies of historical poetry give evidence of the sig-

[12]Baker, Ernest A., *A Guide to Historical Fiction.* George Routledge and Sons, Ltd., London, 1914, p. vii.

[13]Taine, H. A., *History of English Literature,* Vol. I. Chatto & Windus, London, 1899.

nificance attached to it.[14] Of the poetry written "so to speak, from the inside, on the spot," Stevenson claims, ". . . 'The Star-Spangled Banner' is the most famous example, as well as perhaps the best. Even at this distant day, reading it with a knowledge of the circumstances which produced it, it has a power of touching the heart and gripping the imagination which goes far toward proving the genuineness of its art."[15] Just because of its greater emotional appeal, poetry is a very important additional means of gaining insight into the feelings, aspirations, and spirit of a people.

In using contemporary imaginative literature, especial care must be taken to correct and offset the biased and restricted views of a single author. Archer, Owen, and Chapman, however, hold that even these restricted views are useful: "Chaucer and the author of *Piers Plowman* give a different impression of contemporary England, but both impressions are necessary to our appreciation of their age. Friars may not have been so black as Piers Plowman paints them; but the fact that sincere laymen could so regard them is itself an important feature of the time."[16]

Many novels are written with an avowed purpose that inevitably influences the author in the selection and treatment of his material. Dickens, for example, took every possible opportunity of showing the want of sanitary improvements in the neglected dwellings of the poor.[17] Fiction may be the medium

[14]Among the more valuable collections of historical poetry are: *English History Told by English Poets,* compiled by Katharine Lee Bates and Katharine Coman. The Macmillan Company, New York, 1902; *American War Ballads and Lyrics,* edited by George Cary Eggleston. G. P. Putnam's Sons, New York, 1889; *Poems of American History,* collected and edited by Burton E. Stevenson. Houghton Mifflin Company, Boston, 1922.

[15]*Poems of American History,* p. xi.

[16]Archer, R. L., Owen, L. V. D., and Chapman, A. E., *The Teaching of History in Elementary Schools.* A. and C. Black, Ltd., London, 1916, p. 79.

[17]Crotch, W. W., *Charles Dickens, Social Reformer.* Chapman and Hall, Ltd., London, 1913.

of expression for either the radical or the reactionary. The partisan emphasis that must of necessity result in either case is an influence against which the reader must guard himself. Bias, whether unconscious or deliberate, is not, however, limited to fiction; histories also have been written for definite purposes. It is essential, in any case, to know the author's intent.

In short, the results of a searching examination into the opinion of both historians and critics lead to the conclusion that contemporary fiction, poetry, and drama are important source materials. Used intelligently, interpreted judiciously, and checked carefully against other sources, such literature broadens one's conception of a people and a period. How these materials should be selected and used will be discussed later.

HISTORICAL FICTION

Although the value of contemporary literature to historical study is generally admitted, it is the historical novel, drama, and poem that have been most used in the teaching of history. It is easy to see why this should be. For whether a writer attempts with the utmost conscientiousness to reconstruct the life of some past epoch, or whether he merely places his characters in the background of a period earlier than his own, the fact that his narrative is *about* the past suggests its use to teachers.

Literature of this type has invited the critical evaluation of the historian and has aroused widespread disagreement. A sizable bookshelf could be filled with the publications on this controversy, even if limited to the most penetrating discussions. A canvass of the arguments reveals a wide variety of opinion, ranging from hearty endorsement to thorough disapproval. In this controversy, moreover, most writers,

whether they praise or condemn historical fiction, so qualify their statements that it is impossible to make an exact alignment of their positions. The interpretations that follow, as well as the actual quotations cited, while meant to be fairly representative, should be regarded as invitations to read the complete statements of the critics themselves.

The task of the writer of historical fiction is admittedly difficult. Like the historian, he is confronted with the problem of securing adequate source materials; but while the historian may leave gaps in his narrative where data are lacking, the novelist or dramatist is forced by the demands of his plot and characterization to fill in such gaps as best he can. He is pre-eminently occupied, moreover, with that part of history most neglected in the works of the historian and so difficult to reconstruct—the motives, desires, feelings, atmosphere, and concrete circumstances of social life. In comparing the best reconstructions of the historian and of the writer of fiction, Baker points out that, "Neither can possibly be more than an approximation to the reality; neither can help us to anything but a partial realization of the past which is no more. This, it has been pointed out over and over again, is, in its fullness and vitality, utterly beyond our grasp. We can never put ourselves in the place of an early Victorian, much less of an Elizabethan or a man of the Stone Age. . . ."[18]

The pervasive influence of the mood and perspective of his own time is felt by the novelist, as by the historian, when he attempts to interpret and rebuild the past. Canby, for example, believes, "Historical fiction, like history, is more likely to register an exact truth about the writer's present than the exact truth of the past. The romantic Scott saw the Middle Ages in a golden haze, the moral Hewlett and the still more

[18]Baker, *Guide to Historical Fiction*, pp. viii–ix.

moral Tennyson, as a conflict of nobility with barbarous instincts, the realist Feuchtwanger sees them as a stew of politics, sensuality, greed, and stupidity."[19] It is obviously difficult, as Trevelyan points out, ". . . when we cannot know what the people were really like . . . to fashion substitutes out of our own modern experience."[20]

The writer of historical fiction is handicapped also by the limitations of the reader. In order to grip the imagination and to create the "illusion of reality," which is the art of fiction, the novelist must use language, sentiments, and settings that are reasonably familiar to his readers, not too difficult for them to understand, and not repulsive to their modes of thought. Otherwise he will fail conspicuously in his appeal. How well he succeeds in portraying the circumstances and atmosphere of earlier times depends not only upon his fidelity to sources of dependable data but also upon his command of the art of fiction. Thus Davis, who objects to the falsification of the facts of history, criticizes certain stories that, in his opinion, deserve an award of merit as historical reconstructions, but fail as works of art because the basis of their emotion is meaningless to the reader.[21]

The reader should approach the historical novel with a different attitude from that with which he undertakes the study of history. Gooch asserts, "No self-respecting historian would ever dream of suggesting that fiction, however conscientious and erudite, could provide a substitute for genuine historical study. If, however, we bear in mind that we are only in the outer courts of the temple of truth, that it is the privilege and

[19]Canby, Henry Seidel, "What is Truth?" *Saturday Review of Literature* IV (December 31, 1927), p. 481.

[20]Trevelyan, "History and Fiction," p. 567.

[21]Davis, Elmer, "Dealing with the Ancients," *Saturday Review of Literature* IV (July 21, 1928), pp. 1045–1047.

indeed the duty of the author to give rein to his imagination, and that his object is rather to stimulate interest than to solve problems, there is no reason why we should not take full advantage of the delights which historical novelists in our own and other countries provide for us in rich profusion."[22]

Regarding the point of view of the reader and the benefits he should derive from historical fiction, Butterfield advises, "When a reader comes to the historical novel he is not, or ought not to be, ignorant of the fact that it is a form of fiction that he is reading, and that history in it is mixed with inventions in a proportion which he cannot be expected to estimate with any precision. . . . The real justification of the novel as a way of dealing with the past, is that it brings home to readers the fact that there is such a thing as a world of the past to tell tales about—an arena of vivid and momentous life, in which men and women were flesh and blood, their sorrows and hopes and adventures real as ours, and their moment as precious as our moment."[23]

Although the fiction, drama, and poetry that deal with the past cannot be appraised by the canons of historical scholarship alone, any consideration of the value of these types of literature for instruction in history must involve an inquiry into the authenticity of the reconstruction and the care taken by the author in gathering and interpreting the materials with which he works. Ford, who was both a novelist and an historian, held that, ". . . a novel is historical or unhistorical because it embodies or does not embody the real feelings and tendencies of the age or generation it attempts to depict, and in no sense because the events it records have happened or the

[22]Gooch, G. P., "Historical Novels," *Contemporary Review* CXVII (February, 1920), p. 204.

[23]Butterfield, H., *The Historical Novel.* Cambridge University Press, Cambridge, 1924, pp. 95–96.

people it describes have lived . . . the great historical novel in the past has not been notable because of its use of historical events and characters, but because of its use of an historical atmosphere, such as Scott created in his Ivanhoe and Thackeray in his Esmond."[24]

The illusion of reality thus created may, of course, fall short of historical truth. For only to a limited extent, as has been shown, can the novelist recapture the spirit of other times. Yet without such aid most persons would have neither the incentive nor the background to make any reconstruction whatever. To the degree that it is considered important to create a sense of atmosphere, it is important that such atmosphere be authentic.

While many historians agree that fiction may give atmosphere, they differ both in their judgment of the value of specific works and in the degree of their approval of such writing in general. "These Historical Novels," wrote Carlyle of the Waverley Novels, "have taught all men . . . that the bygone ages of the world were actually filled by living men, not by protocols, state-papers, controversies, and abstractions of men."[25] In a discussion of fiction as supplementary reading in history, Channing, Hart, and Turner maintain,

"Historical events and movements are frequently fixed in the memory by the perusal of books which may be inaccurate in themselves, especially as to details, but which nevertheless leave a permanent and reasonably correct impression on the mind of the reader. Thus Keats's famous sonnet, in which he made the conqueror of Mexico discover the Pacific Ocean, could not well be less in accordance with the historical fact;

[24]Ford, Paul L., "The American Historical Novel," *The Atlantic Monthly* LXXX (December, 1897), p. 724.

[25]Quoted by Nield, Jonathan, *A Guide to the Best Historical Novels and Tales.* The Macmillan Company, New York, 1929. Title page.

but it enforces the charm of discovery more intensely than the reading of many original letters and reports could do."[26]

Many historians are inclined to be charitable regarding errors in matters of detail, provided an essentially accurate general impression is given, but few are so lenient as these authors.

"Historical fiction," according to Trevelyan, "has done much to make history popular and give it value." Nevertheless, he warns, "Historical novels, even the greatest of them, cannot do the specific work of history; they are not dealing, except occasionally, with the real facts of the past. They attempt instead to create, in all the profusion and wealth of nature, typical cases imitated from, but not identical with, recorded facts. In one sense this is to make the past live, but it is not to make the facts live, and therefore it is not history."[27] Likewise Belloc sees both the limitations and the value of fiction, for he says that even though a work has ". . . all the excellences required of a novel but fails on its historical side, it does more harm than good." But he continues, ". . . a good historical novel—that rarest of rare things—is the best educational instrument imaginable. To know the past, or even a section of the past, is to add dimension to experience."[28]

Other historians and critics place a lower value on the contributions of historical fiction and are less willing to overlook offenses against historical accuracy. In spite of such notable exponents as Flaubert, Dumas, and Chateaubriand, historical fiction has not been so highly regarded in France as in England and America. Langlois and Seignobos evidently hold the

[26]Channing, Edward, Hart, Albert B., and Turner, Frederick J., *Guide to the Study and Reading of American History.* Ginn and Company, Boston, 1912, p. 182.

[27]Trevelyan, "History and Fiction," p. 565.

[28]Belloc, H., "The Character of an Historical Novel," *The London Mercury* IX (November, 1923), p. 37.

historical novel in very low esteem, as they do the romantic treatment of history itself.[29]

The Australian historian Scott states, "The historical novelist does not bind himself to verities if it suits his artistic purpose to depart from them," and adds that unless historical novels are critically examined for ". . . anachronisms and departures from historical truth . . . they are likely to be causes of misleading rather than guides to understanding."[30]

Among the most adverse of the American critics is Brander Matthews, whose evaluation of the historical and contemporary novel is very much to the discredit of the former.[31] Jenks, although praising historical novels at their best, warns that they ". . . must be based, just as much as History itself, on as complete a knowledge of facts as the evidence permits."[32] One of the most distinct difficulties to be faced by the historian, according to Ford, is ". . . the existence of preconceived ideas of many historical characters, due solely to the novelist and dramatist."[33]

The illustrative quotations that have been given must suffice if this section is to stop short of an anthology of criticism of historical fiction. The diversity of opinions concerning the merits and demerits of historical fiction is indicated in Johnson's remark: "The teacher who desires to prove either side by citations of opinion will find no lack of distinguished support."[34] Nevertheless, it is clear that the trend of opinion,

[29]Langlois, Charles V., and Seignobos, Charles, *Introduction to the Study of History.* Henry Holt and Company, New York, 1932, pp. 296–315.

[30]Scott, Ernest, *History and Historical Problems.* Oxford University Press, London, 1925, pp. 137–138.

[31]Matthews, *Historical Novel,* pp. 3–28.

[32]Jenks, Edward, "History and the Historical Novel," *The Hibbert Journal* XXX (January, 1932), p. 342.

[33]Ford, "American Historical Novel," p. 727.

[34]Johnson, Henry, *Teaching of History in Elementary and Secondary Schools.* The Macmillan Company, New York, 1928, p. 404.

not less among historians than among literary critics, is that the best examples of historical fiction do contribute materially to the reader's insight into past times.

The criticisms of the historians are not more severe than those of the literary critics or the novelists themselves, and they emphasize the same strengths and weaknesses. The achievements most generally claimed for historical fiction are that it: (1) gives atmosphere, (2) shows more vividly and intimately the bearings of past conditions upon the people, (3) enables the reader to enter imaginatively into the experiences of past times, and (4) stimulates an interest in historical study. All this is achieved by an art of selection and emphasis that is in principle not unlike that of the portrait painter. The weaknesses and limitations most commonly pointed out are: (1) the inadequacy of the sources from which reconstructions are built, (2) the distortion and false color caused by interpreting the past from the point of view of the writer's own time, (3) the bias of a limited point of view or purpose, and (4) the necessity for meeting the demands of a well-rounded plot even though historical data are lacking. It is frankly recognized, however, that all but the last of these weaknesses exist also in varying degrees in historical works themselves.

PEDAGOGICAL VALUE OF IMAGINATIVE LITERATURE

Most of the writers to whose critiques reference has been made in the preceding paragraphs have not been interested primarily in the appraisal of fiction for the specific use of instruction in school; their evaluations are, nevertheless, fundamental to its selection and use in teaching. There are, however, historians, makers of guides to reading, and writers

on methods of instruction who have been concerned particularly with its use in teaching the social studies. The appraisals of fiction for this definite purpose exhibit the same diversity and trends of opinion already noted in the critiques of its use for the purposes of history in general. It is not strange that this should be so, for instruction must proceed within the limits of the potentialities and weaknesses pointed out by historical and literary critics. If a novel or poem does not present an accurate or adequate picture of the period with which it deals, its deficiencies are not likely to be removed by methods of teaching.

Historians are of divided opinion concerning the instructional value of historical fiction. The books on methods of historical study and research, such as those by Vincent[35] and Langlois and Seignobos,[36] have little to say about the pedagogical uses of imaginative writing and do not value it highly for advanced study. Johnson believes that history and literature are radically different both in spirit and in purpose and is convinced that, "The value of history is not, in any event, to be realized by teaching literature. The duty of those who profess to teach history is to teach history."[37] Firth takes a somewhat more favorable position. He asserts, "There is a general agreement amongst teachers as to the value of historical novels, however much they may differ concerning the merits of particular specimens. . . ."[38]

A number of guides to historical readings contain sections on fiction that give recommended titles and also statements

[35]Vincent, John M., *Historical Research: An Outline of Theory and Practice.* Henry Holt and Company, New York, 1911.

[36]Langlois and Seignobos, *Introduction to the Study of History.*

[37]Johnson, *Teaching of History*, p. 406.

[38]Quoted in Nield, *Guide to Best Historical Novels*, opposite p. 1. See also Firth, C. H., *Historical Novels*, Leaflet No. 51, The Historical Association, London, 1924.

of the place of such reading in teaching. That by Channing, Hart, and Turner, which has long been a handbook for students of American history, assigns a place, although a subordinate one, to historical fiction, and gives a short list of novels, poems, and ballads, in which, unfortunately, ". . . no attempt is made to separate the works based on sound study from those which may justly be classed with fiction. . . ."[39] Even in the case of books that are not free from historical inaccuracies and anachronisms, the authors say, "Certain it is that for all pupils and students of American history such books are useful in connection with accurate textbooks, with other secondary accounts, and especially as adjuncts to a moderate use of the sources which tell the same tales more simply."[40] In the English *Handbook for History Teachers,* edited by Dymond, the usefulness of fiction is assumed as a matter of course, although the need for care in selecting books is emphasized.[41]

Special guides to fiction are uniformly enthusiastic regarding the potential value to be obtained from the study of historical fiction. Perhaps this is to be expected, since their preparation was apparently motivated by a belief that fiction contributes materially to historical information and insight. It would hardly be supposed that those of the opposite conviction would spend time in such an undertaking.

The use of literature is commended, with varying reservations, by most writers on the teaching of history;[42] writers of textbooks frequently give tacit approval by including novels,

[39]Channing, Hart, and Turner, *Guide,* p. 183.

[40]*Ibid.,* p. 183.

[41]Dymond, Dorothy (ed.), *A Handbook for History Teachers.* Methuen and Co., London, 1930, Section VI.

[42]Firth, Catherine B., *The Learning of History in Elementary Schools.* Kegan Paul, Trench, Trubner & Co., Ltd., London, 1932, pp. 128–140; Johnson, *Teaching of History,* pp. 397–406; Kendall, Calvin N., and Stryker,

stories, and poems among the suggested supplementary readings. Many of the claims made in the discussions on the pedagogical worth of historical fiction are similar to those advanced for its general cultural value. These claims fall into two main groups: it is said, first, to give atmosphere and to make history living and real; second, to attract the pupil to history and to make the subject more interesting. In addition, it is sometimes held that it aids in fixing past events in the memory.

Any decision regarding the use of fiction depends upon complete understanding of the nature and purposes of a particular unit of instruction. If, for example, the student's problem is to form an accurate idea of the types and distribution of industries in the United States in various periods, his chief dependence should be placed upon authoritative sources of information, such as the *Atlas of the Historical Geography of the United States.*[43] But if the purpose is to people an era with real individuals and to share imaginatively in their thought, their feelings, their conquests, and their tragedies, the best historical fiction can be a valuable supplement to the systematic treatises.

By their very nature and definition the social studies and geography deal with men and their problems; yet the individuals, for the most part, do not appear as real persons, but

Florence E., *History in the Elementary School.* Houghton Mifflin Company, Boston, 1918, Chap. VII; Knowlton, Daniel C., *History and the Other Social Studies in the Junior High School.* Charles Scribner's Sons, New York, 1926, pp. 132–141; Tryon, Rolla M., *The Teaching of History in Junior and Senior High Schools.* Ginn and Company, Boston, 1921, Chap. IX; Wayland, John W., *How to Teach American History.* The Macmillan Company, New York, 1914, Chap. III.

[43]Paullin, Charles O., *Atlas of the Historical Geography of the United States.* Carnegie Institution of Washington Publication, No. 401. Published by the Carnegie Institution of Washington and the American Geographical Society of New York. Printed by A. Hoen and Company, Inc., Baltimore, 1932.

as mere figures and abstractions: the number of killed and wounded in the battle of Gettysburg; the population of Chicago in 1870; the average income of tenant farmers in the Middle West. Not only the people but movements and conditions are presented in abstract rather than in concrete form. However pleasing or necessary such abstractions may be to the social scientists, they are less likely to grip the interest and challenge the imagination of the students in the public schools. A story, consequently, may aid materially in giving a sense of the human significance of the generalizations in which typical texts and reference books abound. That many historians recognize the potential value of this contribution has already been shown. Reporting on books for historical reading, a joint committee from three associations of history teachers concedes, after a somewhat adverse criticism, that ". . . novels written by men with historical training, and based upon real knowledge of the history and literature of the period . . . may give the pupil a lively appreciation of conditions under which people lived. A few such novels put things together in a living whole and visualize life . . . and may make contribution to the development of sound imagination and healthy sympathies. . . ."[44]

Imaginative literature, of course, is not the only source of such enrichment, for it shares this function with memoirs, diaries, biography, and other acknowledged sources of historical and geographical information.

The contribution of fiction to the development of interest in history has been a moot question. Gooch thinks that

[44]"Books for Historical Reading in Schools," A Report by Joint Committees of the New England History Teachers' Association, the History Teachers' Association of the Middle States and Maryland, and the Teachers' Section of the Mississippi Valley Historical Association, Herbert D. Foster chairman. *The Historical Outlook* XV (October, 1924), p. 312.

". . . historical novels have repeatedly given an impetus to scientific study by awakening youthful interest in a period or a movement, a country or an individual, and creating the desire in the reader to discover for himself what relation the story to which he has listened bears to the real character of actors and events."[45] Logasa observes, "While from the individual standpoint, this type of reading does not appeal to some, there are others for whom it becomes a gateway to historical interests and historical knowledge."[46] A frequently quoted adverse opinion is that of the German historian Ranke, who said that an event of lasting importance in his life was the discovery of the difference between Louis XI and Charles the Bold as depicted in *Quentin Durward* and in Commines. "I found by comparison," he said, "that the truth was more interesting and beautiful than the romance."[47] Johnson questions the extent to which historical novels develop an interest in history: "It will not do to argue that, because Parkman was led by Cooper's novels to write one of the greatest of American histories, the pupil who begins with Cooper will end with Parkman. It is safer, as a general proposition, to argue that the historical novel cultivates a taste for the historical novel."[48]

Many who have the cause of history at heart will sympathize with Johnson's skepticism. It has been shown repeatedly that the appeal of historical problems is sufficient in itself to arouse the interest of most students. And although the reading of fiction may stimulate in certain students an interest that might

[45]Gooch, "Historical Novels," p. 212.

[46]Logasa, Hannah, *Historical Fiction and Other Reading References for History Classes in Junior and Senior High Schools.* McKinley Publishing Company, Philadelphia, 1934, p. 10.

[47]Quoted by Gooch, G. P., *History and Historians in the Nineteenth Century.* Longmans, Green, and Company, London, 1913, p. 78.

[48]Johnson, *Teaching of History,* p. 404.

otherwise be lacking, there is a danger that such reading may supplant other collateral reading that is more desirable.

Whether the historical novel is appraised for making the past real, for creating atmosphere, or for stimulating interest, it is misleading to contrast the elaborate portrayals that it provides with the condensed discussion of a textbook. Rather, the novel should be compared with treatments of equal detail and similar scope. Cooper should not be compared with a school text, but with Parkman. No novel treats successfully the entire history of the United States; fifty novels cannot do it. No textbook of six hundred pages can do it either.

The importance of a thorough discipline in the methods of acquiring and using social knowledge is strongly emphasized in *A Charter for the Social Sciences in the Schools.*[49] The demand that students develop powers of intelligent and independent attack on social problems is increasing, as evidenced by the wide acceptance of such popularized slogans as "Teach pupils how to think, not what to think." In the light of these requirements, it seems likely that an uncritical or unrestricted use of fiction in teaching the social studies may have a deleterious effect on the student's habits of thought and work. The student who would learn how to attack problems in the social sciences should practice the modes of thought of the social scientists themselves. If, for example, the student wishes to learn how to deal with the historian's problems, he should choose the historian's methods.[50] Two conclusions seem to follow by implication: first, that the recognized sources of authentic information must predominate in the student's reading, and second, that when fiction is used in a history class, it must be subjected to the same criteria as the more traditional

[49]Beard, Charles A., *A Charter for the Social Sciences in the Schools.* Charles Scribner's Sons, New York, 1932. See especially pp. 99 and ff.

[50]See pp. 22–30 of this volume.

and systematic sources of information. It is necessary, moreover, that students be aware of the way in which the contribution of fiction to historical study is limited. Scott and others have even suggested that the appraisal of the historical authenticity of a novel or story may become a valuable exercise in historical criticism.[51]

To depend upon the untrained reader's critical evaluation of either contemporary or historical fiction as a safeguard against his obtaining misconceptions of the past is, however, extremely hazardous. Langlois and Seignobos point out that such evaluation cannot be taken for granted, even by the historian in appraising documentary sources: "For criticism is antagonistic to the normal bent of the mind. The spontaneous tendency of man is to yield assent to affirmations, and to reproduce them, without even clearly distinguishing them from the results of his own observation."[52] Children, in particular, are more given to credulity than to critical skepticism and are likely, therefore, to be misled by a vivid and interesting, but erroneous, portrayal.

The actual use of fiction in teaching the social studies does not often reflect those standards of scholarship upon which there is substantial agreement among social scientists, or an appreciation of the significance of issues that are still debated. The essential difference between contemporary and historical fiction is apparently not recognized, and the former tends to be neglected, while the latter is used too much. The works of fiction included among the recommended readings in courses of study, and even in textbooks by authors of recognized standing, give the impression, in general, of being selected with little critical attention to their authenticity or to the

[51]Scott, *History and Historical Problems*, p. 138.
[52]Langlois and Seignobos, *Introduction to the Study of History*, p. 69.

manner of their use. In the primary and elementary grades the focus of attention is not uncommonly upon fictional stories of slight historical or geographical significance. To judge by published courses of study, reference books, and descriptions of classroom work, this is especially true in those schools where Indian life or other primitive civilizations are studied. Here, stories of particular Indians or of imaginary individuals in other lands are frequently taught as fundamental texts, with little distinction between what is true and what is fanciful. Some of the stories are evidently based on adequate historical or anthropological knowledge, but many more have a decidedly flimsy factual background and are full of inaccuracies as to events, atmosphere, and general ideas. From a historical point of view, the extensive use of myths and legends is another controversial issue. Many teachers are evidently not aware of the marked success with which competent teachers in the early grades have used real historical and geographical materials.

The evaluations of literature for the purpose of teaching history, whether made by writers on method or by historians and critics, show an unfortunate tendency to be more lax in their requirements of historical accuracy when the books are intended for immature students. This is quite without justification. Not only are first impressions lasting, but younger children have neither the knowledge nor the training in critical methods to protect themselves from any distortion and inaccuracy in the literature that they read. Shortcomings that might be overlooked in books placed in the hands of advanced students or more sophisticated and informed adults are quite intolerable in books to be read by children in the early stages of their development.

Textbooks, courses of study, and books on methods of teach-

ing commonly include fiction without differentiating it from other references, and without making any recommendation as to the way in which it should be used. Yet a distinction must be clear in the minds of both students and teachers if confusion is to be avoided. While historians, as many point out, have sometimes forsaken strict adherence to fact in the temptation to tell a good story, and novelists have sometimes been faithful to history in the development of their plots, history and fiction are, nevertheless, different in art and purpose. That teachers of social science should encourage students to read the great classics of contemporary and historical fiction, and the social and geographical novel, is beyond argument; that they should take much of the limited time now allotted to social studies for such reading is another matter. The chief responsibility for teaching literature belongs to the teacher in that field and only incidentally to the teacher of social science.

How, then, should fiction be used? The teacher may suggest important contemporary or historical fiction concerning the period being studied, making a clear distinction, however, between it and other historical sources, and assisting the student in formulating historical and literary standards of criticism. Unusually significant excerpts may occasionally be read aloud by the teacher or pupil, after an explanation that they represent an attempt at imaginative reconstruction and interpretation. When well chosen, such readings contribute to the subject under discussion and also afford an effective introduction to the books themselves. Rarely should fiction be included as a part of the minimum or basic collateral readings.

Whenever fiction is used in teaching history, it must be treated from the historical point of view. If pedantry is avoided, there is no reason why this approach should detract

from æsthetic or artistic appreciation. On the contrary, it should make for a more compelling and intelligent interest, whether the primary concern is in the story or in the history. The care with which the historical novelist gathers and arranges his material is not uncommonly a source of pride to him, and the trend in literary criticism is to relate all fiction, contemporary or historical, to the social life in or about which it is written. Certainly no one should entertain a proposal to leave the student in ignorance of the special type of social truth that a novel portrays or the degree of authenticity that it achieves.

Teachers of literature, as well as teachers of history, should have a clear idea of the limitations of imaginative writing as an instrument for teaching history.[53] It has been found helpful, in many schools, to relate the courses of study in history and in literature so that the contribution of each to the other is made clear, and so that the teachers in the two fields will not work at cross purposes. There are obvious advantages in a moderate degree of integration between these subjects. Each enriches and supplements the other: literature in giving a sense of atmosphere, and history in providing authentic factual background of the period or conditions.

To recapitulate, the teacher who considers any use of literature in connection with social studies might well read a number of the scholarly and critical estimates from which quotations have been cited in the preceding pages. He should have in mind especially the distinction between contemporary and historical fiction and should realize why, in general, contemporary fiction is preferred by the historian. He should understand the difference between the purposes and methods

[53]Simon, Henry W., "Some Dangers in Teaching Literature as Social History," *The English Journal* XX (October, 1931), pp. 645–652.

of history and fiction. He should know that portrayals may be vividly impressive and yet be false. He should be aware that the language, the points of view, and the sentiments of a historical novel are likely to be of the time of the writer rather than of the period treated. He should be critical of the limited horizon or the personal bias of the writer. Above all, he should understand that the child, even more than the adult, is not in a position to tell what is authentic and what is either imaginary or erroneous. In any case, the teacher's decisions must be made not on the use of fiction in general but on the use of a specific book or selection for a definite purpose.

THE USE OF IMAGINATIVE LITERATURE IN TEACHING GEOGRAPHY

Imaginative literature, such as fiction, poetry, and drama, has not been so closely related to geography as to history, partly because of the nature of geographical problems and partly because the affiliations of geography have been more with the natural sciences than with the humanities. Nevertheless, a connection does exist; for example, novels must have a setting, and in many instances geographical problems are involved in the plot, if they do not, indeed, give it shape. Novels abound in descriptions of the natural and cultural landscape, and phenomena of geography are frequently discussed at considerable length. If authentic, the descriptions of contemporary life in almost any modern novel are valuable for geography as well as for history, and contemporary fiction of past periods makes a significant contribution to historical geography.

The relation of fiction to geography has been generally ignored in the treatises on geographical study and research. The most important exception is an English publication, The Geographical Association's *Guide to Geographical Books and*

Appliances,[54] which contains a short chapter on the geographical novel, and assigns it an important place in the study of geography. The opening paragraphs of this chapter indicate the general position taken by the association and state the case for the use of the geographical novel.

"There are many good works of fiction which are distinctly geographical, beyond the multitude which have 'local colour'." There are some, of course, whose accuracy is not above suspicion; but others are both trustworthy and full in their treatment of scenes, places, and peoples. Assuming that the geography of novels and tales is accurate, a strong case may be made out for their use by students, and more especially by teachers.

"An ordinary text-book is limited to concise and generally meagre statements, and it is very difficult to create a mental picture as a result of these statements; yet in the creation of such a mental picture lies the secret of real and lasting instruction. . . . The scenes [word-pictures to be found in tales] are frequently described at some length, and, better still, they may form an integral part of the narrative, as when the peculiarities of the district or of the people influence the course of the story. This is an important part of the value of a geographical novel: it may show by actual examples that working out of the various forces and inter-action of the various factors that is of the essence of geography. A little careful search through good novels would furnish examples of most of the important phenomena and their relations."[55]

The chapter includes a fairly extensive list of novels, some of which are given strong praise. "A perfect description of a

[54]Mill, H. R., and others, *Guide to Geographical Books and Appliances.* Published for the Geographical Association. George Philip & Son, Ltd., London, 1910, Chap. IV.

[55]*Ibid.*, pp. 58–59.

cyclone in the West Indies is given in Mrs. Gertrude Atherton's *The Conqueror.* Its course, the torrential rains and the terrific violence of the winds . . . the effect of the cyclone on the vegetation and the people—all are described in such a way that the thing seems real and its impression endures in the mind."[56] The novels are grouped by regions and are recommended as ". . . useful to teachers, but . . . not necessarily suitable for their pupils."

No group of American geographers has so approved of fiction, but writers of several textbooks include fiction among their suggestions for supplementary reading. A recent report of a committee on the teaching of geography contains no discussion of the use of imaginative literature in its thirty-two chapters, although one chapter, "A Bibliography of Geography Books for Teachers and Pupils," lists a few stories among the readings for children.[57] Wright, in *Aids to Geographical Research,* makes no reference to the use of imaginative literature.[58] A careful search disclosed few magazine articles devoted entirely to the geographical novel or to a bibliography of imaginative writing, selected from the geographical point of view; those found were in no way comparable to similar articles in the field of history.

The guides to general reading, however, as well as to historical fiction, have comments that are useful for teachers who wish suggestions and appraisals of geographical novels.[59] Baker's *Guide to Historical Fiction,* for example, although

[56]*Ibid.,* p. 59.

[57]Branom, Frederick K., "A Bibliography of Geography Books for Teachers and Pupils," *Thirty-second Yearbook,* National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, Chap. XXVI.

[58]Wright, John Kirtland, *Aids to Geographical Research.* American Geographical Society Research Series No. 10, American Geographical Society, New York, 1923.

[59]A number of these guides are given on pp. 296–299.

compiled from the historical point of view, is arranged by countries and is, therefore, to some extent a guide to geographical fiction. The best-known guides to children's reading have books of geographical interest in their sections on geography and travel. There is a need, however, for a list of novels and stories to which the criteria of geographical truth and significance have been rigorously applied.

The geographical contributions of fiction are not usually examined very critically from the point of view either of significance or of fidelity to truth. Nevertheless, fiction, as well as other imaginative writing, is widely used in connection with the teaching of geography. The arguments advanced for its use are similar to those already discussed in teaching history: It adds interest and reality, it gives atmosphere, and it brings out relationships whose significance might not otherwise be understood. Writers on the teaching of geography recommend the use of stories, novels, and poetry.[60] Most textbooks and courses of study include among collateral readings lists of stories, novels, and other literature. These books, however, vary widely in quality. A few of them, such as Spyri's *Heidi*, Lagerlöf's *The Wonderful Adventures of Nils*, and Kipling's *Captains Courageous*, are excellent. Not many books in the recommended lists, however, reach so high a level. Lowest of all in quality are those that attempt to sugarcoat geography by a story presentation that is superficial and inaccurate as geog-

[60]Branom, Mendel E., and Branom, Fred K., *The Teaching of Geography*. Ginn and Company, Boston, 1921, Chap. XVIII; Crawford, Claude C., and McDonald, Lois P., *Modern Methods in Teaching Geography*. Houghton Mifflin Company, Boston, 1929, Chaps. VI and VII; Dodge, Richard E., and Kirchwey, Clara B., *The Teaching of Geography in Elementary Schools*. Rand McNally and Company, Chicago, 1913, Chaps. VII and XIV; Holtz, Frederick L., *Principles and Methods of Teaching Geography*. The Macmillan Company, New York, 1924, Chap. XIII; Stull, DeForest and others, *Tentative Course of Study in Geography*. Bureau of Publications, Teachers College, Columbia University, New York, 1927, pp. 49–51.

raphy and utterly stupid as literature. There are a few superior books in which the story is made the vehicle of geographical knowledge, but these are in the minority. The merest trash seems to be mentioned as frequently as books of the highest type. Definite precautions must be taken if geographical stories and novels are not to supplant the use of more systematic and dependable sources of information. The geographical novel at its best may contribute materially to geographical interest and understanding. Its use is similar to that of the historical novel; consequently, it needs no separate discussion.

GUIDES TO FICTION FOR USE IN TEACHING THE SOCIAL STUDIES AND GEOGRAPHY

The use of fiction in teaching the social studies cannot be approved nor condemned in a wholesale fashion. Even those who believe that fiction gives a poor introduction to geography and history would undoubtedly make some exception, and those who most strongly advocate the use of fiction reject the great mass of novels as either poor in literary quality or grossly inaccurate. Each story or novel must therefore be judged on its own merits. Among the sources to which the teacher may turn for assistance in appraising and selecting appropriate fiction are: (1) the chapters and lists in books on method, (2) the general guides to historical reading, and (3) the special guides to fiction.

An excellent example of a short, well-selected list of historical fiction for children is found in Dymond's *Handbook for History Teachers*.[61] The books were submitted to historical specialists who appraised them "from the point of view of reasonable accordance to historical truth." Considerable pains

[61]Dymond, *Handbook for History Teachers*.

were taken to determine whether any given book was intelligible and interesting to children. The brief annotations following each bibliographical item are critically enlightening and indicate the age group for which each is suitable.

Many novels are listed in Channing, Hart, and Turner's *Guide to the Study and Reading of American History.*[62] One may assume that the authors consider these books to be of some historical merit, although they merely list them without annotations and without an indication of the age level to which they are suited.

There are a number of general guides to historical fiction, varying from those like Baker's,[63] which includes all periods for all countries, to those like Sturgis',[64] which is highly specialized and includes only the English fiction that bears on the Spanish world. The most extensive guide to historical fiction is that by Baker. The introduction gives a brief but penetrating discussion of the relation of fiction to history. The skillfully annotated bibliography indicates also which books are suitable for young readers. Adding greatly to its value is the very extensive and usable index. Another extensive guide is that by Nield.[65] The introduction contains a concise statement of the arguments concerning historical fiction. The most valuable of the 2392 novels that he lists are designated, and those appropriate for children are also indicated. Following each book is a brief descriptive note, which, in some cases, includes a sentence appraising the historical accuracy. The guide by Logasa is one of the few expressly limited to recom-

[62]Channing, Hart, and Turner, *Guide.*

[63]Baker, *Guide to Historical Fiction.* See also Baker, Ernest, and Packman, James, *Guide to the Best Fiction.* The Macmillan Company, New York, 1932.

[64]Sturgis, Cony, *The Spanish World in English Fiction.* The F. W. Faxon Company, Boston, 1927.

[65]Nield, *Guide to Best Historical Novels.* See also Kaye, James R., *Historical Fiction Chronologically and Historically Related.* Snowdon Publishing Company, Chicago, 1920.

mended readings for students of the junior and senior high school.[66]

There are also a number of useful guides that deal wholly or in part with the imaginative literature bearing on some special field in history. An outstanding piece of work is Dondore's *The Prairie and the Making of Middle America: Four Centuries of Description,*[67] in which traditional historical sources and imaginative writings are critically appraised and blended into the author's own interpretation of the evolving culture of this area. Another excellent example is Miner's *Our Rude Forefathers,* in which a copious selection of political verse is woven into a discussion of the period in which it was produced.[68]

No satisfactory guides to historical and geographical fiction have been prepared especially for children in the elementary school. Lists of supplementary readings are included in some textbooks of history and geography, but they are usually not accompanied by critical annotations, and often give the impression of undiscriminating selection.

Guides to children's reading frequently suggest books pertinent to the social studies.[69] A teacher must bear in mind,

[66]Logasa, *Historical Fiction.* For a general reading list for high school students, see Center, Stella S., Herzberg, Max J., and others, *Leisure Reading for Grades Seven, Eight, and Nine.* The National Council of Teachers of English, Chicago, 1932; and by the same authors, *Books for Home Reading for High Schools.* The National Council of Teachers of English, Chicago, 1930.

[67]Dondore, Dorothy A., *The Prairie and the Making of Middle America: Four Centuries of Description.* The Torch Press, Cedar Rapids, 1926.

[68]Miner, Louie M., *Our Rude Forefathers, American Political Verse, 1783–1788.* The Torch Press, Cedar Rapids, 1937.

[69]*Children's Catalog,* compiled by Minnie E. Sears. H. W. Wilson Company, New York, 1930. With cumulative supplements: Gardner, Emelyn E., and Ramsey, Eloise, *A Handbook of Children's Literature.* Scott, Foresman and Company, Chicago, 1927; Mahony, Bertha E., and Whitney, Elinor, *Realms of Gold.* Doubleday, Doran, and Company, Garden City, New York, 1929. The following supplement to *Realms of Gold* has been published, Mahoney, Bertha E., and Whitney, Elinor, *Five Years of Children's Books; A Supplement to Realms of Gold.* Doubleday, Doran and Company, Garden

however, that those compilations were not made primarily on the basis of historical or geographical authenticity but according to such criteria as literary merit, value in ethical training, and children's interests. Few of the guides make any distinction between contemporary and historical fiction, between fiction and non-fiction or between social science in story form and stories that are admittedly fanciful.

The need of a complete and authoritative guide to the imaginative writing that contributes to historical, civic, and geographical understanding is imperative. Such a guide should contain an introductory section making clear the limitations and potentialities of imaginative writing in the teaching of social sciences and geography, and giving explicit suggestions as to how such materials are to be used. The bibliography should be selective rather than extensive, and each item should be accompanied by a statement of its authenticity, prepared by an authority in whose field of scholarship it belongs. The age limits within which it may be read with interest and understanding should be determined by experiment. Specific suggestions as to the most valuable uses of each item would also be helpful. A clear distinction should be drawn between contemporary and historical fiction. In order to keep such reading integrated with and subordinated to the basic collateral readings, this guide to imaginative writing might well be incorporated as one section of a general guide to collateral reading.

City, New York, 1936; Starbuck, E. D., and others, *A Guide to Literature for Character Training*. The Macmillan Company, New York, 1928–30; Terman, Lewis M., and Lima, Margaret, *Children's Reading*. D. Appleton and Company, New York, 1931; Washburne, Carleton, and Vogel, Mabel, *Winnetka Graded Book List*. American Library Association, Chicago, 1926.

Chapter VIII

ORAL INSTRUCTION

INTRODUCTION

The spoken word is the source of much of the knowledge that students acquire and is indispensable in guiding their learning and in stimulating their interests. In the chapter on the text and collateral reading, it was pointed out that European schools depend upon oral instruction to a greater extent than do American schools. Nevertheless, oral instruction does and should play an important part in teaching the social studies in this country. It takes many forms: lectures, lecture demonstrations, short talks, reading aloud, comments, group discussions, and questions. The possibilities of instruction by radio are also being increasingly explored. The functions and effectiveness of oral instruction deserve a most careful consideration.

ORAL INSTRUCTION IN THE ELEMENTARY SCHOOL

The reports of committees on teaching the social studies, as well as other pedagogical literature in this field, have generally recommended that instruction in the early elementary grades be chiefly oral. Indeed, the recommendations frequently go further in limiting oral instruction to simple stories. The literature is full of articles on the story-telling method of teaching history in the elementary school.[1] Probably no other

[1]See, for example, the appropriate sections in the following: Bagley, W. C., "History for the Intermediate Grades," in *Classroom Teacher,* Vol. VIII. Classroom Teacher, Inc., Chicago, 1927, pp. 429–464; Bourne, Henry E., *The Teaching of History and Civics in the Elementary and the Secondary School.* Longmans, Green, and Co., London, 1905; Clarke, F., *Foundations of History-Teaching.* Oxford University Press, London, 1929; Firth, Catherine

theory has done so much to retard and devitalize instruction in the social studies. Schools noted for the outstanding quality of their work have long organized both their curriculum and their methods very differently. They have dealt with the simple, fundamental problems and processes of social life, and in their methods have introduced students gradually but systematically to the principal procedures that have been found to be effective in social inquiry. For example, the reports of instruction in Dewey's school at the University of Chicago,[2] in the Francis Parker School,[3] and in the Speyer School[4] furnish unmistakable evidence that the teaching in these schools bore little resemblance to that recommended under the story-telling method. There is probably no outstanding elementary school at the present time in which story-telling is the dominant principle in the organization of the curriculum or in methods of teaching.[5] Historical and geographical narratives are used, of course, but they are no more prominent and no better received bv young children than by students at higher levels.

The unfortunate emphasis upon the story-telling method

B., *The Learning of History in Elementary Schools.* Kegan Paul, Trench, Trubner & Co., Ltd., London, 1932; Jarvis, Charles H., *The Teaching of History.* Clarendon Press, Oxford, 1917; McMurry, Charles A., *Special Method in History.* The Macmillan Company, New York, 1905; Storm, Grace E., *The Social Studies in the Primary Grades.* Lyons and Carnahan, Chicago, 1931.

[2]Mayhew, Katherine Camp, and Edwards, Anna Camp, *The Dewey School.* D. Appleton-Century Company, New York, 1936.

[3]*Francis W. Parker School Year Book,* Vol. I (1912), Vol. III (1914), and Vol. IV (1915). Francis W. Parker School, Chicago, Illinois.

[4]*Speyer School Curriculum.* Teachers College, Columbia University, New York, 1913.

[5]Note the small part that story-telling plays in the teaching of such units as are described in: California State Department of Education, *Teachers' Guide to Child Development—Manual for Kindergarten and Primary Teachers.* California State Printing Office, Sacramento, 1930; and California State Department of Education, *Teachers' Guide to Child Development in the Intermediate Grades.* California State Printing Office, Sacramento, 1936.

is an outgrowth of the theory, now thoroughly exploded, that childhood is a period of passive receptivity, whereas it is, in reality, a period of active, dynamic exploration. This emphasis also reflects a lack of knowledge of the success with which the fundamental approaches to understanding and insight in the social studies are utilized in our best elementary schools.[6]

During the first two or three years in school, the child must depend more upon what he is told than upon what he reads, but the spoken word is only one source of information. It is supplemented by excursions, by pictures, by objects and museums, and by a rich program of constructive activities. As later shown, constructive projects play an especially important part in vitalizing instruction.[7] For example, any one who has observed a group of primary children curing a skin, using an Indian fire drill, or making rag paper is left with no doubt that these activities stimulate thought, expand experience, and create interest to a degree not even approached by story-telling. In the best schools, moreover, students grow rapidly in their ability to read, so that even in the second and third grades they turn increasingly to printed materials for their information.

Beginning with the intermediate grades, there is a still greater dependence upon books as sources of information. Instruction in the majority of the schools is based upon a textbook, whether in geography, in history, or in some other area of the social studies. These texts are supplemented, in the best schools, by collateral readings.[8] The trend toward the greater use of printed materials is found not only in schools that follow

[6]Note, for example, Henry Johnson's strong emphasis upon the social group and upon the simple elements of historical method in his *Teaching of History in Elementary and Secondary Schools.* The Macmillan Company, New York, 1928, especially Chaps. VII to XIV.

[7]See Chap. X.

[8]See Chap. VI.

a textbook rather closely but also in those in which instruction is organized on a unit or project basis. Yet there is and should be a great deal of oral teaching in the intermediate grades. Where adequate supplementary references are not provided, the text must be expanded and interpreted by the teacher. Oral instruction should also play an important part in organizing, interpreting, and supplementing the ideas gained from collateral readings. It will most often take the form of short comments that expand and elucidate the ideas gained from books or that answer questions raised by pupils, but there are occasions when talks of considerable length are essential, particularly in giving overviews, in introducing new problems, in filling in gaps for which data are not available in printed form, and in showing the relation of one topic or problem to what has gone before and to what is to come afterwards. And while these talks may not be thought of by the teacher as lectures, some of them may well occupy an entire class period and are facilitated or impaired by the same factors that influence the lecture in its more elaborate forms.

ORAL INSTRUCTION AT THE HIGH SCHOOL LEVEL

The use of printed materials in secondary schools is even more marked than in elementary grades. This fact is indicated by the prevalence of various forms of question-and-answer recitations, most of which follow study periods in which assigned books and collateral references have been read. As in the earlier grades, however, there is a great deal of oral instruction, and the ends served are the same. Longer and more systematic talks are more numerous and in some instances, as in the Morrison plan, these talks occupy a key position.[9] In all schools, moreover, where student initiative

[9]Morrison, Henry C., *The Practice of Teaching in the Secondary School.* The University of Chicago Press, Chicago, 1926.

has been developed and where student questions are encouraged, a considerable part of the class time is appropriately devoted to the teacher's answers to these questions.

ORAL INSTRUCTION IN COLLEGE

In view of the fact that students at the college level have greater reading ability and the further fact that library facilities are generally more adequate, it might be expected that oral instruction would be less prominent here than in the secondary school. On the contrary, it is not only more prominent but is much more frequently found in the form to which most serious objections have been raised—the lecture method.

This method of teaching has long been subjected to unfavorable criticism. It is generally held to be most nearly justified in colleges, less acceptable in high schools, and totally unsuited to the elementary schools. The comments of the critics, even at the college level, however, are distinctly unfriendly and often scathing.[10] Eliot's appraisal is:

"Lectures alone are too often a useless expenditure of force. The lecturer pumps laboriously into sieves. The water may be wholesome; but it runs through. A mind must work to grow."[11]

Referring to the lecture method in England, Pink states: "Surely no system of teaching can have ever been devised with so little regard for ordinary efficiency. Batches of students are set to take imperfect notes of a probably imperfectly delivered lecture by a man who has either taken his material

[10]Bane, Charles L., *The Lecture in College Teaching.* Richard G. Badger, publisher, Boston, 1931. Bane has made an interesting collection of such criticisms. The author is indebted to him for the source of some of the criticisms that are here cited.

[11]Neilson, W. A., *Charles W. Eliot, The Man and His Beliefs.* Harper & Brothers, New York, p. 14. Quoted by Bane, *Lecture in College Teaching*, p. 39.

from books that they ought to read themselves, or is dictating what is really an original text-book, which obviously, in the interests of economy in time and labour, to say nothing of accuracy, ought to be printed."[12]

Kelly, after a survey of the liberal arts colleges in the United States, reports:

"Attempting to sum up the opinions expressed by college teachers, college students and alumni, we must seriously question the validity of the lecture method in many of the places and under many of the circumstances where it is now used."[13]

Slosson, after visiting more than a hundred classes in a number of the most liberally supported universities, was particularly impressed with the poor quality of the lectures. He concluded: "It would be well if the teachers did not know quite so much, if they knew how to tell what they did know better. . . . In many cases it has seemed to me that the instructor has come into the room without the slightest idea of how he is to present his subject. He rambles on in a more or less interesting and instructive manner, but without any apparent regard to the effect on his audience or the economy of their attention. The methods of instruction are much the same as those used in the universities of the thirteenth century. . . . Many lecturers do not even take pains to speak distinctly enough so they can be heard in their small classrooms without strained attention. Many introduce matter which cannot be conveyed through the ear. I have heard long columns of figures read off to a class, tables of boiling points, population, and the like; also descriptions of complicated apparatus and

[12]Pink, M. Alderton, *Procrustes or the Future of English Education*. E. P. Dutton & Co., New York, 1927, p. 83.

[13]Kelly, Frederick J., *The American Arts College*. The Macmillan Company, New York, 1925, p. 96.

machinery, details of analytical processes, dimensions of ancient buildings, lists of names and dates, references to readings, sometimes read in such a hurried and indistinct manner that they could not be taken down, sometimes slowly and laboriously written out on the blackboard. Such data, wherever necessary, should be given to the students in printed or typewritten syllabi, and the university authorities should see that such facilities are freely provided for their instructors and utilized by them. The lecture is useful for inspiration and demonstration, but not for information. Facts and figures that the lecturer cannot keep in his own head for fifty minutes are not likely to get into the heads of the students."[14]

Particularly objectionable, according to President Butler, is the use of the lecture to impart information. He says: "The lecture system as a means of communicating facts should have been dispensed with when the art of printing was invented. The true purpose of the lecture is interpretation, and the facts to be interpreted are supposed to be in possession of the lecturer's hearers. The provision through textbook or printed syllabus of an easy means by which the student may come into possession of the facts with which a lecture or a classroom exercise is to deal, is essential. Given this, the student may be required to get the facts for himself, and then, and then only, will he be able either to participate understandingly and helpfully in a discussion of these facts or to hear with profit an interpretative lecture concerning them."[15]

In spite of more than a century of criticism of the lecture

[14]Slosson, Edwin E., *Great American Universities.* The Macmillan Company, New York, 1910, pp. 517–518.

[15]Butler, Nicholas Murray, *Report of the President of Columbia University for 1933.* Columbia University Bulletin of Information, Thirty-fourth Series, No. 12, December 23, 1933. Columbia University, New York, pp. 30–31.

method and frequent reports of faculty committees against its use, the lecture still occupies a dominant place in college instruction. In one university, a severely adverse report by a committee of the faculty was followed shortly by a greatly increased program of lectures.

INVESTIGATIONS OF ORAL TEACHING

Before appraising the criticisms of the lecture method, it is useful to review the research that has been done on the effectiveness of various forms of oral instruction, including the lecture. The investigations may be classified into four main groups: (1) those that compare reading a selection with hearing a selection read; (2) those that compare reading with lectures; (3) those that seek to determine the factors that influence effectiveness in speaking; and (4) those that compare the lecture with the question-and-answer method and other types of class discussion.

1. *Oral Instruction Compared with Reading.*—Oral instruction and reading are alike in one respect; words, whether spoken or written, are symbolic, with all the potentialities and limitations that this fact implies.[16] This common symbolic element doubtless explains, to a considerable degree, the high correlations that have been reported between the results obtained by auditory and visual presentation. The meaning that the student gets in either case is dependent upon his ability to recognize the symbols and to associate them with experiences that will enable him to construct the ideas that the language is intended to convey. Nevertheless, it is worth while to ask whether oral instruction may not have certain advantages at some grade levels or for some purposes.

[16]The significance of the symbolic character of language has been elaborated in earlier chapters, especially in Chapters IV and V.

Psychologists have long been interested in the relative effectiveness of oral and visual presentation of verbal materials. A large number of studies have dealt with the relative efficiency of various forms of sensory presentation, including the oral and visual, but these have been limited, for the most part, either to the learning of digits, nonsense syllables, and lists of words or to the verbatim memorizing of prose and poetry. While the results of these experiments help to refine knowledge with regard to the types of imagery used, they contribute only indirectly to the establishment of the relative efficiency of oral and visual presentation of ideas in connected discourse.

Worcester's conclusion, in reporting an investigation of verbatim memorizing, is fairly representative of the findings of experiments in these mechanical forms of learning. He states that neither auditory nor visual presentation shows "any marked degree of superiority in the rate of learning of meaningful, connected material" and that "The one who learns easily by one method also learns easily by the other method."[17]

Studies of the effect of the form of presentation on the recall of information or ideas are more significant for the formulation of method than those that deal with verbatim memory. In many of the studies of the former type, the verbal materials have been kept constant; *i.e.*, the effect of reading a selection is compared with that of hearing the same selection read. The most extensive and carefully controlled experiments have been conducted with public school students. Russell investigated the effect of the visual as compared with the auditory presentation of three selections: a description in science, a narrative poem, and a story. His subjects were 690 students distributed among the fifth, seventh,

[17]Worcester, D. A., "Memory by Visual and by Auditory Presentation," *Journal of Educational Psychology* XVI (January, 1925), p. 26.

and ninth grades of one large city system. Only immediate recall was tested.[18] His conclusions are:

"1. Oral presentation of verbal material in learning has a decided advantage over visual presentation of verbal material in the fifth grade.

"2. Neither the verbal-acoustic nor the verbal-visual method of presentation seems to have any distinct advantage over the other in the seventh grade.

"3. The verbal-visual method has a substantial advantage over the verbal-acoustic method in the ninth grade."[19]

Young measured both immediate and delayed recall of the ideas in fifteen selections, including three descriptions of industrial processes, four units of natural science, four hero stories from American history, and four narrative poems. Data were obtained for more than 2000 students, distributed among grades four, five, and six in six school systems. He concludes that, as measured by immediate recall,

"1. Mode A (oral reading by teacher) and Mode B (oral reading by teacher plus simultaneous silent reading by pupils) are equally effective in the situations studied.

"2. Mode A is generally superior to Mode C (a single silent reading without time limit) but its superiority is usually not statistically significant.

"3. Mode C seems to be about equal in effectiveness to Mode A in Grade VI for nature science selections and descriptions of industrial processes.

"4. Mode A is generally superior to Mode D (silent reading for the same time as given to oral reading by teacher). Few statistically significant differences were established. Mode D

[18]Russell, Ralph Douglas, *The Relative Effectiveness of Presenting Verbal Material Visually and Orally as Measured by the Amount of Recall.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1923.

[19]*Ibid.*, p. 81.

is equal to Mode A in Grade VI and perhaps in Grade V for nature science selections and descriptions of industrial processes."[20]

He found very little difference among the various modes of presentation on delayed recall, but such differences as were discovered were in favor of oral presentation. Most of the differences, both on immediate and delayed recall, were small, although a few were statistically significant.

In conformity with results of experiments on the effect of a single reading, which are reviewed in Chapter V, Young found the scores to be low in all four modes of presentation on immediate recall and very much lower on a test given four weeks later. Students who did well on one mode of presentation did well also on all of the others.

Carver compared, at the college level, the effectiveness of reading for one's self with hearing the selections read. He used various types of material, including narrative, descriptive, explanatory, and abstract passages; series of directions; short selections of prose, poetry, and humorous stories, including one difficult historical selection; vocabularies; digits and lists of nonsense syllables.[21] His subjects were fifty-two adults, many unemployed, varying in age from 18 to 65, and thirty-nine undergraduate students in a psychology class. His summary statement is:

"The chief results may be summarized in relation to the four experimental variables. (1) *Difficulty of the material.* The effectiveness of auditory presentation tends to vary in-

[20]Young, William Ernest, *The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention.* Doctor's dissertation, State University of Iowa, Iowa City, 1930, pp. 242–243. An abstract of this dissertation has been published in *The Journal of Experimental Education* V (September, 1936), pp. 30–39.

[21]Carver, Merton E., "Listening Versus Reading" in Cantril, Hadley, and Allport, Gordon W., *The Psychology of Radio.* Harper & Brothers, Publishers, New York, 1935, pp. 159–180.

versely with the difficulty of the material presented. (2) *Type of material.* The effectiveness of auditory presentation is limited to meaningful material, and tends to be superior for subject matter that is concrete and serial in nature. (3) *Mental functions.* If other conditions are kept constant, the mental functions of recognition, verbatim recall, and suggestibility seem more effectively aroused in listening; whereas critical attitudes and discriminative comprehension are favored by reading. The human relationship involved in the auditory situation is of value for certain types of communication (*e.g.*, æsthetic and humorous) where the personal factor customarily plays a rôle. (4) *Educational background.* The higher the cultural level of the listener the greater is his ability to profit from auditory presentation."[22]

While it may be true that the amount learned from auditory presentation is in proportion to the cultural advancement of students, the evidence indicates that one may expect the *relative* effectiveness of oral as compared with visual presentation to decrease as proficiency in reading improves and as the cultural level of students is raised. The existing data, however, are too incomplete to warrant a confident statement on this point.

The fact that students in the lower grades obtain more from hearing a selection read than from reading it themselves does not mean that the teacher in these grades should read the texts and references to the pupils. It is true that references which are too difficult to be read by students but which contain important information may profitably be read to them with comments. The necessity for this practice, however, should be removed as soon as possible by putting the needed information into books that can be read by the students. It is only by

[22] *Ibid.*, p. 159.

wide and careful reading that satisfactory reading ability is developed. The most important conclusion to be reached from the investigations reviewed above is that the chief difficulties in understanding, both in reading a selection and in hearing it read, grow out of the limitations of language. The significance of this truth has been elaborated in earlier chapters.[23]

2. *Lectures versus Reading.*—There have been a number of investigations of the effectiveness of the lecture method considered alone, compared with reading, or compared with class discussion. In some instances, the experiments were not conducted in social studies classes but in classes where the conditions of learning are similar. Jones studied the amount retained by college students after hearing thirty lectures of forty minutes each. Tests were given immediately at the close of the lecture and after intervals of varied length. The average scores ranged from 62 per cent on immediate recall to 24 per cent at the end of eight weeks. About half of what was known at the end of the lecture was forgotten in one day. He found the usual range of individual differences, the best students learning about six times as much as the poorest. In the case of a lecturer chosen because of his exceptional ability, the average scores made by students ranged from 71.6 per cent on immediate recall to 35.3 per cent after fourteen days.[24]

Norton tested the ability of 926 freshmen to understand the content of three four-minute speeches. In one of these, a speech on Edmund Burke, the average score on immediate recall was 24.5 answers right out of a possible 40. The amount retained from the other two speeches, one on a scientific

[23]Chapters IV and V.

[24]Jones, Harold E., "Experimental Studies of College Teaching," *Archives of Psychology* X, No. 68 (November, 1923).

and one on a philosophical topic, showed about the same amount of retention. No delayed tests were given.[25] The amount retained on immediate recall in both of these experiments and on delayed recall in that by Jones is considerably larger than that reported in other studies of lecturing and in investigations of reading. In the experiment of Jones, the superiority may be due to the fact that the lectures were, as the author states, semi-popular in nature. In the experiment by Norton, the high scores were probably due to the low difficulty of the questions used.

Greene compared the efficiency of lectures and reading in college classes in psychology. His summary conclusion is: "As far as these results are valid, we must conclude that the two methods of presentation were about equally effective to the average student as preparation for immediate tests. For delayed tests the lectures were somewhat superior in spite of the fact that the lectures could be greatly improved."[26]

Corey investigated the relative efficiency of reading and of listening to a lecture. His subjects were college students in a freshman orientation course. A 2500-word lecture on outlining was prepared and delivered to one group at the rate of a hundred words a minute. The other group was allowed the same amount of time for reading the lecture in mimeographed form as had been required to deliver it. No note taking was permitted during either the lecture or reading. The scores made after reading were higher than those made after listening to the lecture, both on immediate and delayed recall. The differences, however, were very small, being barely

[25]Norton, Laurence E., *The Speech Comprehension Ability of College Freshmen.* Unpublished master's thesis, State University of Iowa, Iowa City, 1934.

[26]Greene, Edward Barrows, "The Relative Effectiveness of Lecture and Individual Reading as Methods of College Teaching," *Genetic Psychology Monographs* IV (December, 1928), p. 530.

significant statistically on immediate recall and not significant on delayed recall.[27]

The closeness of average results obtained from reading and from listening to a lecture suggests that students probably learn more from excellent and less from poor lectures than from reading. Under typical conditions, where the lecture is not read, its relative effectiveness will depend upon the ability of the lecturer, both in terms of the clearness of his thought and his skill in presentation. Instructors vary enormously in both of these respects. One often hears the statement that less skill and preparation are required for a class lecture than for a class discussion, and experienced teachers have sometimes given their young colleagues the cynical advice, "When not prepared, lecture." Little can be expected from a lecture so conceived. The least that can be required of a lecturer is a scholarly grasp of the field with which he is to deal. But this is not enough. To be successful a lecture must be skillfully planned, with the needs and limitations of the class audience in view. Speaking is an art in which proficiency should be developed by every teacher of the social studies.

3. *Factors that Influence Effectiveness in Speaking.*—The qualities that make speech effective have been the subject of much speculation and advice since the time of the Greeks. The status of opinion on these matters at the present time is readily shown by standard books on the subject.[28] While in general the qualities that make lectures effective before public

[27]Corey, Stephen M., "Learning from Lectures vs. Learning from Readings," *The Journal of Educational Psychology* XXV (September, 1934), pp. 459–470.

[28]Winans, James Albert, *Public Speaking* (revised edition). The Century Co., New York, 1924; Monroe, Alan H., *Principles and Types of Speech.* Scott, Foresman and Co., New York, 1935; Sarett, Lew, and Foster, William T., *Basic Principles of Speech.* Houghton Mifflin Co., Boston, 1936.

audiences are much the same as those that make them effective in school, the use of the lecture as an instructional instrument opens up additional problems. An excellent discussion of these is given by Bane.[29] Although his book is concerned primarily with college teaching, the discussion of the lecture in college is suggestive of its use in high school.

Space does not permit the discussion of the qualities that make a lecture successful either in public speaking or in teaching. For such a discussion reference should be made to the books that have been cited. It is strange that, in spite of the long interest in speaking and the enormous amount that has been written upon it, there should have been so little endeavor to ascertain, by direct experiment with audiences, what the effects of various types, principles, and techniques of speaking really are. There have been, of course, a number of studies of student opinion. Bane, for example, reports the results of a questionnaire answered by 140 college students. Each student was asked to check the characteristics of the best lecturer among his teachers. The ten characteristics most often checked by students are, in order of frequency with the number of checks indicated, as follows:

"124 Presented his subject more systematically and clearly.
110 Made more use of concrete illustrations and practical applications.
108 Knew his subject better than the average college teacher.
97 Was more enthusiastic about his subject.
90 Was less dogmatic in his views, more open-minded.
86 Knew more outside his subject, more practical.

[29]Bane, *Lecture in College Teaching*. See especially Chap. II, "The Major Defects of the Lecture," Chap. III, "Suggestions on Lecture Technique," Chap. IV, "Hints from Some Master Lecturers," and Chap. V, "Safeguards for the Lecture."

75 Had a better sense of humor than his colleagues.
73 Lecture did not duplicate text or materials easily accessible to students.
70 Was less 'bookish' or 'academic' than his colleagues.
62 Was more inclined to allow students to ask questions or more patient in answering them."[30]

Hollingworth gives a stimulating analysis of the psychological factors involved in securing, holding, and impressing audiences, with citations to a few of the investigations that have been reported in this field.[31] Very few of these experiments, however, are of interest to the classroom teacher. Cantril and Allport report some interesting data on the effect in broadcasting of (*a*) general and concrete statements, (*b*) long and short sentences, (*c*) speed, repetition, and length of speech.[32]

An investigation by Jersild of the relative value of position, repetition, and artificial emphasis in public speaking has some important implications for teaching. His subjects were 253 college students; the material of the speech was a biographical sketch of a fictitious person. He reports that, as measured by immediate recall, the most influential modes of emphasis are as follows: (1) The most effective, though not the most economical form of emphasis, is repetition to the extent of two or three statements. (2) Repetition is most effective when the presentations are separated by an interval of time. (3) The most impressive part of a lecture is the opening statement. (4) Of artificial devices, verbal comments are the most successful, followed, in order, by pausing before a statement, raising the voice, gestures, banging the table or desk. Speaking

[30] *Ibid.*, p. 53.
[31] Hollingworth, H. L., *The Psychology of the Audience.* American Book Company, New York, 1935.
[32] Cantril and Allport, *Psychology of Radio,* Chap. X.

slowly has a negative effect.[33] His conclusion as to the value of repetition is in harmony with that reached by Cantril and Allport[34] and by Norton,[35] who found that the effect of a single statement cannot be depended upon.

The evidence from the experiments so far reviewed indicates that there is little difference in the effectiveness of the visual and auditory presentation of verbal materials and that, in general, students who learn well by one method learn well also by the others. While conclusions from these experiments must be drawn cautiously and tentatively, the drift of the evidence suggests that:

(1) In the early years in school students understand and remember significantly more of what they hear than of what they read. This superiority decreases as facility in reading is developed, until it disappears in about the sixth or seventh grade. The differences between the visual and oral presentations are very small, but in the case of certain types of material they appear to be statistically significant. The data from experiments at the college level, however, show reading to be superior only in the case of difficult material and in cases where critical and discriminating comprehension is demanded, but the subjects used in these experiments were relatively few in number and poorly selected in comparison with those used at the lower levels of instruction.

(2) There is a high correlation between the scores made by students on tests after reading a selection and those made after hearing a selection read. It is rare to find a student with normal sense organs who is distinctly superior in ability to learn from one mode of presentation and inferior in learning

[33]Jersild, Arthur, "Modes of Emphasis in Public Speaking," *The Journal of Applied Psychology* XII (December, 1928), pp. 611–620.
[34]Cantril and Allport, *Psychology of Radio*, pp. 196–200.
[35]Norton, *Speech Comprehension Ability*.

from the other. Young, as has been pointed out in the chapter on reading, in an experiment involving over two thousand cases, found no student who was in the best quartile in the ability to understand what was heard and in the poorest quartile in the ability to understand what was read.[86]

(3) One of the most important conclusions to be drawn from the evidence on the efficiency of these two forms of presentation is that the amount that is understood by students, even when measured by immediate recall, is very slight and decreases rapidly with increasing intervals of time. Teachers should know that what they say in a lecture, in a comment, or in an elucidation is subject to these limitations. In other words, listening to a lecture or to an explanation is merely the first step, and often a halting one, in gaining an idea. Any teacher who believes that statements he makes are adequately understood by the average student will be thoroughly disillusioned by a test given at the close of his talk.

4. *Lecture versus Class Discussion.*—The efficiency of the lecture method has also been compared with that of the question-and-answer method. Alderman sought to determine the relative value of the lecture and the question-and-answer methods of class instruction in the social studies. There were five lessons on the government of England and one on that of Switzerland. The subjects were 271 pupils from grades seven to twelve in ten public schools. Both of the paired sections had a twenty-minute study period in which an identical text in government was used; this was followed in one case by a lecture that expounded the text, and in the other by a question-and-answer lesson. No notebooks or reference materials were allowed. The median score for the study period followed by a question-and-answer lesson was 83.25 per cent and that

[86]Young, *Relation of Reading Comprehension.*

for the study period followed by a lecture, 81.61 per cent.[37] These scores, which are large in comparison with those reported in other experiments, indicate either that both the lecture and the question-and-answer lessons were conducted with unusual skill or that the test was easy. The average differences in the results of the two methods are so small, however, as to be unreliable. There is some indication that the lecture method gave slightly better results for students of the upper grades. Students of the first quartile in ability profited slightly more from the lecture than from the question-and-answer lesson, while for students of the lowest quartile, the reverse was true.

Bane investigated the relative effectiveness of the lecture as compared with class discussion in college classes in education and in psychology. Students of the lecture classes were paired with those in the discussion classes on the basis of intelligence. Assignments made to the two sections were identical, and every effort was made to keep the subject matter the same in both instances. His conclusions are:

"(1) The lecture and class discussion methods of college teaching appear about equally effective in the immediate recall of content material.

"(2) The class discussion method is more effective than the lecture in the delayed recall of subject matter.

"(3) The lecture method is more suitable for the immediate recall of subject matter than for its retention to a later period; while the reverse is true of the class discussion method."

After pointing out some of the shortcomings in his investigation, he adds:

"However, inconclusive as these experiments are in some ways, they certainly do indicate that the lecture method is

[37]Alderman, Grover H., "The Lecture Method versus the Question-and-Answer Method," *The School Review* XXX (March, 1922), pp. 205–209.

especially suitable for imparting information for immediate use, but that certain safeguards must be taken to insure its retention over a longer period of time."[38]

Downing, in an investigation comparing the lecture-demonstration with the laboratory method of instruction in science, found that the lecture-demonstration was superior in imparting essential knowledge and in developing skill in laboratory technique in the early stages, that it resulted in greater ability to solve new problems, and that it was more economical of time and expense.[39]

An elaborate study by Scheidemann and Knight, comparing the method of individual instruction with a combination of two lecture hours followed by one hour of conference, recitation, or discussion, found the two methods of instruction to be of approximately equal effectiveness in teaching elementary psychology.[40]

Hudelson found the lecture method to give slightly higher achievement scores than did class discussion in a course in education.[41]

Spence and Watson compared, during one semester, the lecture method with the discussion method in two large classes. During the second semester, the groups were reversed. Their

[38]Bane, *Lecture in College Teaching*, Chap. I. This chapter is an abstract of his thesis: Bane, Charles L., *The Lecture vs. the Class-Discussion Method of College Teaching*. Doctor's dissertation, State University of Iowa, Iowa City, 1924.

[39]Downing, Elliot R., "A Comparison of the Lecture-Demonstration and the Laboratory Methods of Instruction in Science," *The School Review* XXXIII (November, 1925), pp. 688–697. See also Johnson, Palmer O., "A Comparison of the Lecture-Demonstration, Group Laboratory Experimentation, and Individual Laboratory Experimentation Methods of Teaching High School Biology," *Journal of Educational Research* XVIII (September, 1928), pp. 103–111.

[40]Scheidemann, Norma V., "A Comparison of Two Methods of College Instruction," *School and Society* XXV (June 4, 1927), pp. 672–674.

[41]Hudelson, Earl (ed.), *Problems of College Education*. University of Minnesota Committee on Educational Research. The University of Minnesota Press, Minneapolis, 1928, Chap. XXXII, p. 417.

conclusion is: "The results of the tests show therefore that these students tended to do better work in lectures at least as far as measurable results on examinations is [*sic*] concerned."[42]

Morris[43] and Tuttle[44] report somewhat equivocal results in comparing the lecture with what they termed the project method.

Remmers conducted a series of experiments at the college level that involved a comparison of (1) the lecture in groups of 150 to 170, plus one recitation in which these groups were divided into four sections, versus (2) recitations in groups of 35 to 40 meeting three times a week, and (3) a large group of 125 students meeting three times a week for lecture only. In comparing the lecture-recitation with the recitation, he concludes in part:

"1. Average learning achievement tends to be somewhat higher under the lecture-recitation procedure than under the recitation procedure. That is, groups at least four times the customary size can be at least as effectively and probably somewhat more effectively taught by the lecture-recitation method.

"2. Learning of the abler students is approximately equal under the two methods.

"3. Learning of the less able students is probably somewhat greater under the lecture-recitation procedure.

"4. Retention appears to be somewhat more permanent under the lecture-recitation method. Forgetting appears to be

[42]Spence, Ralph B., "Lecture and Class Discussion in Teaching Educational Psychology," *The Journal of Educational Psychology* XIX (October, 1928), p. 458.

[43]Morris, Victor, "Quantitative Measurement in Institutions of Higher Learning," in *Yearbook No. XVIII,* National Society of College Teachers of Education. The University of Chicago Press, Chicago, 1930, p. 144.

[44]Tuttle, H. S., "Quantitative Measurement in Institutions of Higher Learning," in *Yearbook No. XVIII,* National Society of College Teachers of Education. The University of Chicago Press, Chicago, 1930, pp. 144–145.

somewhat more rapid for the students in the smaller recitation groups.

"5. Student attitudes tend slightly to favor the smaller recitation groups, notwithstanding the higher average learning achievement in the larger lecture-recitation groups."[45]

The most important conclusions reached in comparing the effect of the recitation and the lecture-recitation with that of the lecture only are:

"1. Average learning achievement tends to be slightly higher, but not significantly so, under the lecture procedure.

"2. Lectures three times a week are about as effective for learning achievement as is the lecture-recitation procedure.

"3. Learning of the abler students is approximately equal under the three procedures.

"4. Learning of the less able students under the lecture procedure is at least equal and probably slightly superior to that of similar students under the recitation procedure."[46]

The conclusions as to the relative effect of the three methods are, of course, complicated by the additional factor of class size. The evidence from experiments on this factor, however, does not indicate that lectures to groups of 125 or more would be significantly less effective than those given to smaller groups.[47] On the other hand, the more informal type of lecture, in which opportunities are given for questions by the student and for some class discussion, would seem to be best adapted to small classes.

Gerberich and Warner[48] investigated the relative efficiency

[45]Remmers, H. H., *A Ten-Year Review of Studies in Higher Education.* Purdue University, Lafayette, Indiana, 1934, p. 64.

[46]*Ibid.*, pp. 64–65. [47]See Chap. II, especially pp. 68–76.

[48]Gerberich, J. R., and Warner, K. O., "Relative Instructional Efficiencies of the Lecture and Discussion Methods in a University Course in American National Government," *Journal of Educational Research* XXIX (April, 1936), pp. 574–579.

of the lecture and discussion methods for matched sections of a university course in American national government. The instructor, the references, the assignments, and the time allotments were identical in the different sections. Occasional opportunities were given for discussion and for asking questions in the lecture sections, while in the discussion groups the instructor tried to avoid everything partaking of the nature of a formal lecture. On a typical objective achievement test, the differences between the two class procedures fell far short of statistical significance. On a test that attempted to determine attitudes and points of view on controversial, semi-controversial, and commonly misunderstood issues, the sections taught by the lecture gave evidence of greater growth in liberalism than did the discussion sections, and the difference approached statistical significance.

As a method of clarifying the ideas gained in the study period and in providing for their retention, the lecture apparently compares favorably, in the higher grades, in high school, and in college, with the question-and-answer or discussion method. In general, students who do well under one method do well also under the other, but there is a tendency for above-average students to obtain relatively more from lectures than from class discussion, while the reverse is true for below-average students.

The evidence that has been reviewed indicates that the lecture method has been greatly undervalued in pedagogical literature for all levels of instruction, both with regard to its effectiveness in presenting data and with regard to other important pedagogical uses. Most of the criticism of this method should be directed instead to its overextensive use, particularly at the higher levels; to employing it for purposes better served by other methods, and to serious shortcomings that, while not

inevitably bound up with it, are all too common in practice. Some of the antagonism may be due to defining the lecture too narrowly. In practice the lecture varies from the most formal type, read directly from manuscript, to informal talks without notes and interspersed with frequent questions and comments by the students. Both of these extreme types and many intermediate forms serve useful purposes. The practical problem is to determine the situations in which the lecture in some form should be employed. Bane gives the following helpful analysis of these situations:

"(1) To convey knowledge or information not easily available in print, not to duplicate the text or specific references.

"(2) To afford a new interpretation based upon a broad synthesis of old materials.

"(3) To impart directions and unifying suggestions specific to a given course—to insure a continuous and defensible viewpoint through all the maize [*sic*] of materials.

"(4) To give expositions, illustrations, or demonstrations not otherwise possible—utilizing current happenings, new discoveries, more recent studies and investigations to adapt materials to a particular group.

"(5) To modify the relative emphasis upon particular portions of the subject given in the accessible references, either because of the more vital importance of the topic or its greater relative difficulty.

"(6) To afford inspiration to the students giving them a sense of personality pervading and vitalizing the course—challenging their thinking and stimulating them to individual reading and investigation.

"(7) To instruct exceptionally large classes where no other method is possible.

"(8) To replace other forms of instruction in the case of the unskilled teacher.

"In addition to these eight situations where the lecture is used as the only method for the entire hour, there is an incidental use of the lecture for specific situations where in the main some other method is used. The part-time use of the lecture serves a variety of teaching situations. The main ones are: to show how a new topic fits into the work; to give a bird's-eye view of what is to come next; to arouse interest in new work; to summarize a class discussion, or a big unit of the course; to build up a proper mental set at the beginning of the hour by review of previous materials or otherwise; to answer at length questions asked by students; to give historical background, biographical data, illustration and applications; to give detailed explanations of assignments, with suggestions for further investigation; to characterize references and books; to present the author's or the teacher's views; to call attention to current materials and studies in progress; to arouse emotional reactions; and to afford variety of procedure in the classroom.

"For these teaching situations, the lecture either in whole or in part will be found especially suited. It is for some of them practically indispensable. To deny the lecture a place in future methods, is to misunderstand these purposes."[49]

This analysis, while made with the problems of college teaching in mind, is also usefully suggestive of the place of the lecture and informal talks in elementary and secondary schools. The recommendation that the lecture be used to instruct exceptionally large classes and to replace other forms of teaching in the case of incompetent teachers should not be accepted without substantial qualification. It is easy for an administrator

[49]Bane, *The Lecture in College Teaching*, pp. 115–116.

to become so obsessed with the feasibility of lecturing to large classes that education will be formalized and the individual student neglected; and although, as has been pointed out, other forms of instruction may require more ability and more preparation than the lecture method, nevertheless it is unlikely that a teacher who cannot use other methods will achieve marked success through his lectures.

THE RADIO

Cantril and Allport estimate that there were seventeen million radios in the United States in 1932.[50] The number has undoubtedly increased. With the appreciation of the growing importance of the radio as a social force has come an increasing interest in its potential uses in education.

As a result, schools are now confronted with an imposing list of new problems, unheard of in schools a generation ago. They must discover the number and nature of the programs to which students listen in their own homes and decide what policy, if any, should be adopted in guiding the students' choices of programs and their methods of listening. They must, in any case, recognize the influence of these programs upon the students' interests and ideas. They cannot fail to be concerned with the way the various types of broadcasting stations, whether commercial or educational, are controlled. They must decide what uses, if any, are to be made of the radio in classroom instruction and, in so far as it is used, must be concerned with the planning of broadcasts, as well as with the many related administrative and teaching problems involved in the use of broadcasts in the school. They must

[50]Cantril and Allport, *Psychology of Radio*, p. 37.

appraise the radio in relation to other educational instruments and decide what peculiar merits it possesses.[51]

There have been a number of studies of the effectiveness of radio talks as compared with lectures given in person, with reading, or with other typical classroom procedures.[52] The problems involved in these comparisons are very complicated and the experimental factors are difficult to control; consequently, research in this field is in the early experimental stages. While the results that have been reported are not complete or consistent enough to warrant a confident appraisal of the merits of the radio as compared with other means of instruction, the trends of the data point to the probability that, on the average, the radio is neither markedly superior nor inferior to other forms of language presentation. What the evidence does show unmistakably is that, as in the case of hearing a lecturer in person or in the case of a single reading, the amount retained is small and many erroneous ideas result. This is precisely what one would expect from the fact that the radio is, after all, only another form of language presentation; all the central factors that have been shown to limit the student's attempt to get meaning from reading or from personal talks also limit his attempt to get meaning from a broadcast.

After reviewing the evidence, Lumley concludes: "Memory experiments have shown that listeners do not accurately report many things heard over the radio. Whether this inaccuracy is

[51]There is a growing literature dealing with these and other related problems. See especially Cantril and Allport, *Psychology of Radio;* "Education on the Air," MacLatchy, Josephine H. (ed.), *Third* (1932), *Fourth* (1933), and *Fifth* (1934) *Yearbooks,* Institute for Education by Radio. Ohio State University, Columbus, Ohio.

[52]A review of studies made up to 1934 may be found in Lumley, Frederick L., *Measurement in Radio.* The Ohio State University, Columbus, Ohio, 1934, Chap. X. See also Cantril and Allport, *Psychology of Radio.*

greater than that in reporting what is read remains undecided."[53]

Worcester reports that when sixth-, seventh-, and eighth-grade students were required, immediately after hearing a broadcast on the prevention of disease, to write a summary of what they had heard, not more than a third of the main ideas, on the average, were included. With regard to matters of detail, "There were 125 ideas presented. The largest number of ideas on the paper by any pupil was 27, and 11 of these were wrong. In the sixth grade the average number of ideas in the summaries was 14.5 of which 4.3 on the average were wrong. In the eighth grade an average of 13.7 ideas were given and 2.7 were wrong."[54]

The "howlers" reported in the case of reading,[55] are matched by numerous instances reported to result both from advertising and from educational broadcasts. For example, after listening to advertising broadcasts that warned against the pink toothbrush, three hundred persons asked for pink toothbrushes in the drugstores of one chain.[56] Here, again, is shown the need for skillful teaching that follows up, corrects, clarifies, and supplements the ideas gained from language presentation.

There is some evidence to show that short broadcasts are better than long, that material presented at the beginning of a broadcast is, as in the case of the lecture, best understood and remembered, and that the average person of the volunteer radio audience will not listen to a lecture for more than a few minutes. On the other hand, the lapsing of attention is not unknown in the study period, in the lecture, or in the class

[53]Lumley, *Measurement in Radio*, p. 206.

[54]Worcester, D. A., "What People Remember from Radio Programs," in "Education on the Air," *Third Yearbook*, Institute for Education by Radio, p. 225.

[55]See pp. 187–194 of the present volume.

[56]Lumley, *Measurement in Radio*, p. 210.

discussion, and many texts and references that students are required to read would probably not be read voluntarily by the average person who listens to the radio in his home.

A general appraisal of the value of the radio in classroom instruction is given by Cantril and Allport. They conclude that, as compared with listening to a lecturer in person, "*. . . radio seems to have a slightly dulling effect upon higher mental processes.* In the radio situation the listener is on the whole less analytical, less alert, less involved personally and socially, and more passively receptive than he is in the face-to-face situation."[57] The same authors, in evaluating the radio presentation in comparison with other forms of classroom instruction, point out,

". . . that the radio presentation must be regarded psychologically as more of a 'closed whole' than the ordinary method of instruction found in the classroom. The absence of the teacher's gestures and facial expressions, to say nothing of the missing blackboard, give the radio talk a peculiar rigidity. Students report that their note-taking habits are distorted in a radio lecture. It is less easy to dissect the talk into major and minor points. Listeners find that they require more repetition and more concrete illustrations. . . . The radio talk goes on relentlessly; there are no pauses in response to puzzled looks from the class. Radio permits no wholesome 'mental interruptions' during which the student can come up for air and a fresh look around.

"Over the air the teacher is unable to establish the peculiar rapport that emerges from circular social response. He cannot gauge the effects of his remarks, he cannot tell how long to pause after a jest until the laughter has subsided; he cannot repeat or amplify his remarks when the students seem be-

[57]Cantril and Allport, *Psychology of Radio*, p. 157.

wildered, and above all, he cannot answer those unpredictable questions that make life in a classroom interesting. The modern practices of using a studio audience, rehearsing for smoothness, and employing dialogue with prearranged questions and answers only partially compensate for these disadvantages.

"Unless the radio is installed in a classroom, the speaker cannot count on the social facilitation which in assemblies augments laughter and interest, and speeds the students' responses. When the listener is solitary, all of the phenomena that characterize congregate groups and crowds are absent. This condition is, of course, favorable to critical listening and tends to offset the prestige suggestion of the radio. The educator, unless he is also a propagandist, wishes to stimulate analytical and critical thought, and is accordingly pleased to address a scattered audience. On the other hand, he is bound to lose some of the striking advantages in enhanced interest and responsiveness that he would have in congregate assemblies.

"Summarizing in a rough way the advantages of radio instruction as compared with classroom instruction, the following points emerge—each, of course, being relative to the precise conditions obtaining in any particular classroom and in any particular broadcast:

radio can reach incomparably larger audiences;

figuring per capita cost its services are probably cheaper than any other medium of instruction;

the varied content possible in its programs promotes interest and attention;

its varied methods do the same;

dramatization and showmanship make education pleasurable;

in many regions it can supplement poor local teachers with good radio teachers;

it probably has a favorable effect upon the exercise of visual imagination;

it can make important events and personages more real to the pupil;

it can bring good music into every locality;

the pupil becomes less provincial in his outlook; the excellence of talks and music heard may fire his ambition and arouse talents that might otherwise lie dormant.

"As compared with classroom instructions, radio has certain serious disadvantages:

it cannot count upon the habits of disciplined and attentive listening that the classroom calls forth since it is usually regarded as a medium of entertainment rather than instruction;

all visual aids in education are absent, save only the aid of visual imagery;

spontaneous questions are impossible;

humor is less appreciated;

circular phenomena are absent, and the invention of new ideas from class discussion becomes impossible;

there is less opportunity for the students to analyze and dissect the presentation;

suggestibility is enhanced (though perhaps no more so than in a congregate face-to-face assembly);

lectures are impersonal with a consequent loss in friendliness and human interest;

students do not, as inquiry shows, favor radio education as an exclusive substitute for classwork."[58]

Whether or not to use the radio will often be determined by

[58] *Ibid.*, pp. 252–253.

For a more comprehensive discussion of the radio in education and an extensive bibliography, see Lumley, *Measurement in Radio*. See also "Education on the Air," *Third, Fourth and Fifth Yearbooks*, Institute for Education by Radio, and Cantril and Allport, *Psychology of Radio*, Chap. XIV.

factors other than the efficiency of this mode of presentation. The radio is not merely, or even chiefly, an instrument for teaching in the school, but is a means of contact with persons and affairs in the world at large. There are many programs on the various commercial networks that may be listened to with interest and profit by students in the social studies, and much of what is contained in these programs cannot be secured by any other means. Something is undoubtedly gained from listening to an address by a famous man that cannot be obtained from reading the printed account. Programs are not limited to addresses, and even when the addresses are available in printed form, their personal appeal cannot be duplicated. Obviously, noted speakers cannot address each interested class in person. Broadcasts seem to have decided merits, therefore, in the presentation of news and current problems as well as in bringing a personal message from scholars in the various fields of the social studies and from other eminent persons.

Broadcasts planned expressly for systematic instructional purposes are another matter; they are to be evaluated primarily as a method rather than as a unique contact with the world outside the school. It would be rash to predict what part they will play in instruction in the social studies even ten years hence. Their use is increasing at all levels, from college to the elementary school. Those who have recognized the potentialities of the radio in education have waged an uphill battle to retain the control of a fair share of the broadcasting rights, and in their efforts they deserve the support of every teacher of the social studies.

Experience in using the radio for systematic instruction in the social studies is so little matured and the problems involved are so manifold that guiding principles cannot be set up with confidence. A review of experimental evidence and of the

discussions by those most familiar with the radio as an instructional instrument suggests the following tentative policies:

1. Educational broadcasts should be co-ordinated with the school program in such a way as to make them subservient to the purposes of instruction.

2. As in the case of all methods, one should first ask what it is that is to be learned and for what purpose, and then decide whether or not broadcasts are more efficient than other methods or are a valuable supplement to them.

3. In general, the radio should not be used for the presentation of information if the same information, equally well organized and adapted to the students, is available in printed form. Entirely aside from the manner of presentation, the content and organization of many broadcasts, if one is to judge from the printed script, are inferior to the treatments of the same subjects in available texts and references.

4. In addition to being planned with the utmost care as to accuracy of content and effectiveness of organization, broadcasts should be planned with full recognition of the conditions required, as shown by experiment and experience, for making broadcasts most effective.

5. The radio should supplement, not supplant, other forms of instruction.

6. Special efforts should be made to counteract the passive and uncritical attitudes that are reported to be somewhat more marked in this than in other forms of presentation. Because of administrative difficulties, it does not seem possible to make the radio as subservient to the developing interests and ideas of children as are other forms of instruction.

7. Unusual precautions should be taken to meet the needs of individual students. There are few other types of presentation that are so likely to result in mere mass instruction.

8. The radio does not take the place of the teacher nor does it make possible the employment of teachers of inferior ability. As compared with other methods of presentation, there is probably even more need for a teacher's competent guidance in removing misconceptions, in clarifying and supplementing ideas, in stimulating thinking, and in providing for growth and retention.

INFORMAL DISCUSSIONS

There is no experimental evidence to indicate the value of comments, explanations, and supplemental remarks made during class discussions. The need for all of these procedures is clearly indicated, however, in the chapter on reading, in the chapter on the textbook and collateral reading, and in a subsequent section on questioning. From the point of view of the needs of the students, these types of oral instruction seem to have distinct advantages over the formal lecture. Nevertheless, they suffer from some of the same limitations that have been shown in the case of lectures and reading. They are not likely to be fully comprehended or remembered. The teacher should know that any explanation should be clinched and followed up if it is to be effective. Since these informal discussions are usually extemporaneous, moreover, they often involve inadequacies or errors in statements of fact. Kerr, for example, had stenographic records made of a series of lessons in the teaching of geography. He reports that most of the errors made upon a test given at the end of a unit of instruction were traceable to errors or inadequacies in statements made by the teacher or in statements made by pupils and uncorrected by the teacher.[59]

[59]Kerr, Walter E., *A Case Study of Reading Comprehension Difficulties in Geographic Materials.* Unpublished master's thesis, State University of Iowa, Iowa City, 1934.

OTHER FORMS OF ORAL PRESENTATION

Two other forms of oral presentation should be mentioned: that in connection with both silent and sound pictures and that by means of the phonograph. The service of the lecture or explanation as a part of motion pictures is later pointed out in the discussion of visual aids and need not be developed further here. The phonograph record has two advantages in its favor: it records and brings to the classroom the addresses, songs, and circumstances of past days, and it is readily integrated with regular classroom work. The usefulness of the phonograph in teaching the songs of the past has been demonstrated.[60] There is no reason why it should not be used with equal or greater profit in the case of noted addresses or debates that have been preserved. Records are available, for example, of speeches made by Wilson, Theodore Roosevelt, Taft, William Jennings Bryan, Franklin D. Roosevelt, and others. Playing these records in the classroom will undoubtedly add a sense of the reality of the personalities of these men, in relation to the political issues of the time, that cannot be duplicated by any other means except by the modern newsreels. These reels go back only a few years, are very expensive, and are usually not available.

It is evident from the results that have been reviewed, as well as from common-sense analysis, that no type of oral presentation, whether in the form of lectures, radio broadcasts, or informal talks, should be employed exclusively at any level. Oral teaching, like reading and class discussion, should be used in circumstances where it has peculiar merits. These circumstances have already been enumerated. There are times when

[60]Landman, Jacob Henry, "Phonograph Records as an Aid in the Teaching of American History," *The School Review* XXXV (November, 1927), pp. 681–685.

oral instruction is the most effective method of making adjustments to individuals, since the teacher, with an individual or class before him, can make adaptations to needs as they arise. Oral instruction in the class as a whole, however, is subject to one limitation: the content of the talk and the rate at which it is given are the same for all students. On the contrary, where adequate textbooks and collateral readings are available, each pupil can read, at his own rate, materials adapted in difficulty to his ability and can re-read these materials as often as necessary.

Finally, the effect on development of habits of work must be considered in weighing the relative merits of the lecture, the radio, reading, and class discussion. That the student must learn how to use books and libraries in the study of social problems is beyond debate. But he must also learn discrimination in choosing lectures and must be taught how to make the most of them. He needs especially to know how to keep in touch with important radio lectures, as well as how to listen to them in a critical spirit. Making the most of lectures is undoubtedly affected by training, just as learning from books is affected by the development of proper reading habits. Nor should the experience gained in class discussion be underestimated; it is valuable not only for immediate learning but also as a preparation for the many forms of group discussion that exist in life outside the school.

QUESTIONING

PREVALENCE OF THE QUESTION-AND-ANSWER RECITATION

There has probably never been a time during the last seventy-five years when some form of the question-and-answer recitation has not been the most prevalent method of teaching. Throughout this period, the enemies of formal teaching have attacked

the mechanical procedures into which questioning often degenerates, have suggested improvements or substitute forms of teaching, and have sometimes deluded themselves by the belief that the objectionable practices were disappearing. Many advocates of new methods, however, have been as uncritical of the innovations that they proposed as they have been hypercritical of questioning. Faults have been attributed to questioning that should have been charged to its misuse; and by thus centering attention exclusively upon objectionable features, the potentialities of good questioning have been obscured. Meanwhile, both good and poor questioning persisted. *The Cyclopædia of Education,* published in 1877, states:

"The catechetical method was formerly very popular in schools, and almost universally employed; but, in proportion as mechanical methods of recitation and rote-teaching gave place to such as appealed directly to the pupil's intelligence and powers of expression, the mere question-and-answer system of instruction became discredited and was abandoned. In its place, the *topical method* is now in quite general use."[61]

Apparently, however, the catechetical method was more persistent than this quotation would indicate, for the professional literature in subsequent years abounds in criticisms of this and other formal procedures. Stevens, in 1912, estimated that four fifths of the school time was taken up with question-and-answer recitations.[62] A year later Yamada wrote: "To-day more than two-thirds of the school time is occupied with questions and answers. . . ."[63] Available evidence from steno-

[61]Kiddle, Henry, and Schem, Alexander J. (editors), *The Cyclopædia of Education.* E. Steiger, New York, 1877, p. 117. See also article on Interrogation.

[62]Stevens, Romiett, *The Question as a Measure of Efficiency in Instruction.* Contributions to Education, No. 48, Teachers College, Columbia University, New York, 1912, p. 6.

[63]Yamada, Soshichi, "A Study of Questioning," *The Pedagogical Seminary* XX (June, 1913), pp. 129–186.

graphic reports and from studies of the distribution of activities of pupils and teachers indicates that these estimates are probably conservative. As late as 1931, Backlund reported that of thirty-nine classes observed in a large city system, thirty-seven used question-and-answer recitations, most of them of a relatively formal type.[64] Apparently "the passing of the recitation,"[65] with the accompanying question-and-answer method, has been, like the report of Mark Twain's death, "greatly exaggerated."

Questioning is not limited, moreover, to the traditional question-and-answer recitation; it has an important place in all of the forms of teaching that are in common use in modern schools: socialized recitation, mastery technique, Dalton plan, unit plan, project method, and even activity programs. As a matter of fact, as shown in the National Survey of Secondary Education and in other surveys, the question-and-answer recitation is still prevalent even where instruction is labeled to indicate other patterns of teaching. This is true even in the case of teachers who are reputed to have exceptional skill.

The literature on questioning is voluminous and extends back to the time of Socrates.[66] Whole books have been written on the art, and rightly so, for it has a place of strategic importance in teaching. During the last few years, however, it has not received the attention that it deserves.

THE EXPERIMENTAL STUDY OF QUESTIONING

The experimental study of questioning has not been limited to its use in instruction but has been carried on also in con-

[64]Backlund, Elliot, *An Analysis of Classroom Activities in the Teaching of American History in Chicago High Schools.* Master's thesis, Northwestern University, Evanston, 1931.

[65]Thayer, V. T., *The Passing of the Recitation.* D. C. Heath and Company, Boston, 1928.

[66]Some idea of the drift of the theory of questioning may be obtained

nection with certain psychological problems and with its practical application to legal testimony. Binet in France and Stern, Borst, Lipmann, Franken, and Bader in Germany may be mentioned among the pioneers in the study of the psychological aspects of the problem. Their investigations and others are

from the following references, which are arranged in chronological order:

Page, David P., *Theory and Practice of Teaching.* Hall & Dickson, Syracuse, 1847.

Young, W. T., *The Art of Putting Questions.* 1853. (A later edition was published by C. W. Bardeen, Syracuse, in 1895.)

Kiddle and Schem, *Cyclopædia of Education,* 1877.

Report of the Committee of Ten on Secondary School Studies. The American Book Company, New York, 1894, pp. 189–192.

Fitch, Joshua G., *The Art of Questioning.* C. W. Bardeen, Syracuse, 1897. (The edition used in the preparation of this report was published by The Abingdon Press, New York, in 1906.)

McMurry, Charles A., and McMurry, Frank M., *The Method of the Recitation.* The Macmillan Company, New York, 1897.

Landon, Joseph, *A Manual of the Art of Questioning.* C. W. Bardeen, Syracuse, 1899.

Hinsdale, B. A., *The Art of Study.* American Book Co., New York, 1900, pp. 97–104.

DeGarmo, Charles, *Interest and Education.* The Macmillan Company, New York, 1902. Chap. XIV, "The Art of Questioning," pp. 179–204.

Keith, John A. H., *Elementary Education.* Scott, Foresman and Company, Chicago, 1905, pp. 151–179.

The Committee of Eight, *The Study of History in the Elementary Schools,* Report to the American Historical Association. Charles Scribner's Sons, New York, 1909, pp. 93, 100–101, 103.

Earhart, Lida B., *Teaching Children to Study.* Houghton Mifflin Company, Boston, 1909.

Adams, John, *Exposition and Illustration in Teaching.* The Macmillan Company, New York, 1910.

Strayer, George D., *A Brief Course in the Teaching Process.* The Macmillan Company, New York, 1911. Chap. XI, "Questioning"; also pp. 130–131, 170–207.

Charters, W. W. *Methods of Teaching* (third ed.). Row, Peterson & Company, Chicago, 1912. Chap. XVIII, "Questioning."

Stevens, *The Question,* 1912.

Hall, John W., and Hall, Alice C. K., *The Question as a Factor in Teaching.* Houghton Mifflin Company, Boston, 1916.

Parker, Samuel C., *Methods of Teaching in High Schools* (second ed.). Ginn and Company, Boston, 1920. Chap. XX, "The Art of Questioning."

Colvin, Stephen S., *An Introduction to High School Teaching* (second ed.). The Macmillan Company, New York, 1921. Chap. XV, "The Question as a Method of Instruction."

Monroe, Walter S., and Carter, Ralph, *The Use of Different Types of Thought Questions in Secondary Schools and Their Relative Difficulty for*

summarized in convenient form by Yamada.[67] The data on questioning in cross examinations are summarized by Yamada, Burtt,[68] Morgan,[69] Stern,[70] and Whipple.[71] The most influential studies of oral questions in instruction are those by Stevens[72] and Yamada.[73] The research on the written question or test is too varied and extensive even to list here. Valuable summaries of this research are found in Ruch and Stoddard, *Tests and Measurements in High School Instruction*[74] and in Volume IV of this Commission.[75]

The long-recognized importance of questioning is due not so much to the fact, already referred to, that questioning takes up a large part of the school day, as to the inherent value of good questions. Even before the Herbartian influence had gained much headway in America, there had been protests against formal catechetical methods, with their attendant emphasis on verbal memory; and these protests eventuated in many excellent constructive suggestions. The Herbartians, in

Students. Bulletin No. 14, Bureau of Educational Research, College of Education, University of Illinois, Urbana, 1923.

Wilson, Harry B., Kyte, George C., and Lull, Herbert G., *Modern Methods in Teaching.* Silver, Burdett and Company, New York, 1924. Chap. XVII, "Questioning," pp. 239–252.

Douglass, Harl R., *Modern Methods in High School Teaching.* Houghton Mifflin Company, Boston, 1926, pp. 31–48.

[67]Yamada, "A Study of Questioning."

[68]Burtt, Harold E., *Legal Psychology.* Prentice-Hall, Inc., New York, 1931.

[69]Morgan, Charles S., "A Study in the Psychology of Testimony," *Journal of the American Institute of Criminal Law and Criminology* VIII (July, 1917), pp. 222–232.

[70]Stern, William, "Abstracts of Lectures on the Psychology of Testimony and on the Study of Individuality," *American Journal of Psychology* XXI (1910), pp. 270–282.

[71]Whipple, Guy M., "The Observer as Reporter," *Psychological Bulletin* VI (May, 1909), pp. 153–170.

[72]Stevens, *The Question.*

[73]Yamada, "A Study of Questioning."

[74]Ruch, G. M., and Stoddard, George D., *Tests and Measurements in High School Instruction.* World Book Company, Yonkers-on-Hudson, 1927.

[75]Kelley, Truman L., and Krey, A. C., *Tests and Measurements in the Social Sciences.* Charles Scribner's Sons, New York, 1934.

turn, placed a high value on questioning as a means of developing, organizing, and using new ideas.[76] Although Stevens, in her investigation, published in 1912, drew a rather sorry picture of questioning as practiced in the schools at that time, she rightly pointed out that the faults disclosed were to be attributed to a lack of skill on the part of teachers, rather than to any intrinsic weakness in questioning as a method. She held the question-and-answer recitation, when properly used, to be superior to the topical recitation, the written lesson, or the lecture. She stated:

"The question and answer recitation may become a conversation hour between teacher and pupils, a period of richest opportunity for true education, *i.e.,* the *'leading out'* of what is in the mind of the pupil."[77]

Yamada, whose summary of the investigations of the psychology of questioning is still the best available single digest, wrote:

"The question rightly used is a medium through which a teacher comes into the closest touch affectively with her pupil."[78]

The statement of Horne is: "Questioning is one of the supreme methods by which a maturer mind can assist a learner's growing mentality. It best enables teacher and pupil to work together. . . ."[79]

For a few years after the publication of the investigations by Stevens and Yamada, questioning received increased attention in the literature on the methods of teaching. During the last few years, however, the emphasis upon oral questioning

[76]See Hall and Hall, *Question as a Factor in Teaching.* See also Mace, William H., *Method in History.* Ginn & Company, Boston, 1897, pp. 302–307.

[77]Stevens, *The Question,* p. 2.

[78]Yamada, "A Study of Questioning," p. 130.

[79]Horne, Herman H., *Story-telling, Questioning, and Studying: Three School Arts.* The Macmillan Company, New York, 1916, p. 64.

has gradually dwindled, until the indices of some modern books contain no items whatever on the subject. This recent neglect may be due to a number of causes: to an absorption in the improvement of the technique of written examinations; to a distortion of the vision of fundamental methods by becoming engrossed in novel types of procedures; to an improper identification of oral questioning with mere fact quizzes; or to an erroneous assumption that good questioning can be taken for granted. It is significant that Dewey, who has persistently attacked formal instruction, has an important section on questioning in the revised edition of *How We Think*.[80] An examination of his recommendations indicates that he gives space to the problem, not from a resigned conviction that the question-and-answer recitation is fated to be always with us, but from the realization of the peculiarly valuable part that questioning plays in teaching pupils to think.

THE IMPORTANCE OF QUESTIONING AS REVEALED BY ITS FUNCTIONS

Many of the obvious shortcomings that are reported in question-and-answer recitations as commonly conducted are undoubtedly the result of too exclusive an emphasis on testing to the neglect of other important uses to which questions may be put. The functions of questions are many, but only a few of the most significant can be given here.

First, questioning is indispensable in bringing about proper understanding and co-operation between pupils and teacher. This is universally true—in the school that seeks to organize its instruction around the problems of children as well as in the school that seeks to identify children with the persistent problems and values of life. The ramifications of questioning

[80]Dewey, John, *How We Think* (new edition). D. C. Heath and Company, Boston, 1933, Chap. XVIII.

in the establishment of proper relationship between pupils and teacher become increasingly apparent as each of the following functions is examined.

Second, questioning is essential in the discovery, stimulation, and guidance of interests. At this point in learning, its purpose is to raise problems and to create a favorable mind-set, both affectively and intellectually, toward their progressive solution, rather than to secure fixed answers.[81] Questioning contributes to this end in two ways: (*a*) in developing a sense of value or a feeling of need, and (*b*) in demonstrating to the student, after the manner of the Socratic method, the limitations of his knowledge.

Third, it teaches pupils to think. Dewey points out that thinking is questioning.[82] This function has received steady and vigorous emphasis for many years, although it is still far from being realized in common practice.

Fourth, questioning helps to improve the accuracy, clearness, and organization of meanings and concepts. This function was much stressed by the Herbartians. Modern research furnishes unmistakable evidence of verbalism as well as of the vagueness, the error, and the incompleteness of children's concepts in the social studies. In the discovery and removal of such deficiencies, there is no satisfactory substitute for the question, although, as will be shown later, poor questions befog as much as good questions clarify.

Fifth, skillful questioning develops a more active and aggressive attitude toward learning. This fact is commonly ignored by the critics of the question-and-answer recitation. There is considerable experimental evidence showing that, for this reason, questions are beneficial in their influence not only on initial learning but also on retention.

[81] *Ibid.*, pp. 267–268.

[82] *Ibid.*, p. 265.

Sixth, it affords a basis by which pupils and teachers may appraise results. Such appraisals are not limited to mere tests for the purpose of establishing marks or even for diagnostic purposes to discover whether or not additional learning is necessary; they are required to give a confident sense of accomplishment, which is so important for developing morale and maintaining interest in a subject.

Although this list does not exhaust the desirable functions of questioning, it will serve to show why the question has received such widespread attention in educational literature. No good end would be served by an effort to rank these functions in the order of their significance. All are important, and the usefulness of questioning is greatly diminished, if, through too exclusive an emphasis on one of them (as in the past on testing), the others are obscured.

THE INFLUENCE OF QUESTIONING UPON MEANING

Most of the experimental evidence on the effect of questions upon learning bears on the way in which they influence the accuracy, completeness, and organization of meanings and concepts. So intimately is this problem of meaning related to all of the other functions, however, that any evidence that throws light on it illuminates them also. The somewhat meager data on the influence of oral questioning upon efficiency of learning are reinforced by more extensive research on the use of the question in obtaining legal testimony and by the evidence from closely related experiments in the psychological laboratory. All these data lead rather consistently to a number of conclusions of great import for the teaching of the social studies.

First, the number of significant items that can be accurately recalled as a result of a given experience is relatively small.

Some items may have been erroneously perceived, some forgotten, and some not perceived at all. The difficulty of obtaining adequate meanings from language is pointed out elsewhere in this report.[83] Various studies on reading have demonstrated that very little is obtained, on the average, by a single reading; that serious misconceptions are common and difficult to prevent; that such misconceptions occur when the source of meaning is the spoken word, as well as when it is the printed page; and that questioning may operate either to clarify or to muddle concepts that have been gained through study.

Second, both the amount and accuracy of what is recalled are affected by the way the recall is stimulated. The pupil (or witness), for example, may be asked to tell, with little or no interruption, all that he knows about a given matter, or he may be questioned specifically about it. In the former case, the data are more accurate in detail but much less complete than those obtained by questioning, and the effect upon subsequent learning or retention is much less beneficial. Yamada suggests that a combination of the free report and questioning is more effective in learning than either of the methods taken alone.[84]

Third, the quality, content, and accuracy of pupils' answers are influenced by the nature of the questions asked. The amount of this influence has been greatly underestimated both in the discussions of oral questioning and in the literature on written tests. A study of the answers that pupils give to typical oral and written questions leads one to suspect that what is said is sometimes determined as much by the kinds of questions asked as by what the pupil has learned. It will be shown later that a rapid fire of questions that focus chiefly on matters of fact tends to block thinking and to decrease the

[83]See Chap. IV. [84]Yamada, "A Study of Questioning."

quality of oral expression. Investigations of testimony,[85] of suggestion as a psychological problem,[86] and of the question in instruction[87] show that questions, whether leading or misleading, vary greatly in the amount of suggestion that they contain. Stern, Lipmann, Muscio, and Yamada give elaborate gradations of the suggestiveness of various types of questions.[88] Ruch found that certain types of written test items are more leading or misleading than others.[89] Improper questions not only distort ideas by focusing upon certain facts or principles to the neglect of others but also may bring about imaginative constructs that are partly or wholly fictional.[90] If, as the evidence indicates, questioning increases and focalizes mental activity, the harm thus done is thereby intensified. The effect of improper questioning must therefore be regarded as a matter for serious concern. Good questions, on the other hand, are as beneficial and essential as poor questions are harmful and unnecessary.

Fourth, the attitude of the questioner, as well as that of the questioned, must be reckoned with as factors that determine not only a continuing interest in a problem but also the character of the ideas acquired.[91] This applies even to the intellectual phases of a problem, and still more to the emotional aspects.

[85]See footnotes on p. 340. [86]Yamada, "A Study of Questioning," pp. 131 ff.

[87]Keatinge, M. W., *Suggestion in Education*. Adam and Charles Black, London, 1907, pp. 36–53. See also Yamada, "A Study of Questioning," pp. 146–147.

[88]Yamada, "A Study of Questioning," pp. 149 ff. See also Muscio, Bernard, "The Influence of the Form of a Question," *British Journal of Psychology* VIII (September, 1916), pp. 351–389. The data from various investigations are summarized by Yamada.

[89]Ruch, G. M., "Specific Determiners Which Invalidate Objective Tests," *Los Angeles Educational Research Bulletin* X (April, 1930), pp. 2–5.

[90]Keatinge, *Suggestion in Education*. See also Yamada, "A Study of Questioning."

[91]For a summary of the evidence, see Yamada, "A Study of Questioning," pp. 157–160; Keatinge, *Suggestion in Education*. See also the preceding references to the data on legal testimony as reviewed by Yamada, Burtt, Morgan, Stern, and Whipple.

Both interest and thinking may easily be inhibited by improper attitudes on the part of the teacher, and even where this does not occur, the worst type of indoctrination often results. The teacher's attitude as well as his questions should stimulate inquiry, not discourage it.

Fifth, questioning has an important influence on learning. Washburne,[92] Wilcox,[93] Kirkpatrick,[94] and Holmes[95] found this to be true of the written question preceding study. Yamada showed that oral questioning contributes to the correction of errors and to the subsequent retention of right answers.[96] These conclusions obviously have important implications for the assignment of lessons, for the direction of class discussions, and for the conduct of reviews.

PROBLEMS IN THE TECHNIQUE OF QUESTIONING

Earlier books on methods of teaching gave much attention to the types and forms of questions, but because of the failure to view questions in relation to the various functions that they serve, many of the practices recommended were formal and ritualistic. Although less has been written of late on this phase of questioning, it is by no means a trivial matter, and most teachers would undoubtedly profit from a study of the better discussions of types of questions and their uses.[97]

[92]Washburne, John N., "The Use of Questions in Social Science Material," *Journal of Educational Psychology* XX (May, 1929), pp. 321–359.

[93]Wilcox, Myron J., *The Effect of a Corrected Inventory Test.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1932.

[94]Kirkpatrick, James E., *The Motivating Effect of a Specific Type of Testing Program.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1933.

[95]Holmes, Eleanor, "Reading Guided by Questions Versus Careful Reading and Re-Reading without Questions," *The School Review* XXXIX (May, 1931), pp. 361–371.

[96]Yamada, "A Study of Questioning," pp. 137–147 and also pp. 164–172. See also the section on memory, Chap. XII.

[97]See especially Yamada, "A Study of Questioning," pp. 164–169; Keith, *Elementary Education,* pp. 151–179; and Douglass, *Modern Methods,* Chap. II.

The contrast between so-called "fact" questions and "thought" questions has been much stressed from the time of the earliest reaction against formal methods. In her analysis of sample stenographic reports of lessons in various subjects, Stevens found history teachers to be the worst offenders in neglecting questions that require thinking, with the maximum of only 28 thought questions out of a total of 125 in one lesson, and a minimum of 3 in a total of 60 in another.[98] Later investigations have in general confirmed the findings of Stevens, although the percentage of thought questions is not always so low.[99] Apparently teachers are not following the lead of the study helps provided in textbooks, for even in 1916 Bagley and Rugg reported that problematic or thought questions were becoming the rule in grammar grade histories,[100] and in 1926 Moore, as a result of the analysis of eighteen intermediate grade texts in reading, history, and geography, found that 61.3 per cent of the questions required thinking.[101]

Such data are impressive, but they may be misleading. "Thought" questions and "fact" questions are wrongly set off against each other instead of being thought of as correlative, as is more proper. "Thought" questions and "memory" questions are also commonly differentiated, and again improperly, for neither learning nor thinking is possible without memory. It would be more serviceable to contrast questions that stimulate or test thought, understanding, and the use of essential ideas, with those that can be answered by the memorization of

[98]Stevens, *The Question,* pp. 58–60.

[99]See, for example, Backlund, *Analysis of Classroom Activities,* and Osburn, W. J., *Are We Making Good at Teaching History?* Public School Publishing Company, Bloomington, Illinois, 1926, pp. 7–58.

[100]Bagley, W. C., and Rugg, H. O., *The Content of American History as Taught in the Seventh and Eighth Grades.* University of Illinois, School of Education, Bulletin No. 16. Urbana, Illinois, 1916, p. 14.

[101]Moore, Nelle E., "An Analysis of Study Questions Found in Textbooks for the Intermediate Grades," *Elementary School Journal* XXVII (November, 1926), pp. 194–208.

mere verbal statements. Indeed, a distinction between "fact" questions and "thought" questions is, to a considerable extent, a subjective matter and cannot be made with confidence.

Certain types of questions have long been frowned upon: leading questions; questions that can be answered by one word, and especially when the one word is yes or no; elliptical questions; questions calling for a choice of alternatives; and questions that require a fixed response rather than those that "keep the subject developing."[102] While these forms, or types, should not be condemned in too wholesale a fashion, they undoubtedly make up too large a proportion of all of the questions asked, and great caution is needed even in their occasional use. It is significant that the very types that are held to be objectionable in oral questioning are the ones most commonly used in the modern forms of the written examination.

THE RAPIDITY OF QUESTIONING

The overwhelming rapidity of questioning was impressively portrayed in the investigation by Stevens. Her summary tables[103] indicate that, on the average, a question was asked and some sort of answer given every two minutes. The history teachers asked an average of 81.2 questions per period, the number ranging from 41 to 142. Subsequent counts made in recitations at all levels from the elementary school to college confirm these findings in a general way.[104]

The large number of questions asked per recitation shows, in Stevens' opinion, that:

1. The resulting rapidity of questioning leads to "the maintenance in the class room, for considerable portions of time, of a highly strung nervous tension. . . ."

[102]Dewey, *How We Think* (new edition), p. 267.
[103]Stevens, *The Question*, pp. 11–15.
[104]See, for example, Backlund, *Analysis of Classroom Activities*, pp. 27, 53, 61.

2. Rapid questioning creates a condition in which ". . . the teacher is doing most of the work . . . instead of directing the pupils in the doing."

3. Many questions do not lead to real understanding, for ". . . the largest educational assets that can be reckoned are verbal memory and superficial judgment."

4. A large number of questions is so time-consuming that ". . . there is no time in the mechanics of the school room to cultivate the gentle art of expression."

5. Little thought is given to the needs of individuals.

6. The classroom is a "place for displaying knowledge instead of a laboratory for getting and using it."

7. Little effort is "put forth to teach our boys and girls to be self-reliant, independent mental workers. . . . There is no time to teach him [the youth] how to study: how to organize subject matter, how to judge relative worths of facts studied, what to memorize."[105]

The rapidity of questioning should be appraised in the light of the various functions that questions serve. One cannot agree with Stevens that rapid, incisive questioning is always and necessarily objectionable.[106] It has its place in checking or clarifying essential matters of fact, in stimulating simple deductions, and in putting vigor and direction into a lazy or wandering discussion. But these functions, while important, must be kept subordinate to the stimulation of interest, the encouragement of thinking, and the organization of ideas. It is doubtless because none of these functions has been adequately served that rapid questioning has fallen into disrepute.

When, however, questions are asked at the rate of one or two

[105]Stevens, *The Question*, pp. 17–26.

[106]*Ibid.*, p. 71: "A LARGE NUMBER OF QUESTIONS IS AN INDISPUTABLE INDEX OF BAD TEACHING, . . . A SMALL NUMBER OF QUESTIONS DOES NOT NECESSARILY INDICATE GOOD TEACHING."

a minute, the student has very little time to comprehend the question or to formulate an answer. Most of the functions that have been alleged to be served by questioning are impossible under such conditions. To be sure, in mere repetitive drill, or in reports on problems that have been previously raised and thought out, little time is required for formulating answers, but exercises of this type must be limited if formalism and verbal memorizing are to be avoided. Yamada, after summarizing the experimental results of Hillgruber, Rusk, Meumann, Müller, Franken, Stevens, Bader, and others, calls attention to the probability that not only are individual differences of pupils ignored but exceedingly superficial and inefficient habits of thought are also developed as the result of requiring speedy answers. His statement, which follows, although made in 1913, is consistent with the theory and evidence that have since been produced:

"Any demand for speedy reactions deprives a child of time for suspension of judgment and weighing the evidence pro and con; it prevents him from appealing to concrete experience latent in his mind, but encourages him to accept any suggestion from within as well as without and to react at random. As a result such a method may bring about mental automatism, a habit of instinctive, premature reaction. We should keep in mind that the class room is not a vaudeville stage for displaying or rehearsing the mere strength of verbal memory, but a laboratory for testing, getting, verifying, using and developing knowledge, in a word, for the training of purposive thinking."[107]

What has been said above is limited, obviously, to the question-and-answer recitation with its various modifications and

[107]Yamada, "A Study of Questioning," p. 177. See also his entire summary of the evidence on rapidity of questioning, 172–180.

to such related procedures as the informal discussion, the conversational lesson, or the socialized recitation. The rapidity and quality of questioning in other modern forms of teacher-pupil contacts should also be investigated. It is notable that most of the newer forms of written tests contain a large number of small items that tend to be answered with such rapidity that thinking would be impeded even if it were challenged.

No fixed rule can be given as to the rapidity with which questions should be asked. The specific purposes of the questioning should be the determining factor in every situation. The program for reducing the rapidity of questions should be positive rather than negative and should focus upon the conditions that help to determine the number of questions. If the assignment sets up a clear plan of co-operative endeavor in the solution of a few large problems; if the study period has been devoted to the actual solution of these problems rather than to the mere reading of page assignments; if pupils share in raising questions; if the assignment is preserved in some form so as to constitute a guide for the class discussion; if questions in class challenge thought and the organization of ideas; if answers are utilized rather than merely appraised; if an informal atmosphere is preserved, little will need to be said either about the number of questions or the completeness of the answers.

DISTRIBUTION OF QUESTIONS

Throughout the learning process, whether in the assignment of lessons, in the study period, or in the class discussion, children must of necessity be confronted with those questions that are essential to a well-rounded grasp of the problem. Especially when the understanding of any phase of a problem appears to be inadequate, the questioning by the teacher, and by the pupils as well, should focus upon a discussion of that point.

Erroneous notions must be cleared up, and the mode of thinking that led to them corrected. It is doubtful whether any other known method is as effective as questioning in helping pupils to discover and correct their mistakes. The flexibility of the oral question and the opportunity that it affords for the skillful, intelligent teacher to adapt procedures to the immediate needs of each pupil make it superior in most cases to the written test as a means of diagnosis and remedial work, particularly in the social studies, where verbalism is so likely to occur.

Since questioning exerts a profound influence upon learning, each student should be given an opportunity to profit from it through participation. Too often questions are distributed very inequitably among the various members of the class. Horn reports that inequalities are especially marked in social studies, that bright pupils participate more than those of inferior ability, and that such inequalities are greatest, on the average, in schools which allege that they attempt to develop initiative on the part of the pupils and to vitalize the course of study.[108] The inequality is very great in the case of some individual teachers. Records for one high-school teacher of history, for example, showed that 67.2 per cent of the total student participations were made by the best fourth of the class, while only 2.9 per cent were accredited to the poorest fourth. Apparently the very pupils who need most to have their interests stimulated, their misconceptions cleared up, and their habits of work improved are least likely to be questioned. While it must not be assumed that pupils benefit only from questions to which they make overt responses, nevertheless, such answers afford the chief evidence of the nature of the child's concepts and methods

[108]Horn, Ernest, *Distribution of Opportunity for Participation Among the Various Pupils in Class-Room Recitations.* Contributions to Education, No. 67, Teachers College, Columbia University, New York, 1914.

Note: The original data, including stenographic reports, show that most pupil participations are elicited by questions.

of thinking. Stenographic reports of lessons in the social studies lead one to suspect that poorer students are likely to be asked either minor questions of fact or questions of the crutch variety. Although this practice may give to students the illusion of success, it does little to assist them in gaining an adequate grasp of the chief matters with which the lesson is concerned.

Questions that are put to the class as a whole and those that are directed to individual students should be balanced. In the former case, the individual student is not entirely neglected, and in the latter case, the time of the group is not entirely wasted. A number of helpful recommendations are available on this and other matters of class administration, so that space need not be given here to its general discussion.[109] Two aspects of the problem, however, deserve special attention: first, the encouragement and utilization of pupils' questions, and second, the utilization and improvement of pupils' answers.

THE UTILIZATION OF PUPILS' QUESTIONS AND ANSWERS

The infrequency with which children themselves ask questions in class discussions in the social studies constitutes damning evidence of the formal, didactic atmosphere that generally prevails. Not many such questions are asked even in schools that stress pupil initiative. Attention has already been called to the importance of encouraging students to raise questions in planning the assignment. Because reference equipment is so commonly inadequate, one would expect children who are interested in understanding a problem to ask questions as a means of obtaining additional information. Part of the study period could well be given to the formulation of questions for which the student has found no satisfactory answers. There is

[109]See especially Douglass, *Modern Methods*, pp. 31–48.

more than a grain of truth in the proposal, sometimes made, that it is the pupil's problem to ask the questions and the teacher's place to answer them. The questions that a child asks from a sincere interest in trying to solve a problem must be distinguished, however, from those that he is induced to ask through such a device as having him become chairman of the class discussion in the place of the teacher. Any device of this type is objectionable not only because the pupil does not have a sufficient grasp of the subject or knowledge of teaching to assure the achievement of the various functions that questions serve, but also because such practice tends to prevent the natural raising of problems by pupils who desire more insight. Students should be led to see that it is their privilege and responsibility to ask questions about matters which, after reasonable effort, they still do not understand.

The utilization and improvement of the answers that pupils give deserve an important part of the class period. Indeed, as has been shown above, these answers give the clue to needed adaptations of content and questions. Too often answers are summarily branded as right or wrong, instead of being utilized for the development either of the child or of the discussion, and little or no training is given to the pupils in the improvement of their habits of work. The teacher should listen patiently and attentively to what the pupil is saying in order to ask questions that may correct erroneous ideas or to utilize the child's contribution in the development of the lesson. Pupils can be given a vision, moreover, of the functions of questioning and can be taught how to improve their answers. It is especially important that children understand that the purpose of questioning is not limited to appraisal.

The preceding discussion points to the probability that there

is nothing that does a pupil more harm intellectually than habitually to ask him, year after year, the wrong kinds of questions: questions that encourage verbal memory through requiring pat answers; that make him putter-minded by dwelling exclusively on isolated and petty items; that close his mind through requiring fixed answers; that distort his ideas by calling attention to one aspect to the neglect of others; that cause prejudice or dishonesty through improper suggestion. On the other hand, the discussion also indicates that nothing contributes to his intellectual development more than to ask the right questions: questions that stimulate and guide his interests; that develop a more active and responsible attitude toward learning; that help to improve the accuracy, clearness, and organization of his concepts; that challenge critical thought; that bring attitudes into conformity with realities; that give a competent sense of accomplishment.

How well a teacher can avoid the evils of poor questions and reap the benefits of good questions depends upon his intelligence, his sensitivity to the needs of individual pupils, his scholarship, and his command of the art of questioning. Questions are likely to challenge thought only to the degree that those who ask them can themselves think. The quality of a teacher's thinking is in part a function of native intelligence and in part a matter of adequate understanding of the subject under discussion. Astute thinking can hardly be expected from teachers of below-average intelligence. Neither can any of the functions of questioning be realized by a teacher who does not himself understand the data that bear on the problems raised. For example, a teacher can hardly be expected to guide the child in his attempt to understand the formation of the Constitution, or even to appraise his efforts, if the teacher does not himself understand it.

The development of interest in a problem, the clarification and organization of ideas, the selection of what is to be retained—all these demand scholarship of high order. It is perhaps too much to expect any teacher, no matter how well qualified, to formulate, unaided, all the vital questions about which an intelligent American citizen should be informed. What questions, for example, should the thoughtful citizen ask about the activities of Japan in the Far East, or about foreign debts? Perhaps the course of study in social studies should be organized about just such questions. The authors of textbooks and the accompanying manuals can render a substantial service by including, at proper places, the most challenging and indispensable questions that should be asked on each of the important topics that are treated. The guidance of such questions would undoubtedly be welcomed even by the best-qualified teachers and would give a measure of protection to pupils whose teachers are not so competent. Such aids would need to be used very cautiously, however, lest didactic and formal instruction result; questions should always be re-formulated in the light of the developing thought of the students. The naturalness and informality so vital to the wholesome give-and-take between pupils and teachers must be preserved.

CONCLUSION

In considering the merits of oral instruction, regardless of its form, one must bear in mind that all language, whether spoken or written, is subject to serious limitations. The meaning obtained from a lecture, a question, or a class discussion, like that gained from reading, is dependent upon three factors: (1) the nature and inherent difficulty of the concepts treated; (2) the adequacy with which these concepts are presented; and

(3) the student's ability, including his experience, intelligence, and interest. A teacher cannot give a student an idea, no matter how brilliantly he talks, or how skillfully he questions. The student must construct it himself, and his success will always be circumscribed by the factors enumerated above.

Chapter IX

VISUAL AIDS

INTRODUCTION

The chapters on meaning and reading dwelt in detail on the shortcomings of language in depicting the realities of social life. If any teacher doubts that such limitations exist, let him sample a dozen pages of any text or reference book that his students are using. Let him ask, paragraph by paragraph, whether his students have had sufficient experience to build the concepts there treated. If still unconvinced, let him probe beneath the answers that students have given to questions on these paragraphs.

Words must of necessity operate within the boundaries of the pupil's experience. To move far from this base of supply is to court intellectual disaster. The pupil's world is personal and, in the great majority of cases, narrowly confined to the phenomena of his immediate locality. The more limited and specialized the resources of this immediate environment, the more necessary it is to supplement these resources by every possible means. Among the most feasible means are visual aids.

The term visual aids is, in a sense, a trade name and is very comprehensive. It embraces several types of pictures: drawings, photographs, prints, stereographs, lantern slides, still films, strip films, and both silent and sound motion pictures. It includes also maps, globes, charts, graphs, diagrams, models, objects, specimens, exhibits, and sometimes excursions and laboratory apparatus. It does not ordinarily include constructive activities, such as weaving, but in the case of many visual aids, such as

maps, graphs, lantern slides, and exhibits, it refers to production as well as to use.[1] Lately a preference has been shown in some quarters for a more inclusive term, such as multi-sensory or visual-sensory aids.[2]

The aids listed above range in character from symbolical representation to actual experience. They vary widely in availability, in extent of use, in cost, and in potential contribution to learning. Although all have a common and general purpose, in that they are intended to furnish a relatively concrete approach to reality, each one possesses unique features, serves particular functions, and must be appraised on its own merits. Consequently, in this chapter attention will be focused separately upon the various types of pictures; upon maps and globes; and upon graphs, charts, and diagrams. Excursions, dramatizations, and constructive activities, as well as models, specimens, objects, and exhibits will be discussed in the following chapter.

PICTURES

The advantages claimed for the various types of pictorial illustration are much the same. Pictures are said to contribute to meaning and so to combat verbalism, to give a sense of reality, to arouse and sustain both interest and effort, to stimulate the imagination, and to aid retention. These benefits are said to accrue to all students, but especially to those of less than average ability. All these claims seem to be within the limits of probability and have been validated to some degree by the results of research.

[1]Dorris, Anna V., *Visual Instruction in the Public Schools.* Ginn and Company, Boston, 1928, Chapter IV.

[2]Glick, Annette, "The Use of Visual Aids in Teaching the Social Studies—Past and Present," *Fifth Yearbook,* National Council for the Social Studies. McKinley Publishing Company, Philadelphia, 1935, pp. 123–142; McClusky, F. Dean, "Basic Values in Visual-Sensory Instruction," *Education* LV (October, 1934), pp. 65–70.

That pictures contribute to the accuracy, clarity, and organization of ideas is beyond debate. Their value is attested by common experience and is amply proved by direct experiment. The appearance of any region or object, is difficult *to put into words* to the satisfaction even of the writer who has seen it; it is more difficult, if not impossible, *to be reconstructed from words* by the reader who has not seen it. Similar limitations are found in verbal descriptions of events.

Even the accomplished scholar needs and uses pictures. The sketchbook and the camera are a requisite part of the field equipment of the geographer in recording data for his own study, and the sketches and pictures included in his published reports are valued by his most eminent colleagues. *The Geographical Review,* the journal of the American Geographical Society of New York, a scientific publication designed for scholars rather than the general public, makes full use of pictures. Without pictures and sketches the reports of recent excavations in Egypt and Asia Minor would be understood only to a limited extent by an archæologist who did not participate in these expeditions.

The pupil's need for pictures is, of course, immeasurably greater than that of the scholar, not only because the store of raw materials out of which he may build meanings is meager, but also because he lacks facility in utilizing these materials in thinking. Sometimes these limitations are so serious as to discourage any attempt to make a construct at all; more often, the construct, although made, is inadequate or erroneous. Pictures undoubtedly help to prevent such frustration and error, particularly, as will be shown later, when they are used in the initial stages of learning. In many instances, they must be regarded as basic materials rather than merely as means of enrichment. This is true especially of the pictures used in

geography for the study of the natural and cultural landscape of any area.

Closely akin to the value of pictures in enriching meaning is their contribution to the development of a sense of reality. This value is not easily measured in statistical terms, but it is frequently cited in the reports of observers, as well as by students themselves, particularly after seeing moving pictures. The circumstances of time and place are made to seem less remote. The achievement of a valid sense of reality, accompanied by clear, accurate, and well-organized ideas, may lead the student to set a higher and more rigorous standard for his thinking and to be more dissatisfied both with verbal memory and with constructs that are vague or fragmentary.

The value of pictures does not lie solely in the sense of reality and the vivid imagery that they provide; by giving the imagination something concrete to feed upon, they actually make it much more active than it would be if stimulated by words alone. In fact, the whole process of learning, including the raising of pertinent questions, is much more active when visual aids are used than when they are not.

The evidence points consistently to an increase of interest and aggressive effort through the proper use of pictures. This increase comes naturally as a result of improved understanding. It does not result from the use of a mere device. Pictures catch the student's attention quickly and give initial impetus to further study. And to the degree that they contribute to the success of the student's continued efforts at understanding, they maintain and even increase interest.

It would be strange if the vividness, understanding, and interest that attend the use of pictures were not reflected in the retention of what is learned from them. While not all experiments have included the measurement of delayed recall,

the results of those requiring such recall indicate that forgetting is much less marked when pictures are used than when material is studied only through reading and class discussions. This is true even when the pictures are not closely co-ordinated with systematic instruction. If integrated with instruction and accompanied by a definite effort to select, emphasize, and organize the items to be remembered, the amount retained would undoubtedly be greater than that which has so far been reported. The persistency of what is learned from pictures is impressive and should be a warning to select only those that are authentic and to use them with care. For, as Holaday and Stoddard have pointed out, erroneous ideas are retained as readily as those that are accurate.[3] Indeed the influence of an unauthentic picture may be so strong as to depreciate or break down the ideas that have been previously or concurrently attained.

A number of reports of experiments on the use of pictures have stressed their value for children of low intelligence or inferior reading ability. It must not be concluded, however, that it is easy to get correct ideas from pictures or that illustrations are not important for gifted students. The student whose intelligence is high, whose imagination is fertile, and whose general reading ability is superior, often makes constructs from reading alone that, while satisfying to him, are exceedingly unauthentic. Consitt, for example, reports that such superior students are sometimes disturbed by the fact that the realities, as shown by pictures, are markedly different from the constructs they have previously made from reading.[4] This is but

[3]Holaday, Perry W., and Stoddard, George D., *Getting Ideas from the Movies*. The Macmillan Company, New York, 1933, pp. 60–65. (Bound with Charters, W. W., *Motion Pictures and Youth: A Summary*.)

[4]Consitt, Frances, *The Value of Films in History Teaching*. G. Bell and Sons, Ltd., London, 1931, p. 204.

another illustration of the fictions that result when, at any level of intelligence, constructs are attempted without a sound basis of fact and experience.

To summarize, pictures undoubtedly have, potentially and to a moderate degree, the values that have been claimed for them above. Neither critical judgment nor the data of research, however, warrant the extravagant claims that are often made for the great variety and degree of benefits to be attained by their use. For example, claims that pictures save time, if not actually false, are certainly greatly exaggerated. The extent to which their potential values are realized is conditioned not only by the skill with which they are selected and used but also by the limitations inherent in the pictures themselves. Only part, and probably a minor part, of the subject matter of the social studies can be represented in pictures. Thus one may have pictures of Theodore Roosevelt, of the first steamboat, or of a sugar plantation in Cuba, but not of the Monroe Doctrine, the growth of nationalism, or the rise of democracy. Pictures may, it is true, contribute some of the data out of which the latter concepts may be developed and may stimulate the imaginative apprehension of non-picturable elements. Nevertheless, the pictures now available for use in schools, even in geography, where satisfactory pictures are most abundant, portray a very small part of the curriculum in social studies, and for no unit in the curriculum are they adequate alone. Even in those instances where their contribution is most direct and valuable, they are not a substitute for other instructional equipment but supplementary to and co-ordinate with it.

TYPES OF PICTURES

A number of useful classifications of pictures may be made, but only two will be considered here. First, from the point of

view of the physical form in which they reach the child, there are: (*a*) illustrations in books and magazines; (*b*) loose prints and wall pictures; (*c*) stereographs; (*d*) lantern slides, strip films, and still films; (*e*) silent moving pictures; and (*f*) various types of sound films. Second, from the point of view of their method of representation, there are: (*a*) line drawings; (*b*) paintings; (*c*) photographs of studio or location constructs; (*d*) photographs of actual scenes and occurrences. The two classifications obviously overlap.

Textbook Illustrations.—No other method of providing the pictures necessary to clarify and enrich the text has as many advantages as that of including them in the textbooks themselves. These pictures are likely to be more pertinent to instruction and more adequate than those that the teacher is able to select independently. Because of their accessibility and arrangement, they are readily integrated with the problems treated in the text. Their cost to the school is low in comparison with other forms of pictures. A recent textbook in geography, for example, contains over three hundred pictures in addition to maps and other figures. These pictures were evidently selected with great care and at considerable expense to the publishers. It would be difficult for a teacher to find and select, at any price, three hundred pictures of equal quality and pertinence to the text. The pictures alone, if found, would undoubtedly cost far more than the entire book that now includes them.

The possibilities of pictorial illustration in school books are more nearly realized in modern texts in geography than in texts in history or other social studies. The illustrations are more numerous, more authentic, and more skillfully integrated with the text. Nor is the inferiority of history textbooks in this particular to be attributed solely to the difficulty of secur-

ing authentic pictures. Their illustrations are less representative of the best available material and contribute less to the matters treated in the text. While the pictures in history textbooks have improved steadily during the last thirty years, they do not yet provide the assistance that pupils need. A disproportionate number of them still pertain to political and military leaders or events.[5] Illustrations of the cultural, social, and economic phases of society are very meager. There should be a great number that, singly, or in series, show the development of fundamental processes of social life.

The ease with which illustrations may be made an integral part of the treatment of any topic warrants the expansion and perfection of this feature of school books. There is, of course, a limit beyond which it is not practicable to enlarge a single volume, but that limit has not yet been reached. It may sometimes be necessary, however, to make two or three books out of what is now one. The chief objection to this enlargement of school books is the increased expense. Yet no plan for providing adequate pictorial aids is so economical or efficient, and there should be no yielding from the position that adequate pictures must be provided in some form. As an alternative to so enlarging the text, companion books could be made, consisting chiefly of pictures with brief legends and descriptive comments, after the manner of the German and French historical albums and the Pageant of America,[6] but

[5]Kelly, James R., *A Study of Visual Aids Found in Elementary School Histories of the United States.* Master's thesis, University of Chicago, Chicago, 1928; Olds, Hayden W., *The Use of Illustrative Material in Textbooks in the Teaching of American History.* Master's thesis, Ohio State University, Columbus, 1931; Semsch, Sister Mary A., *An Analysis of the Visual Aids Found in Fourteen Modern European History Textbooks.* Unpublished master's thesis, State University of Iowa, Iowa City, 1932.

[6]Gabriel, Ralph H. (ed.), *The Pageant of America, A Pictorial History of the United States.* Yale University Press, New Haven, 1925–1929, 15 vols. The best known of the European albums are Cybulski, Stephan, *Die Kultur*

keyed to the text or course of study. The difficulties involved in using such books, while not insurmountable, are very real, although perhaps no more serious than those found in using separate prints, stereographs, lantern slides, or films. Under average conditions the pictures in such books would undoubtedly be used much less effectively and much less frequently than would the pictures embedded in the text itself.

It is evident that until illustrations in school books, and particularly in histories, have been made more adequate, both in quality and in quantity, other forms of pictures will be required. The illustrations in school books probably should always be regarded only as a basic and irreducible minimum, to be supplemented as the need requires, by loose prints, stereographs, lantern slides, still films, and motion pictures.

Loose Prints.—Loose prints have long been used with profit, in spite of the difficulties of securing suitable pictures, using them in the classroom, and filing them for easy access. The administrative problems involved in their use are simpler, however, than in any other type of picture except those found in textbooks. Loose prints are used in various ways: for reference during the study period, on the bulletin board, in exhibits, in booklets, or as an accompaniment to the class discussion.[7] Their use during such discussion is greatly facilitated by the opaque projector, but this requires a proper screen and curtains for

der Griechen und Römer. Bilder-Atlas mit erläuterndem Text; and Levisse, Ernest, et Parmentier, A., *Album-Historique.* Much usable material is contained in *Compton's Pictured Teaching-Unit Materials.* F. E. Compton and Company, Chicago, Illinois, 1922. (Revised annually.)

[7]See, for example, Dexheimer, Lora M., "Systematizing the Use of Pictures in Teaching Sixth-Grade Geography," *Thirty-second Yearbook,* National Society for the Study of Education, Public School Publishing Company, Bloomington, Illinois, 1933, pp. 507–519; Glick, Annette, "Making History Real," *The Historical Outlook* XVIII (February, 1927), pp. 64–82; Parker, Edith P., "Evaluating the Use of Pictures in Teaching Geography," *Visual Education* IV (November, December, 1923), 275–277, 302–304, V (January, 1924), pp. 15–17.

thoroughly darkening the room. The benefits derived from such practice are limited, as yet, by the expense and trouble of installing and using the equipment now available. If the opaque projector is provided, however, it may be used also to show pictures in reference books and magazines, as well as typewritten pages and flat objects.

Stereographs.—Stereographs have been widely used in teaching geography and social studies.[8] They undoubtedly share with other forms of pictures the advantages common to all pictorial illustration, but apparently to no unusual degree. Superiority is often claimed for them on the ground that they show the third dimension, but the adequacy with which they do this and the benefits which are alleged to result have occasionally been challenged. Although teachers sometimes report a relatively low interest in stereographs as compared with other visual aids, this may be an effect of improper procedures in using them. Because of serious administrative difficulties, it is almost impossible to integrate them with class discussion. However, they can be made a valuable part of the reference equipment for individual study.

Lantern Slides.—Lantern slides, strip films, and still films, as well as loose prints with the opaque projector, are especially well adapted to group work and class discussion and are reported to be used with profit in a number of ways. A group of views may be shown to introduce a unit. Single views or a small number of related views may be used during a discussion or lecture period to clarify specific points that need illustration.

[8]For a discussion of the use of stereographs see, for example, Dorris, *Visual Instruction*, pp. 135–153; Hollinger, John A., "The Use of Stereographs and Stereopticon Slides in Classroom Teaching—Abstract," *Proceedings*, N. E. A., LXVII (1929), pp. 940–941; Weber, Joseph J., *Visual Aids in Education*. Valparaiso University, Valparaiso, Indiana. Chapters XVIII and XIX. (Mimeographed copy.)

They may be used also for purposes of review and maintenance.[9]

Experimental evidence on the use of lantern slides is meager and somewhat inconclusive. Much of it was obtained in the early stages of the experimental work on visual instruction, when the procedures were less carefully controlled and the aids themselves less technically perfect than at the present time. The interest in most of these investigations was in a comparison of slides with moving pictures rather than in the study of the benefits achieved with slides as compared with those attained without visual aids. Experiments reported by Freeman in 1924 indicated that for certain topics slides are as effective as motion pictures.[10] Révész and Hazewinkel, in an experiment at Amsterdam in the same year, reported slides to be superior to motion pictures.[11] In more recent experiments, however, Freeman and others have shown that the use of motion pictures in addition to other visual aids gives better results than those obtained when motion pictures are omitted but all other visual aids are used.[12] There is no evidence on the effect of using either loose prints with an opaque projector, or still films, but the results of their use would probably be much the same as in the case of lantern slides.

Although still and motion pictures are not entirely comparable, since each has distinctive advantages, the trend of

[9]Dorris, *Visual Instruction*, pp. 153–180; Gregory, William M., Abrams, Alfred W., and Peters, Rupert, "Materials for Visual Instruction in Geography," *Thirty-second Yearbook*, National Society for the Study of Education, 1933, pp. 385–394; Preble, C. S., "Visual Aids: Their Use and Abuse," *Journal of Geography* XXX (March, 1931), pp. 120–125.

[10]Freeman, Frank N. (ed.), *Visual Education*. University of Chicago Press, Chicago, 1924, pp. 72–74.

[11]Révész, G., and Hazewinkel, J. F., "The Didactic Value of Lantern Slides and Films," *British Journal of Psychology* XV (October, 1924), pp. 184–197.

[12]See references on motion pictures, pp. 370–375.

opinion now seems to be that the results obtained from still pictures approximate those from motion pictures except where movement or a sequence of events is to be portrayed. At the present time, however, lantern slides are better established as instructional aids, more schools are equipped for their use, and a wider selection of pictures is available than in the case of films. The rapid spread of the sixteen mm. classroom type of motion-picture equipment may alter the current condition.

Much has been written recently on the value of having students make lantern slides.[13] Charts, diagrams, maps, or drawings not otherwise available to the entire class for group discussion may be drawn or traced by the students on glass and shown in the same way as commercially prepared views. In schools where a projector is accessible at all times such slides may be used effectively. If the school has adequate equipment for photography, including slide plates and a copy camera, slides may be made either of illustrations found in books or of actual objects or events. The construction of slides by students is held to have values that do not attend the showing of ready-made slides, in that it encourages initiative, individual research, and self-expression. Constant vigilance is necessary, however, if the enthusiasm attendant upon the making of slides is not to get out of hand. Otherwise, pupils and even teachers themselves may become interested chiefly in the search for something to put on a slide rather than the effort to clarify or enrich the understanding of an important topic.

Motion Pictures.—Although most of the significant experi-

[13]For discussions of the preparation of slides, see, for example, Broyles, William A., "Making Lantern Slides," *The Educational Screen* X (April, 1931), pp. 122–123; Glick, Annette, "Slide-Making and the Social Studies Laboratory," *The Historical Outlook* XXII (May, October, November, 1931), pp. 205–210, 279–284, and 350–356; Price, W. T. R., "Pupil-Made Lantern Slides," *Thirteenth Yearbook*, Department of Elementary School Principals, Washington, D. C., 1934, pp. 325–329.

mental work on the contribution of motion pictures to instruction in the social studies and in related fields has been done in the last ten or fifteen years, the literature reporting these experiments is too voluminous to be reviewed here in detail.[14] Among the earliest experiments are those by Sumstine,[15] Lacy,[16] and Weber.[17] The most extensive investigations of the use of motion pictures in teaching geography and the social studies are those reported by Freeman in 1924,[18] by Knowlton and Tilton in 1929,[19] by Wood and Freeman in 1929,[20] and by Consitt in 1931.[21] Attention should also be called to the study by Spearman, Burt, and Philpott, whose analysis is intensive and illuminating but is based on a relatively small number of cases.[22] The reader is referred to the complete reports of these investigations for detailed information as to methods of research, the results obtained, and the critical

[14]For a bibliography of the most extensive investigations, see Rulon, Phillip J., *The Sound Motion Picture in Science Teaching.* Harvard Studies in Education, Vol. 20, Harvard University Press, Cambridge. 1933.

For a more complete bibliography of work accomplished before 1930, see Weber, Joseph J., "Bibliography on the Use of Visual Aids in Education," *The Educational Screen* IX (Jan.–June, 1930), pp. 29–31, 61–63, 93–95, 123–127, 155–159, 187–191. The issues for March, April, and May contain the references dealing with motion pictures.

For a recent discussion of the value and status of motion pictures in education, see Koon, Cline M., *Motion Pictures in Education in the United States.* The University of Chicago Press, Chicago, 1934. This report was prepared for the International Congress of Educational and Instructional Cinematography.

[15]Sumstine, David R., "A Comparative Study of Visual Instruction in the High School," *School and Society* VII (February 23, 1918), pp. 235–238.

[16]Lacy, John V., "The Relative Value of Motion Pictures as an Educational Agency," *Teachers College Record* XX (November, 1919), pp. 452–465.

[17]Weber, Joseph J., *Comparative Effectiveness of Some Visual Aids in Seventh Grade Instruction.* The Educational Screen, Inc., Chicago, 1922.

[18]Freeman, *Visual Education.*

[19]Knowlton, Daniel C., and Tilton, J. Warren, *Motion Pictures in History Teaching.* Yale University Press, New Haven, 1929.

[20]Wood, Ben D., and Freeman, Frank N., *Motion Pictures in the Classroom.* Houghton Mifflin Company, Boston, 1929.

[21]Consitt, *Value of Films.*

[22]Reported in Marchant, Sir James (ed.), *The Cinema in Education.* George Allen and Unwin, Ltd., London, 1925, pp. 23–128.

appraisal of the data. In general, these investigations indicate that instruction is improved to a significant degree by the addition of motion pictures to other instructional media; that in most cases motion pictures make a greater contribution than lantern slides or other forms of pictures; and that they have the unique advantage of showing movement and continuity.

These conclusions are supported in the main by a number of less extensive investigations in the social studies,[23] as well as by studies of the use of motion pictures in other fields of learning.[24] They are also reinforced and supplemented by the studies made by the Committee on Educational Research of the Payne Fund, which, although dealing with theatrical rather than with educational films, provide data that have important implications for education.[25]

It is fortunate that the services of many distinguished persons have been enlisted in this research, for it is unquestionably very difficult to set up satisfactory experiments in this field. There are several reasons for this difficulty. In the first place, few satisfactory films in the social studies or in geography have been produced, and these pertain to a very small part of the curriculum. The making of such films is very expensive, is in its infancy, and is not yet directed with a skill comparable to that expended on the best theatrical films. Second, it is difficult to plan experiments so that the conditions provide equally well

[23]See, for example, Davis, Helen, *Specific Values of Educational Films Used as Supplmentary Aids.* Doctor's thesis, University of Chicago, Chicago, 1932; and Skinner, Charles E., and Rich, Stephen G., "Visual Aids in Geography: An Experiment," *Elementary School Journal* XXV (May, 1925), pp. 700–705.

[24]Parts of the investigations by Freeman, *Visual Education,* by Wood and Freeman, *Motion Pictures in the Classroom,* and by Spearman, Burt, and Philpott, in Marchant, *The Cinema in Education,* deal with the use of motion pictures in teaching science.

[25]For a summary and bibliography of these studies, see Charters, W. W., *Motion Pictures and Youth: A Summary.* The Macmillan Company, New York, 1933.

for achieving the full potentialities of both films and other media. Third, the variables of time, the influence of the teacher, and the relationship of the films to the course of study are very difficult to control. Fourth, a comparison of the relative degree to which motion pictures and other media affect instruction is somewhat unsatisfactory, since the contribution of each medium may be unique. What the student gets, for example, from seeing a motion picture of the capture of Quebec is different in kind, as well as in degree, from what he gets from reading about it. The motion picture, like language, makes its own distinctive contributions. It would, of course, be possible to measure the effects of various instructional media, including motion pictures, upon the attainment of a highly specific goal, but research has not progressed very far in this direction. Fifth, for these reasons it has been difficult to devise tests by which motion pictures may be fairly and adequately compared with other instructional media. It is probably true that such tests as have been used underestimate rather than overestimate the contributions that motion pictures make to learning in the social studies. On the other hand, the topics that have been used in the research have, in most cases, been those especially adapted to visual presentation.

These limitations have been recognized by the individuals who have investigated motion pictures most extensively and have been taken into account, along with statistical data, opinions of teachers, and reports of pupils, in formulating conclusions concerning the extent to which motion pictures improve instruction. These conclusions, which are summarized below, are, therefore, more valuable for this report than a summary of the statistical results.

1. Motion pictures, like other pictures but to a superior degree, contribute materially to the accuracy, the richness, and

the significance of students' concepts. This is particularly true of descriptive aspects. Places, people, events, and processes are made to seem more real.[26]

2. As a consequence, thinking is made more effective, empty verbalism reduced, vocabulary increased, and language made more meaningful.[27]

3. Learning is made more active: the imagination is stimulated; students write more, talk more, carry on more "projects," and ask more questions.[28]

4. Interest is more easily aroused and maintained.[29]

5. Voluntary reading is encouraged rather than discouraged.[30]

6. A marked contribution is made to retention.[31]

7. Children who are lacking in imagination, low in intelligence, or below the average in reading ability are helped especially.[32]

8. The total desirable results, both direct and indirect, exceed those attained by any other media that were used in teaching

[26]Consitt, *Value of Films,* pp. 191–196, 275–288; Knowlton and Tilton, *Motion Pictures,* pp. 41–47, 90–93; Wood and Freeman, *Motion Pictures in the Classroom,* Chap. VII, Chap. VIII, Chap. X, Appendix VI.

[27]Consitt, *Value of Films,* pp. 200–203, 282; Wood and Freeman, *Motion Pictures in the Classroom,* pp. 221–225.

[28]Consitt, *Value of Films,* pp. 197–198, 200–203, 282, 378–379; Knowlton and Tilton, *Motion Pictures,* pp. 91–92; Wood and Freeman, *Motion Pictures in the Classroom,* Chap. VIII, Appendix VI.

[29]Consitt, *Value of Films,* pp. 200–201, 378; Knowlton and Tilton, *Motion Pictures,* pp. 65–73; Wood and Freeman, *Motion Pictures in the Classroom,* pp. 148–153, 166–169, 332–343.

[30]Knowlton and Tilton, *Motion Pictures,* pp. 71–73, 93; Wood and Freeman, *Motion Pictures in the Classroom,* pp. 153–156, 343–348.

[31]Consitt, *Value of Films,* p. 379; Holaday and Stoddard, *Ideas from Movies,* p. 74; Knowlton and Tilton, *Motion Pictures,* pp. 91, 93; Spearman, Burt, and Philpott, in Marchant, *The Cinema in Education,* Chaps. II, III, V; Wood and Freeman, *Motion Pictures in the Classroom,* p. 161.

[32]Consitt, *Value of Films,* pp. 203–204, 283–284, 380. See also Knowlton, Daniel C., "Improving the Quality of Instruction in History with the Aid of the Photoplay," *The Historical Outlook* XX (April, 1929), pp. 167–179.

the topics chosen for these various experiments.[33] It is important to note, however, that the best results were obtained when the films were used in conjunction with other recognized methods of instruction.

Sound Pictures.—It is not strange that the advent of theatrical sound pictures should have been followed by the introduction of sound pictures in education. The number of sound pictures has increased rapidly since 1930,[34] but as yet the majority of films consist of a silent picture accompanied by a mechanically synchronized lecture and are, therefore, essentially different from the theatrical talking picture. Where sound is a significant part of the manifestation of any phenomena, true sound pictures undoubtedly enhance understanding and give a sense of reality. Where the only sound that the student hears is a lecture about what the picture presents visually, as has been the case in most experiments,[35] the benefits must be appraised on a different basis. The evidence on the effect of verbal accompaniments to pictures, whether consisting of comments by the teacher[36] or a mechanically synchronized lecture,[37] indicates, in general, that these verbal accompaniments contribute something over and beyond what is attained from the silent picture alone. This contribution may result

[33]Consitt, *Value of Films,* Chap. XVII; Knowlton and Tilton, *Motion Pictures,* Section XIV; Wood and Freeman, *Motion Pictures in the Classroom,* Chap. XI.

[34]Gray, Howard A., "Audio-Visual Instructional Materials," *Educational Method* XIII (January, 1934), pp. 211–217.

[35]Arnspiger, Varney C., *Measuring the Effectiveness of Sound Pictures as Teaching Aids.* Contributions to Education, No. 565, Teachers College, Columbia University, New York, 1933; Devereux, Frederick L., *The Educational Talking Picture.* The University of Chicago Press, Chicago, 1933, Chapter V; Rulon, *Sound Motion Pictures.*

[36]Freeman, *Visual Education.*

[37]Einbecker, William F., "Comparison of Verbal Accompaniments to Films," *School Review* XLI (March, 1933), pp. 185–192; Westfall, Leon H., *A Study of Verbal Accompaniments to Educational Motion Pictures.* Contributions to Education, No. 617, Teachers College, Columbia University, New York, 1934.

in part from the help given to pupils in selecting and interpreting the most significant items in the film, and in part from the addition of ideas not presented pictorially.

Conflicting views are held, however, concerning the advantages of mechanically synchronized lectures as compared with comments by the teacher.[88] The advantages claimed for the former are that they are prepared by experts, that they may be used with large groups of pupils, and that they save the teacher's time by making it unnecessary for him to view the film in advance or to prepare comments upon it. On the other hand, it has been pointed out that mechanically synchronized lectures are inelastic, more difficult to subordinate to the course of study, and less easily adapted to the needs of the particular teacher and children who use the film.[89]

Since, by and large, the advantages and disadvantages of the synchronized lecture seem to be pretty well balanced with those of the teacher's comments, expenditures for expensive sound equipment do not at present seem to be justified. Regardless of the form of the verbal accompaniment, however, it must be skillfully integrated with the picture. Otherwise, the attention of students may be so seriously divided that they are prevented from making the most of either the picture or the comments.

It is apparent that the potential contributions of motion and sound pictures are very great. How fully these potentialities are realized depends upon a clear understanding of their peculiar and limited functions and upon the success with which solutions are found for the many practical problems

[88]In addition to the references on sound pictures already given, see Clark, Clarence C., "Sound Motion Pictures as an Aid in Classroom Teaching," *School Review* XL (November, 1932), pp. 669–681.

[89]Dale, Edgar, "The Educational Use of Audible Motion Pictures," *Educational Research Bulletin* X (May 27, 1931), pp. 290–294.

involved in their production and use. A clear recognition of their theoretical and practical limitations leads to a dismissal of many extravagant claims that are made for them. They are not a cure-all for the problems of teaching the social studies. They are not a substitute for other instructional media but are co-ordinate with and supplemental to them. They do not perform all instructional functions; their services are limited and particularized. Moreover, only small parts of the total area of the course of study are touched at all by the films available at present, and these films, with minor exceptions, are seriously inadequate. We are in a vicious circle with respect to the production and use of pictures: the schools cannot buy pictures until they are available, and the producers cannot be expected to make them until they know what and how many pictures will be purchased.

The most serious practical problems involved in the use of motion and sound pictures pertain to their production and distribution, to their subordination to purposes of instruction, to installation of essential equipment in the schools, and to the cost of pictures and projection apparatus. These pictures must be justified, as Freeman points out, not as an economy but as an enrichment of experience.[40] The expense of providing complete motion picture and sound equipment for the entire course of study in social studies, assuming that satisfactory films were available, has not been estimated, but it would certainly reach an amount many times that now spent for all instructional equipment in modern schools, even in large cities, where it is possible to effect many economies.[41] Motion pictures must share the instructional budget, in proportion to service rendered, with textbooks, reference books, lantern

[40]Freeman, Frank N., "Enrichment Thru Aids to Teaching," *Thirteenth Yearbook*, Department of Elementary School Principals, pp. 136–139.

[41]See pages 257–264.

slides, globes, maps, and other equipment; and their proper share in any appropriation that the schools are likely to obtain in the near future will not be sufficient to provide an adequate collection of films. Those that are selected, therefore, should deal with the parts of the course of study where the contribution of motion pictures is most marked.

METHODS OF REPRESENTATION

Photography, because of its remarkable development both artistically and technically, has exercised a dominant influence on visual education. This influence has been strengthened, moreover, by the interest of commercial concerns as well as by the unquestionable value of photographs in conveying a sense of reality. In comparison with photographs, line drawings and engravings have been largely neglected. Yet illustrations of the latter type have great potentialities because of the ease with which they may be adapted to the purposes of instruction in the social studies. They permit the selection and emphasis of the items to which attention should be called, as well as the elimination of all distracting or accidental elements, and so attain a marked degree of useful generalization. Excellent examples of this type of illustration are the engravings of the nineteenth century, such as those in Tombleson's *Views of the Rhine* and Turner's *Annual Tours*. They are impressive not only because of their beauty but because of their rich content of information. In no other form of picture is it possible to depict so much in so small a space. Because of the possibility of making constructs from the best available data, drawings serve a special need in history, where, except for relatively recent times, photographs obviously are not available. Such drawings usually require the collaboration of an

artist and a specialist in the subject matter to be represented. Authenticity should not be sacrificed to art.

STANDARDS FOR EVALUATING PICTURES

With the growing recognition of the potency of pictures has come the realization of the need of standards for their selection. A picture, according to its quality, may as easily falsify and distort the student's conceptions as contribute to clarity, accuracy, and meaning. An unauthentic picture may result in misconceptions that not only tend to inhibit the attainment of valid ideas in the future but actually, as shown by Holaday and Stoddard, contaminate and depreciate the knowledge that the student already possesses.[42] The effects of inaccurate or poorly chosen pictures upon interests and attitudes are no less undesirable. To achieve the potential benefits of pictures, therefore, as well as to guard against potential ills, the teacher, the writer of textbooks, and the makers of all types of pictures which are to be used for educational purposes should have in mind certain definite standards of evaluation.

Numerous attributes of a good picture for educational purposes have been proposed for flat prints,[43] for lantern slides,[44] and for motion pictures.[45] While there are, of course, certain qualities peculiar to each type, the most important attributes, which follow, are common to all:

1. The picture must be authentic. Most valuable, of course, are photographs and drawings made in the circumstances of

[42]Holaday and Stoddard, *Ideas from Movies*, p. 78.

[43]Parker, "Evaluating Use of Pictures"; Halverson, Lynn H., "Pictures in the Teaching of Geography," *Journal of Geography* XXVIII (December, 1929), pp. 357–368.

[44]Gregory, Abrams, and Peters, "Materials for Visual Instruction," pp. 391–392.

[45]Dale, Edgar, "Standards for the Selection of Classroom Motion Pictures," *Thirteenth Yearbook*, Department of Elementary School Principals, pp. 344–348. See also Dale, Edgar, *How to Appreciate Motion Pictures*. The Macmillan Company, New York, 1933.

a particular time and place. In the absence of such representations, however, this standard permits the use of pictures that are skillfully constructed or generalized on the basis of the best available data.

2. Pictures should be relevant to some essential truth that is to be taught. Conversely, pictures that are irrelevant or that deal with unimportant matters should, in general, be avoided.

3. Pictures, in their composition, should direct attention to the most significant facts rather than obscure these facts by giving prominence to unimportant details.

4. The technical quality of pictures should be good. Special attention should be given to the clear definition of what the picture is to bring out, to a good distribution of light and shade, and to freedom from blemishes.

5. Pictures should be attractive, interesting, and calculated to stimulate thought.

These standards have been followed much more closely and intelligently in geography than in history or other social studies. The truth of this statement is attested not only by the various types of pictures used in instruction in geography, especially those in textbooks, but also by the careful attention given to the selection and use of pictures in the literature on methods of teaching.[46] Indeed the literature on the teaching of geography goes far beyond these standards in elaborating criteria in terms of the geographical quality that pictures possess. Thralls, for example, classifies pictures according to the degree to which they "show a *human activity* in its *natural setting*."[47] Pictures of the first group are those that possess

[46]See references in footnote 7, and also Grassmuck, Erna, "The New Geographic Education," *The New Era in Home and School* XII (July, 1931), pp. 230–233.

[47]Thralls, Zoe A., "The Selection and Use of Pictures," *The Journal of the National Education Association* XXI (November, 1932), pp. 247–248.

inherent or primary geographical value because of the completeness with which they show or suggest the relationship of man's activities to the natural landscape. Those of the second group do not directly show or suggest such relationship, but portray landscapes with little or no sign of human occupancy. They may, however, give atmosphere. The pictures of the third group are concerned primarily with cultural items which, although containing nothing that suggests a relationship to the area in which they exist, do give valuable concrete impressions, as, for example, the idea of the progressiveness or the modernity of a city. Thralls also classifies pictures according to their complexity, ranging from those which give concrete images of specific natural and cultural landscapes to those which show the more complicated geographical relationships.

Equally critical appraisals of the attributes of good pictures for instruction in history and other social studies are needed.[48] Although authentic contemporary prints have always been prized among the monuments of history, sociology, economics, and political science, very little attention has been given to any quality other than that of authenticity. Teachers need more definite help than is now available on the selection and use of pictures for instructional purposes.

THE USE OF PICTURES

The way in which pictures are used in instruction is logically dependent upon the purposes that they serve. Their effective use requires clear understanding of what they will and will not do. The primary purpose of all pictures, from flat prints to sound films, is to infuse the phenomena of social life with reality and to assist the student in building concepts that are

[48]An excellent discussion of the use and limitations of pictures is given in Johnson, Henry, *Teaching of History in Elementary and Secondary Schools*, The Macmillan Company, New York, 1928, Chapters VIII and IX.

clear, accurate, and meaningful. All other purposes, such as the contribution to thought, interest, and retention, are dependent upon this one. Therefore, whenever inadequate, foggy, or erroneous ideas of the appearance of things frustrate imagination, pictures, along with other concrete forms of experience, can render a valuable service.

The value of pictures should not be interpreted so narrowly as by Sharp, when he says, "One recognizes the value of good pictures, whether kinetic or static, as an aid to the formation of mental pictures of scenes geographical or historical; but to claim more than that would be, in my judgment, confession of a very inadequate concept of the true meaning of the study of either subject."[49] In reality, both sound and silent motion pictures may help to develop ideas, interpretations, and attitudes that go far beyond mere visual appeal. It is true, nevertheless, that one cannot teach the history of any period or the geography of any area by means of pictures alone. In the last analysis language rather than pictures must be the dominant factor, and unless the significance of what the picture presents is emphasized, the results may be even more limited than Sharp suggests.

That pictures should be subordinated to the main objectives of instruction has already been indicated. It is especially important that the bulk of them deal with central rather than with peripheral matters in the course of study. Otherwise, the child's attention will be diffused and his thought distorted.

The degree of success that attends the use of all types of pictures depends upon the ease with which they may be secured when needed and the use that is made of them, as well as upon their quality and their pertinence to the course of study. Ideally, pictures should be used at the time that

[49]Quoted in Marchant, *Cinema in Education*, p. 15.

the need for them arises; practically, teachers must compromise between this ideal and the limitations of administrative expediency. The ideal is most closely approximated in textbook illustrations at their best, since they are immediately available to all students at any time. In the use of other types of pictures, however, the attainment of this ideal is obstructed by administrative difficulties. Loose prints and stereographs are valuable aids in individual study, but they can seldom be used effectively for group work. Since lantern slides, films, and projection apparatus cannot be provided for each classroom as a part of its instructional equipment, teachers frequently find it difficult, if not impossible, to secure this equipment when it is needed. Moreover, many classrooms are not equipped with curtains for darkening the rooms, even to the extent necessary for use with a translucent screen, and students must be moved to a suitable room before the pictures can be shown. Consequently, the instruction is frequently subordinated to the conditions under which the pictures may be secured and projected, and their full value is not realized.

The various types of pictures involve somewhat different administrative problems, and it is necessary, therefore, that slightly different techniques be employed with each. Yet the same fundamental purposes are served by all types, and the same general principles of use apply to all.

Since pictures furnish the concrete materials for thought and imagination to feed upon, their greatest value is presumably in the early stages of the study of any unit or problem. In some instances they may actually introduce the problem. For example, the study of travel by land in 1800 might be approached through an examination of pictures of the roads, inns, and vehicles of that time. It is usually better, however, to prepare the class for pictures by setting the perspective in

which they are to be viewed, by developing a realization of the need for what is to be shown, and by raising the questions that the pictures are to answer. Teachers and pupils should occasionally work together with open textbooks during an informal discussion period in order to show that pictures are a significant source of information and not merely an interesting diversion. Pictures may be used also in summaries, in reviews, or even as parts of tests. Since it is generally recommended that slides and films be shown more than once, the first showing may be made early as a part of the introduction of a problem or topic and subsequent showings made later for other purposes. There should be no hard-and-fast rule as to the point in the progress of study at which pictures should be introduced, but rather a flexibility that makes possible their introduction whenever the need for them arises.

A number of important cautions have been urged regarding the use of pictures. The teacher should always see each picture before it is shown to the students, in order to determine its bearing upon the problem at hand and to plan what comments, if any, he will make on it. This is necessary for the use of all pictures, but it is especially important in using slides and films.

Not too much should be shown at one time. When the classroom is cluttered up with an indiscriminate assortment of views, pupils are much less likely to be benefited than when their attention is pointed to a small number that are highly pertinent. Similarly, the best results are generally obtained when a small number of slides or stereographs are focused upon the central aspects of the immediate problem. In the field of educational films the tendency to make short reels in order that their content may be specifically related to a narrow topic rather than to a broad and general subject is to be commended.

Too frequently one finds the naïve assumption that the view-

ing of pictures will achieve, *per se,* the ends that pictures potentially serve. On the contrary, there must be definite provisions for getting from them the realities that they depict, as well as the significance of the realities. Although pictures provide valuable raw materials for study, they are not usually self-explanatory, and students without specific training are commonly deficient in their ability either to interpret pictures or to use them in the solution of historical and geographical problems.[50] For example, it is reported that a child who gave an ostensibly satisfactory talk on a lantern slide of the Harvard Observatory in Peru could neither locate the building on the picture nor tell what an observatory is.[51] Misconceptions and "howlers," moreover, arise from the study of pictures as well as from reading books.[52] The data provided in pictures should be critically used, therefore, in accompanying and subsequent discussions and activities.

Teachers and administrators should be cautioned especially against arguments that motion and sound pictures make larger classes possible. Such a proposal adds to the insidious drift, already persistent and widespread, to formalize and mechanize instruction. It should be evident from the preceding pages that the center of attention in visual instruction, as in all education, is upon the individual student.

A final protest should be entered against any disposition to assume that motion and sound pictures or any other visual aids take the place of the teacher. Such an assumption indicates

[50]See, for example, Hoppes, Gladys, J., *Ability of Pupils to Read Pictures for Geographical Purposes.* Master's thesis, University of Chicago, Chicago, 1930; and Thorp, Mary T., "Studies of the Ability of Pupils in Grades Four to Eight to Use Geographic Tools," *Thirty-second Yearbook,* National Society for the Study of Education, pp. 494–506.

[51]*Outline of Visual Method as Applied to the Teaching of Geography of South America.* The University of the State of New York, 1923.

[52]Consitt, *Value of Films,* pp. 196–209; Marchant, *Cinema in Education,* Chap. IV, pp. 65–67.

a distorted vision of the learning process and manifests little understanding of the way in which pictures make their greatest contribution. Like good texts and supplementary readings, they compensate to some degree, it is true, for lack of knowledge and teaching skill on the part of a poorly trained teacher; but their full benefits are obtained only in the hands of teachers who possess competent teaching skill and sound scholarship in the social studies. The subordination of pictures to the course of study, their timely selection and introduction, the preparation of pupils for viewing them, the discussion of problems in their use, and the guidance of the activities that they stimulate —all these demand teaching skill of the highest order. The teacher himself should realize that the showing of pictures constitutes but a small part of the work that he must do to reap their benefits.

GRAPHS AND CHARTS

The visual aids thus far considered are chiefly pictorial; *i.e.,* they attempt to represent what would be seen in the presence of the objective reality itself. Graphs, charts, diagrams, and maps symbolize rather than represent reality. They deal with generalizations and relationships rather than with the appearance of things.

Graphs and charts are being used increasingly by teachers of social studies as well as by persons responsible for the preparation of instructional materials in this field.[53] They make possible the presentation of statistical information in simple and interesting form and often make clear important facts, relationships, or generalizations that are not usually discernible by

[53]Goetsch, Walter R., *The Relative Effectiveness of Different Types of Graphical Representation at the Elementary School Level.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1936; Pokel, Nelda R., *An Evaluation of Graphic Representation in Junior High School Textbooks.* Master's thesis, Colorado State Teachers College, Greeley, Colorado, 1932.

students because of the extent or complexity of the statistical data. The uses of graphs are varied and in many cases narrowly specialized.[54] The most frequent specific purposes for which they are employed in the social studies in grades five to eight are, according to Goetsch, "(1) to show the rank of two or more individuals on the same thing, (2) to show the relative value of various amounts making up a given total, (3) to show continuous change over a period of time, (4) to compare the component parts of two or more total groups, and (5) to compare several things belonging to the same individual."[55] The term individual as used by the author is "broadly defined to include everything from a single person or thing to a definitely organized unit of people or things."[56] The extent to which these purposes are realized is dependent upon the suitability of the form of the graph to the data to be displayed, upon the adherence to requisite standards for graph construction and upon the ability of students to interpret these devices.

The results of investigations that have compared the effectiveness of graphic aids accompanied by reading with reading alone are somewhat equivocal.[57] They do not, in general,

[54]Arkin, Herbert, and Colton, Raymond R., *Graphs: How to Make and Use Them.* Harper and Brothers, New York, 1936; Williams, J. Harold, *Graphic Methods in Education.* Houghton Mifflin Company, Boston, 1924.

[55]Goetsch, *Effectiveness of Different Types of Graphical Representation,* p. 52.

[56]*Ibid.,* p. 10.

[57]Weber, *The Comparative Effectiveness of Some Visual Aids in Seventh Grade Instruction;* Washburne, John N., "An Experimental Study of Various Graphic, Tabular, and Textual Methods of Presenting Quantitative Materials," *Journal of Educational Psychology* XVIII (September, 1927), pp. 361–376, 465–476; Thomas, Katheryne, "Ability of Children to Interpret Graphs," in *Thirty-second Yearbook,* National Society for the Study of Education; Thorp, Mary T., "Studies of the Ability of Pupils in Grades Four to Eight to Use Geographic Tools," in *Thirty-second Yearbook,* National Society for the Study of Education; Harper, R. A., and Otto, Henry J., "An Evaluation of Graphic Instruction Materials," in *Thirteenth Yearbook,* Department of Elementary School Principals; Rogers, J. Lloyd, *A Survey of the Relative Effectiveness with Which Iowa Elementary Schools Are Developing Certain Basic Study Skills.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1935; Goetsch, *Effectiveness of Different Types of Graphical Representation.*

show marked superiority for graphic presentation. This is doubtless due, as Goetsch has pointed out, to the inability of students to read the graphs.[58] As in the case of reading maps, the reading of graphs requires specialized ability and the development of these abilities cannot be left either to chance or to incidental teaching. When students are taught to read graphs, as they should be, there is reason to believe that these aids will add materially to the effectiveness of instruction.

The decision as to what type of graph to use, if any, must be made in the light of the nature of the quantitative material to be represented. The advantages and limitations of various sorts of graphs are discussed in detail in general works on graph construction and should be thoroughly understood by all who use these devices, either in the production of instructional materials or in classroom teaching.[59] The standards generally accepted are those set up in the *Report of the Joint Committee on Standards for Graphic Presentation.*[60]

MAPS

Maps must be accorded a pre-eminent place among the visual aids to learning in the social studies.[61] In fact, they are indispensable to the thought of the student, as well as to the thought of the scholar. "Only the grosser facts of complex occurrences,"

[58]Goetsch, *Effectiveness of Different Types of Graphical Representation.* The serious deficiencies in this particular of students in grades six, seven, and eight are shown impressively in the results of *The 1936 Iowa Every-Pupil Tests of Basic Skills, Test B.* Bureau of Educational Research and Service, Extension Division, State University of Iowa, Iowa City, 1936.

[59]See, for example, Arkin and Colton, *Graphs.*

[60]*Report of the Joint Committee on Standards for Graphic Presentation.* The American Society of Mechanical Engineers, Educational Exhibition Company, New York, 1915. These standards are reprinted in McCall, William A., *How to Measure in Education.* The Macmillan Company, New York, 1922, pp. 332 ff.

[61]The brevity of this section on maps should not be taken to indicate a lack of appreciation, on the part of the writer, of their value in instruction in the social studies. A more expanded treatment was deemed unnecessary because

Bowman points out, "can be retained in the mind. The net of knowledge relationships is now world-wide and the individual facts in any field have become available in numbers that are overwhelming unless pictorialized. Many kinds of statistics have meaning only as they are given spatial relationship. . . . Both the assembly of the data and the regional application of the results are facilitated and given meaning through relationships best displayed on maps."[62]

To show relative and exact locations, important as these matters are, is only one of many functions served by maps. Their functions, according to Thralls, are "to show the following descriptive facts concerning cultural and natural items:

"[1] Relative and exact location, [2] relative and exact area or extent, [3] relative and exact distance, [4] shape of a given human or natural item or patterns of their distribution, [5] elevation and slope of land, and [6] the distribution of cultural and natural items."[63] The varied functions of maps are well exemplified in the *Atlas of the Historical Geography of the United States*.[64] Even the distribution of thought, attitudes, and sentiments is there depicted.

In rendering their distinctive services, maps use a variety of specialized symbols, which, as Bowman points out, represent "a language that has to be learned, like any other language.

of the excellence and fullness of statements found in such works as: Johnson, *Teaching of History; Thirty-second Yearbook*, National Society for the Study of Education; Fordham, Sir Herbert George, *Maps: Their History, Characteristics and Uses*. Cambridge University Press, Cambridge, 1921; Bowman, Isaiah, *Geography in Relation to the Social Sciences*. Charles Scribner's Sons, New York, 1934.

[62]Bowman, *Geography in Relation to the Social Sciences*, pp. 46–47.

[63]Thralls, Zoe A., "The Use of Maps in Geographic Instruction," *The Journal of the National Education Association* (December, 1932), p. 301.

[64]Paullin, Charles O., *Atlas of the Historical Geography of the United States*. Carnegie Institution of Washington, Publication No. 401. Carnegie Institution of Washington and American Geographical Society of New York, 1932.

Upon a single map one may find from twenty to fifty 'signs' that 'save the mind an infinitude of words,' to use Mackinder's phrase.

"A modern map is conventionalized. It is not in part a picture of reality, like some medieval maps that represent real castles, walled towns, and sea animals disporting. Its symbols have to be translated; they cannot be read right off like the text of a printed page. . . . Maps are a kind of shorthand description of the earth, a way of looking at distant places 'as if they were on the palm of your hand,' as a Chinese map maker has put it."[65]

In some quarters, unfortunately, map work is regarded as a formal and memoriter exercise. Such an attitude reflects an entire misconception of the functions of maps in the study of social studies. Intelligent map work constitutes the best antidote to formal and verbalistic learning, for it makes meaningful much that would otherwise not be understood and helps the student to see that both natural and cultural phenomena are rational rather than haphazard.[66]

The types of understanding, abilities, and habits required for the proper use of maps are, according to Thralls, as follows:

"[1] The ability to translate a map into landscape imagery, [2] an understanding of the distinctive types of information that can best be expressed in maps, [3] the ability to read such types of information from maps and to raise questions concerning the facts shown, [4] the ability to translate into map language, information expressed in statistics and reading material or secured from field studies, and [5] the habit of consulting maps."[67]

[65]Bowman, *Geography in Relation to the Social Sciences*, p. 2.

[66]Bowman, *Geography in Relation to the Social Sciences*, pp. 3–63. The entire volume is rich in illustrations of the basic and functional service of maps in the study of human phenomena.

[67]Thralls, "Use of Maps in Geographic Instruction," p. 301.

That students are seriously deficient in all of these essentials, especially in the last, is indicated both by common observation and by many investigations.[68] Students have not formed the habit of using maps, cannot read them intelligently, and are ignorant of many of the essential ideas that are obtainable only from maps. It is clear that more use should be made of maps than at present and that there should be systematic and progressive development, from grade to grade, of all of the abilities and habits necessary to their intelligent use.[69]

Part of the difficulty manifested by children in reading maps may be due to a lack of consistency in map symbols.[70] Not only in various books but sometimes in the same volume, a given symbol, such as a color, is used to represent very different types of data. The result of these variations is necessarily confusing, even though children be taught to examine the key before using a map. As a matter of fact, there is also great variety in the form of the keys themselves, and the keys sometimes do not agree with the maps. Consistency and conformity to recognized map standards are not unreasonable requirements to demand of the makers of maps for school use. Nevertheless, there must be room for experimentation, and recent developments indicate that we have not even approached the possibilities of map symbolization.

The Committee of Ten recommended strongly that maps and globes be regarded as an integral part of the equipment for teaching history and geography. Few modern schools,

[68]*Thirty-second Yearbook*, National Society for the Study of Education, pp. 154–155, 486–506; "Testing Map Reading Ability," *The Journal of Geography* XXX (January, 1931), pp. 38–42; "Manual for Administration and Interpretation of Iowa Every-Pupil Tests of Basic Skills," *The 1936 Iowa Every-Pupil Tests of Basic Skills;* same for 1937.

[69]Thralls, "Use of Maps in Geographic Instruction"; *Thirty-second Yearbook*, National Society for the Study of Education, Chaps. XV and XVI.

[70]Swartz, David J., "A Study of Variation in Map Symbols," *The Elementary School Journal* XXXIII (May, 1933), pp. 678–689.

however, live up to the recommendations of this committee. Map and globe equipment is meager in the average school, and the maps that are provided are often poorly selected. General standards for the selection of maps and globes for school use are given by the committee that prepared the recent yearbook, "The Teaching of Geography."[71] Joerg gives a valuable and critical appraisal of modern American wall maps.[72] The requirements for maps used in the teaching of history are discussed by Shepherd.[73] Accuracy and legibility are the qualities most emphasized.

[71]*Thirty-second Yearbook,* National Society for the Study of Education, Chap. XXV.

[72]Joerg, W. L. G., "Recent American Wall Maps: A Review," *The Geographical Review* XIV (July, 1924), pp. 456–464.

[73]Shepherd, William R., "Historical Maps and Their Making," *Proceedings,* Association of History Teachers of the Middle States and Maryland, X (1912), pp. 23–31.

Chapter X

SOURCES OF CONCRETE EXPERIENCE

THE USE OF CONCRETE EXPERIENCES

Concrete experiences have long been valued as correctives for the bookishness and verbalism that tend to dominate instruction. The limitations of language in representing reality have been pointed out repeatedly in earlier pages, and the services of pictures in removing some of these limitations have also been discussed. But even pictures do not adequately portray the objects, activities, and circumstances of life itself, and there is a need for the richer experiences that can be obtained only from direct contacts. Many sources of such experience have been suggested: (1) objects, models, and museums, (2) excursions, (3) constructive activities, and (4) direct participation in community enterprises.

The divisions of this classification are not mutually exclusive. They are closely related in practice as well as in theory. For example, schools that make a wide use of objects, models, and exhibits usually also make extensive use of excursions and constructive activities. In addition, such schools usually have the best libraries and enjoy the services of superior teachers. It would be misleading, however, to assume that these practices have been instituted and maintained solely to clarify ideas; they also stimulate interest, encourage activity, and break down the barriers between the school and life.

Comenius, Locke, Rousseau, Pestalozzi, Herbart, and Froebel are prominent among the earlier writers whose emphasis

on the need for concrete experience was insistent.[1] In America, the influence of Pestalozzi, as illustrated in the Oswego movement;[2] of Herbart, through the practical application of the theories of apperception and correlation;[3] of Froebel, as exemplified in the kindergarten;[4] and later, the influence of Francis Parker,[5] John Dewey,[6] and others, gave impetus to the growing conviction that the student must be provided with direct and personal sources of experience. The introduction of science, manual training, domestic science, and industrial arts into the course of study tended to shift the emphasis from verbalistic to more objective forms of learning. The culture

[1]Bennett, Charles Alpheus, *History of Manual and Industrial Education up to 1870.* The Manual Arts Press, Peoria, Illinois, 1926, Chapters I–VIII; Parker, Samuel C., *A Textbook in the History of Modern Elementary Education.* Ginn and Company, Boston, 1912; Reisner, Edward H., *The Evolution of the Common School.* The Macmillan Company, New York, 1930; Baldwin, J. W., "Influence of Teaching Aids on Methods," *Fifth Yearbook,* National Council for the Social Studies. McKinley Publishing Company, Philadelphia, 1935, pp. 108–115.

[2]For the general Pestalozzian movement, see, Barnard, Henry, *Pestalozzi and His Educational System.* C. W. Bardeen, Syracuse, 1906; Monroe, Will S., *History of the Pestalozzian Movement in the United States.* C. W. Bardeen, Syracuse, 1907. For the Oswego movement, see Dearborn, Ned H., *The Oswego Movement in American Education.* Contributions to Education, No. 183, Teachers College, Columbia University, New York, 1925.

[3]DeGarmo, Charles, *Herbart and the Herbartians.* Charles Scribner's Sons, New York, 1895; McMurry, Dorothy, *Herbartian Ideas about History Instruction as Developed in American Elementary Schools, 1880–1916.* Unpublished doctor's dissertation, Teachers College, Columbia University, New York, 1932.

[4]For Froebel and the kindergarten movement, see Bowen, H. Courthope, *Froebel and Education by Self-Activity.* Charles Scribner's Sons, New York, 1893; and Vandewalker, Nina C., *The Kindergarten in American Education.* The Macmillan Company, New York, 1908. For a general discussion of the influence of Froebel, see Parker, *History of Modern Elementary Education,* Chapter XVIII.

[5]Parker, Francis W., *How to Study Geography.* D. Appleton & Co., New York, 1889; and Parker, Francis W., *Talks on Pedagogics.* E. L. Kellogg & Co., New York, 1894.

[6]Dewey, John, *The School and Society.* The University of Chicago Press, Chicago, 1899; and Dewey, John, *The Child and the Curriculum.* The University of Chicago, Contributions to Education, No. V, The University of Chicago Press, Chicago, 1902; Mayhew, Katharine C., and Edwards, Anna C. *The Dewey School.* D. Appleton-Century Company, New York, 1936.

epoch theory,[7] the project method,[8] and, more recently, the activity movement[9] have all involved the use of concrete materials. In the early experimental and demonstration schools, such as the University Elementary School at the University of Chicago[10] and the Speyer School at Columbia University,[11] the use of objects, excursions, and constructive activities was closely integrated with instruction in social studies. This practice has since been prominent in laboratory schools generally, in certain private schools, such as the Francis W. Parker School,[12] and also in a number of public school systems.[13]

Although objective methods have had such distinguished advocates and have been demonstrated to be eminently successful in practice, they have not become an integral part of instruction in most schools in the United States. Published courses of study, as well as various surveys of instruction, indicate that only a small minority of teachers make extensive or systematic use of these methods in teaching the social studies. In this respect the typical American school lags far behind the best-known theory and practice. There are, of course, a large number of teachers who make more or less use of these ap-

[7]See, for example, Dopp, Katherine E., *The Place of Industries in Elementary Education.* The University of Chicago Press, Chicago, 1903; and Scott, Harriet M., *Organic Education.* D. C. Heath & Co., Boston, 1899.

[8]Stevenson, John A., *The Project Method of Teaching.* The Macmillan Company, New York, 1921.

[9]*Thirty-third Yearbook,* Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1934.

[10]Mayhew and Edwards, *Dewey School.* See also appropriate articles in *The Course of Study* I (July, 1900–June, 1901), *The Elementary School Teacher and Course of Study* II (July, 1901–June, 1902), and *The Elementary School Teacher* III, IV, V (July, 1902–June, 1905).

[11]For the earlier course of study, see appropriate articles in *Teachers College Record* Volumes III and IV (1902–1903); for a more elaborate use of constructive activities, see *The Speyer School Curriculum.* Teachers College, Columbia University, New York, 1913.

[12]Francis W. Parker School, *Year Books,* Volumes I–IV. The Francis W. Parker School, Chicago.

[13]California Curriculum Commission, *Teachers' Guide to Child Development.* California State Printing Office, Sacramento, 1930.

proaches to understanding and, indeed, there are some who use them with great effectiveness, but for the most part the use is sporadic and incidental rather than systematic and basic. Elementary schools, as perhaps is proper, make more use of objects, excursions, and constructive activities than do high schools, but at no level are the practicable and potential contributions of these aids even approached. Whether they are neglected because of a lack of appreciation of their value, because of expense, because of troublesome administrative problems, or because of habituation to verbal teaching is not clear.

I. OBJECTS, EXHIBITS, MUSEUMS

During the last half of the nineteenth century the use of objects was vigorously advocated and widely employed as a means of making the child familiar with the world about him.[14] Other claims for the method, such as sense training, were also urged, but these need not be discussed here. For a time, object teaching had a place on the daily program. While the method, as might be expected, was applied chiefly to teaching science, it was also extensively used in teaching geography and to a lesser degree in teaching history. Most books on general and special methods had a section on object teaching and, indeed, whole books were written on this subject. Unfortunately, the procedures that were followed tended to become extremely formalized, partly because of faulty psychological theories, and partly because of their lack of subordination to large concepts in the course of study. While formal and artificial methods persist to this day, they have been lessened to

[14]For a view of the theory before 1880, see Kiddle, Henry, and Schem, Alexander J., "Object Teaching," in *The Cyclopædia of Education*. E. Steiger, New York, 1877, pp. 658–661. See also Monroe, Paul (ed.), *A Cyclopedia of Education*. The Macmillan Company, New York, 1913, articles in Volume Four entitled "Museums, School," "Object Teaching," "Objective Method"; Parker, *History of Modern Elementary Education*. Chaps. XV and XVI.

a substantial degree by a more adequate view of the functions of concretion in teaching, by merging objects into enterprises that give them significance, and by more intelligent integration with the course of study. Objects, exhibits, models, and museums are now recommended as essential parts of the instructional equipment, although with more discrimination than in earlier years. Exhibits are provided that illustrate several phases or aspects of important topics. Models are furnished of buildings or of objects that are too large or too rare to be brought into the classroom. In a number of schools, museums are maintained for the collection and preservation of these materials, and large public museums co-operate with the schools both by making their facilities available in the museum itself and by sending loan exhibits to the classrooms.

There have been no extensive experiments of a statistical nature concerning the effectiveness of objects, models, and museums, but a number of appraisals on the basis of observation and critical judgment have been made.[15] The consensus of these appraisals is in agreement with the meager experimental data in showing that objects, models, and museums are indispensable aids to instruction in geography and the social studies. The ends that they serve and their limitations are, in general, similar to those of pictures.[16] The unique value of these materials is that the student may see actual objects and specimens. Usually he may examine them at first hand, handle them, and, in the case of certain objects and models, he may even operate them. Just as a picture of a stone arrowhead or of a pioneer spinning wheel adds vividness and clarity to a verbal descrip-

[15]Glick, Annette, "The Use of Visual Aids in Teaching the Social Studies —Past and Present," *Fifth Yearbook*, The National Council for the Social Studies, pp. 123–142; Thralls, Zoe A., and Reeder, Edwin H., *Geography in the Elementary School*. Rand McNally & Company, Chicago, 1932, pp. 391–392.

[16]See pages 360 to 386 of this volume.

tion, so the actual object adds reality beyond that afforded by a picture.

The criteria for the selection and use of objects, like those for all instructional materials, are to be found in the purposes that guide the instruction. What is to be taught and for what purposes? Do objects make an important and unique contribution to the attainment of these purposes? These questions must be asked persistently if the school is to avoid the encroachment of the mere curio type of exhibit. The availability of some exhibit, especially one that can be procured at little or no cost, sometimes tempts the teacher to focus one or more lessons upon it even though it may have little relationship to the course of study. While such use of objects or exhibits may occasionally provide a general enrichment of experience similar to that of browsing in reading, it should be reserved for odd moments and should not be allowed to obscure the more important functions of objects in providing experience out of which fundamental concepts are to be formed.

Objects, like pictures, should be subordinated to and integrated with the course of study. They must be means rather than ends, and the specific purposes they serve must be clearly understood. It is usually advisable to prepare for their study by developing a feeling of need for them and by raising the chief questions to be answered through their use. And even when objects are strictly subordinated to important matters in the course of study, it is necessary that a high degree of selection be exercised. Otherwise, the student's interest will be dissipated. In teaching history, for example, a pebble picked up on the site of the settlement of Jamestown has no instructional value, but a few cotton bolls and a working model of the first cotton gin can contribute greatly to understanding the influence

of this invention upon the development of the cotton industry.

Even the most enthusiastic among the earlier proponents of the use of objects in teaching saw that unless the concrete experience that objects afford is followed by application and generalization, the value of such teaching is greatly lessened. Some held that when such instruction stops short of generalization, the object method is fruitless and may be actually detrimental. In other words, it is the function of objects to clarify and enrich the child's ideas on matters of detail essential for achieving larger and more adequate concepts. The functions of concretion are far more varied, flexible, and dynamic than can be described in the formulæ: from the concrete to the abstract, and from the simple to the complex.[17] A clear recognition of this fact by both teacher and pupils is essential if the formalism into which object teaching degenerated in the later phases of the Pestalozzian and Froebelian movements is to be avoided.[18]

Syllabi of courses of study should point out the topics that are most likely to be clarified and enriched by the use of objects, should tell where and how appropriate objects may be secured, and should give definite suggestions for their use. In the absence of such helps, teachers may have recourse to the occasional bulletins containing sources from which exhibits may be obtained,[19] and to books on methods of teaching, which sometimes include sections of advice on the selection and use of

[17]Dewey, John, "Concrete and Abstract," in *A Cyclopedia of Education*, Vol. II, p. 173.

[18]Parker, *History of Modern Elementary Education.*

[19]Booth, Mary J., *Material on Geography.* Eastern Illinois State Teachers College, Charleston, Illinois, 1931; Richmond, Edna, *Materials of Instruction Which May Be Obtained Free or at Small Cost.* Fairmont State Normal School, Fairmont, West Virginia, 1930; Snedaker, Mabel, *A List of Addresses from Which Bulletins, Pamphlets, and Illustrative Materials for the Teaching of Geography May Be Obtained.* Extension Division, University of Iowa, Iowa City, Iowa.

such materials.[20] Explicit suggestions for the use of objects in the study of particular topics, however, are rarely given. Little has been done, moreover, to furnish objects, models, and exhibits on a commercial basis comparable to the production and distribution of books and pictures. Many industrial firms supply valuable exhibits of their own products or processes gratis or at small cost. Although these exhibits must be chosen and used with discrimination, there is no justification for the somewhat hysterical fear that the schools will be propagandized through their use.

Some of the most difficult problems involved in the use of objects, exhibits, and models pertain to their cost, methods of housing, and methods of display. These problems are met in four ways: (1) The classroom is made the center; and the number and quality of the objects, exhibits, and models that are collected, or sometimes even constructed by the students, depend largely upon the resourcefulness of the teacher.[21] (2) The school building is the center; and collections of objects or exhibits for the use of various classes are displayed in the corridors or in a room devoted to that purpose. (3) The so-called school museum is maintained for an entire school system, usually under the direction of a department of visual instruction. It sends out pictures, slides, films, exhibits, models, and

[20]An excellent reference is Johnson, Henry, *Teaching of History in Elementary and Secondary Schools.* The Macmillan Company, New York, 1928, Chaps. VIII and IX.

[21]Colbert, Russell, "One Year with a History Museum in a Small High School," *The Historical Outlook* XVI (April, 1925), p. 167; *Thirteenth Yearbook,* The Department of Elementary School Principals, Washington, D. C., 1934, pp. 244–260; Hendricks, Jennie L., "Utilizing Pupils' Own Source Materials," *The Historical Outlook* XXI (January, 1930), pp. 25–26; Knight, Ella B., "Collecting and Making Use of Local Geography Material," *The Elementary School Journal* XX (February, 1920), pp. 459–465; Knox, Rose B., *School Activities and Equipment.* Houghton Mifflin Company, Boston, 1927, pp. 216–229; Wilgus, A. Curtis, "The High-School History Museum," *School and Society* XIV (November 19, 1921), pp. 461–463.

other aids as they are needed by various classes.[22] (4) Use is made of the facilities of the public museum, which students may visit and which, in some cities, lends especially prepared collections to the schools.[23]

Although neither the classroom museum nor that of an individual school can be extensive or elaborate, both may be exceedingly useful. Since available space is usually quite limited, care should be taken to collect objects that illustrate important problems or topics. Especially valuable are actual objects that may be used to illustrate fundamental processes, such as spinning and weaving. Objects that have really belonged to peoples of other times and places or have been produced by them contribute a special interest. Authentic and representative models are also valuable, but must be carefully used in order to make sure that the pupil does not form distorted ideas, particularly of size.

Many teachers encourage students to collect or make objects and models pertaining to the topic or unit under discussion. The chief value of an exhibit, it is often claimed, is in the collecting and making. Such a plan has many advantages: the cost is less, the interest in the exhibits may be greater, and the concomitant experiences are often more valuable than when the objects are provided by the school or by museums. Unless

[22]Rathmann, Carl G., *Visual Education and the St. Louis School Museum.* United States Bureau of Education, Bulletin, 1924, No. 39. Government Printing Office, Washington, D. C.

[23]Belfield, L. M., "The Visual Idea Functioning Through Museums," *Visual Education* II (Sept.–Oct., 1921), pp. 6–14, 54, 9–17; Hine, Sarah A., "New Developments in Visual Aids," *The Educational Screen* XI (October, 1932), pp. 232–233; Miller, Marion E., "The Museum and the Schools," *Progressive Education* VII (December, 1930), pp. 387–394; O'Day, Laura, "The Science Museum: A Vital Factor in Visual Instruction," *Thirty-second Yearbook,* National Society for the Study of Education, Public School Publishing Company, Bloomington, Illinois, 1933, pp. 524–530; Toothaker, Charles R., *Educational Work of the Commercial Museum of Philadelphia.* United States Bureau of Education, Bulletin, 1920, No. 13, Government Printing Office, Washington, D. C.

carefully planned, however, such enterprises are time-consuming and tend to become the end rather than the means of learning. The decisions as to whether to purchase, to collect, or to make should be determined by the cost and availability of the objects, the time required for making or collecting them, and the purposes to be served. For example, a spinning wheel should probably be purchased or borrowed from the attic of a patron, while dipped or molded candles should be made. The plans are correlative rather than antagonistic. The process of making a quilt from fragments of garments may be brought out better by making one, while the art, as well as the thrift and sentiment that quilts often embodied, may be better displayed by a family heirloom or a museum piece. The shortcoming most commonly manifested in pupil-made objects and models is their failure to achieve an authentic or representative quality.[24]

The chief advantages of the museum maintained by the school system are that the teachers are spared the inconvenience and difficulty of storing the materials and the time and effort of keeping them in good repair, and that a more complete collection of visual aids may be made, housed, and circulated. As with all materials that are not a part of the classroom or the school equipment, however, the teacher may neglect to use what is not immediately at hand or may not be able to secure the exhibits at the particular time he needs them.

Public museums possess the advantage of large collections as well as space and materials for authentic reproductions of objects and specimens in their natural settings, but their services are limited almost entirely to the pupils who live in or near large cities. Although excursions to the museum offer special problems, pupils may be greatly aided in their study of both

[24]See pages 419 to 430 of this chapter.

history and geography by such visits. Of especial value are those exhibits, such as habitat groups, which display objects in their life setting. Many large museums also lend certain collections to the schools. Considerable interest has been manifested during recent years in the establishment of small local museums. Although schools may do much by lending support to such enterprises, the chief responsibility rests upon community organizations.

Where the services of neither large, efficient, and well-equipped visual aid departments nor of public museums are available, attention should be directed to the establishment of small, carefully selected museums within the school. Many patrons are willing either to give materials outright or to lend them, with the understanding that they may later be withdrawn. A small but nevertheless significant part of the budget for instructional materials in social studies should be set aside for the purchase, collection, or production of objects, exhibits, and models, and suitable facilities should be provided for their storage and display.

2. EXCURSIONS

The social experiences that a child may gain in even the best school are definitely circumscribed. This is due partly to the limitations of language[25] and partly to the nature of the school as a specialized social institution. To maintain, as many educators do, that the school is a miniature society is absurd. It is not like any city, state, or rural district. It does not mirror any community, even in the crudest outline. It cannot, and probably should not, do so. The school, in reality, is but one part of the local and larger community—a part with the highly specialized function of preparing children to live

[25]See Chaps. IV and V.

in that community. Only a negligible portion of community activities can be brought directly to the school. In most instances, the students must be taken to the activities. This is the function of the excursion.

A variety of names are applied to trips away from the school: *excursions, school journeys, field trips, field exercises, visits, field work, pilgrimages,* and *field study.* The term in vogue at present is *the school journey,* but this is used interchangeably with *the excursion. Field trip* and *field study* are applied to the natural sciences more frequently than to the social studies. These terms are preferable in that they suggest serious work. There is a certain tang of irresponsibility about *journey* and *excursion;* this is intensified by the literature on the subject, which frequently emphasizes freedom, escape from the rigor of the schoolroom, pleasurable association of teachers and pupils, and the exhilaration of the outdoors. The terminology is relatively unimportant, however, the chief point of interest being the idea lying back of the excursion. The fundamental purpose of excursions is to give the students first-hand contact with life.[26]

Excursions are not a modern development by any means. Practices akin to them are found in earlier periods. Kandel states: "Historically the school excursion may be connected with the wandering and begging students of the Middle Ages. The distinct educational value of travel was recognized by most of the writers on education of the sixteenth and seventeenth centuries, . . ."[27] This comparison with earlier practice, however, holds more true for forms such as the German *Ausflug* than for the excursion as a systematic

[26]Gaither, E. F., "The Excursion Project," *The Educational Screen* VIII (April, 1929), p. 104.

[27]Kandel, I. L., "Excursions, School," in Monroe, Paul, *A Cyclopedia of Education.* The Macmillan Company, New York, 1919, Vol. II, p. 542.

method of instruction. Walks and longer journeys of exploration were taken by the pupils in the school of Vittorino da Feltre during the first half of the fifteenth century.[28] Montaigne also advocated school journeys. A great impetus was given to them by Rousseau's philosophy of education with its emphasis on teaching through nature. Basedow, Pestalozzi, Froebel, Herbart, and other German educators recognized the value of out-of-door experiences, and under Professor Rein of Jena University, excursions were made a definite part of the German educational program in the nineteenth century.[29] The founding of the *Wandervögel* in 1896 strengthened the movement.[30] It naturally declined during the war but was revived after 1920 as a means of building up undernourished children.[31]

The popularity of school journeys spread throughout Europe, and even to Asia. In England excursions, first sponsored by Manchester University, were well established by 1911 and are now managed by the School Journey Association.[32] In France, and especially in Paris, visits to industrial districts are encouraged. Ferguson states that approximately 60,000 Swedish children travel each year, the Swedish railroads arranging special tours of the mountain regions. Finland has a state commission charged with the sole duty of attending to school journeys.[33] Japan also utilizes this method of teaching, and

[28]See Woodward, William Harrison, *Vittorino da Feltre and Other Humanist Educators.* Cambridge University Press, Cambridge, 1912.

[29]Kandel, "Excursions," pp. 542–543.

[30]Kemp, H. R., "Seen in Germany," *The New Statesman* XV (July 24, 1920), p. 445.

[31]Wulff, Hans, "Schule und Schulwanderung," *Die Deutsche Schule* XXXIV (1930), pp. 407–416.

[32]Kandel, "Excursions"; Downs, S. W., "The School Journey Movement in Great Britain," *School and Society* XLII (October 19, 1935), pp. 541–542.

[33]Ferguson, Charles W., "School's Out," *The Reader's Digest* XXVIII (March, 1936), pp. 105–108.

excursions occupy a prominent place in the last two years of the elementary course and in high school.[34]

Trips lasting one day or only one-half day are now a part of the elementary school program in most European countries. Longer excursions are taken by some high school and university classes, occasionally even to foreign countries.[35] In Germany, where the movement has been most highly developed, excursions lasting several days are not uncommon. The students walk with their teacher, spending the nights in the *Jugendherbergen* (youth hostels) that are scattered throughout the country. Here they may secure both lodging and breakfast for fifteen or twenty cents. If railroads must be used, a special and very reasonable rate is offered. Thus expenses are kept at a minimum, and even the poorer pupils may participate in the trips.[36]

One of the most valuable outgrowths of the excursion movement in Germany is the custom of "exchanging" children. Those living in the city are sent to farm homes for a time, while country children are sent to the city. In this way city children develop some understanding of rural problems, and country children learn to look at life from the urban point of view.[37] The effect of such experiences can hardly be overestimated.

Excursions have been growing in popularity in the United

[34]"School Journeys in Japan, *School and Society* XLII (August 31, 1935), pp. 300–301.

[35]Downs, "School Journey Movement"; Spiecker, Hans, and Girardet, Alfred, "Eine Schülerwanderung nach Venedig," *Gesundheit und Erziehung* XLV (1932), pp. 201–208.

[36]For a general discussion of German excursions, see Alexander, Thomas, and Parker, Beryl, *The New Education in the German Republic.* The John Day Company, New York, 1929, Chaps. III and IV. In the matter of school journeys, the National Socialists have adhered to the policy of the Republic. See also Kandel, I. L., *The Making of Nazis.* Teachers College, Columbia University, New York, 1935, pp. 76–78.

[37]Alexander and Parker, *New Education in the German Republic,* p. 52.

States since the latter part of the nineteenth century. Their development during the time of the Herbartians may have been due to the contact that the McMurrys and other leaders had had with the movement during the years they spent in study in Germany. Excursions were a prominent part of the work in the laboratory school of the University of Chicago from the time of its organization under John Dewey[38] and in other laboratory schools, such as the Speyer School, Teachers College, Columbia University, and the Elementary School at the University of Missouri. Excursions have been demonstrated as a part of the regular training in many of the normal schools and teachers colleges for more than thirty years and are now recognized as a valuable part of the program in most progressive schools.

Longer trips have never gained the prominence in this country that they have in Europe. An early excursion was conducted by Doctor Rice, who had been inspired by a visit to Jena University. The party, consisting of fifty-four students, fifteen teachers, a doctor, and the state inspector of schools, traveled from Anderson, Indiana, through the state of Virginia. A special train was chartered for the eight-day trip. In these circumstances the cost was naturally excessive and, in addition, too much time was consumed in riding.[39] The latter is a common defect in American school journeys of considerable length.

Although the trip conducted by Doctor Rice aroused great interest, it did not lead to the widespread use of such extensive excursions. Indeed, they are almost out of the question in the average school because of the high cost of travel, board and

[38]Mayhew and Edwards, *Dewey School*, pp. 391 ff.

[39]Curiously, the best account found of this excursion is in a German source: Scholz, E., "Schulreise," in Rein, W. (ed.), *Encyclopädisches Handbuch der Pädogogik*. Herman Beyer und Söhne, Langenfalza, 1899, VI, p. 501.

lodging in this country. At present, railroads do not offer special rates to school groups, and even busses are too expensive for most students. The cost of staying in a hotel or tourist home is, of course, prohibitive. Camping is far from satisfactory if more than a few students are making the journey. In spite of all these obstacles, some schools do undertake long trips,[40] but these either are limited to the wealthier students or are very infrequent occurrences.

Typical excursions or field trips in this country are short from the point of view of both time and distance. Most of them are taken in a few hours or, at most, in a day, and to destinations only a little way from school. Even these short excursions are not so frequent as in Europe. Several reasons have been given for their neglect. The principal explanation is probably a lack of appreciation of their value. Many teachers, moreover, have had no training or experience in their use. There are a good many troublesome problems involved in taking the students away from the school building; schedules of classes must be changed, and often a number of teachers, as well as the superintendent, must be consulted. Week-ends and holidays might be utilized, but it is difficult to assemble a class outside of school hours. Excursions are also time-consuming, so that in schools where the course of study is followed rather rigidly and contains an excessive number of topics, many teachers feel that they cannot spend as much time on one small unit as an excursion would demand. It is often difficult to obtain permission to visit a factory, store, or farm because some proprietors feel that the stu-

[40]Turrill, Park L., "A Traveling School of the Desert," *Sierra Educational News* XXVI (March, 1930), pp. 2–8; Abrams, Selma, "Summary of the First Summer Field Course in High School Geography of the New Orleans Public Schools," *The Journal of Geography* XXIX (January, 1930), pp. 25–29; Rich, Willis E., "A School on Wheels," *Junior-Senior High School Clearing House* IX (November, 1934), p. 185.

dents either will damage the property or will be injured themselves. In addition, there is the troublesome problem of transportation. Because of the heavy traffic on American highways, hiking is dangerous. If automobiles are used, responsible drivers must be secured. A trip by train or street car naturally involves some expense, which, in most instances, is not assumed by the school. Many parents, moreover, have to be educated to the value of excursions.[41]

Many schools have found that it is not impossible to surmount these difficulties, however, and make regular use of excursions in the teaching of social studies and geography,[42] claiming for them the following values:

1. They form a connecting link between the school and community and arouse public interest in the school.

2. They provide definite information from first-hand observation.

3. They arouse interest and vitalize school life and school problems.

4. They furnish common experiences for all children.

5. They develop worth-while attitudes and better understanding between teacher and students.

6. They develop a sympathetic understanding of the prob-

[41]Thralls, Zoe A., "The School Journey," *The Elementary School Journal* XXVIII (December, 1927), pp. 290–295; Preble, Charles S., "Field Trips in Upper-Grade Geography," in Miller, George J. (ed.), *Geography, How to Teach It.* McKnight and McKnight, Bloomington, Ill., 1934, pp. 78–85.

[42]*Fourteenth Yearbook,* Department of Superintendence, Washington, D. C., 1936, Chap. XI, "The Utilization of Community Resources"; Davis, L. C., "Some Experiences in Presenting Work in Field Geography in a Teachers College," *The Journal of Geography* XXXV (February, 1936), pp. 47–53; Sloan, Harold S., "Seeing Social Problems First Hand," *The Social Studies* XXVII (January, 1936), pp. 22–27; Thralls, "The School Journey"; Kusch, Monica Henrietta, "An Experiment in Fifth Grade Field Work," *The Journal of Geography* XXXV (May, 1936), pp. 179–185; McMurry, Charles A., *Excursions and Lessons in Home Geography.* The Macmillan Company, New York, 1916.

lems and social contributions of the various vocations.[43]

These conclusions as to the value of excursions are based chiefly upon the critical judgment of persons who have had extensive experience in their use, rather than upon statistical advantages. The degree to which these and other values result is contingent both upon the soundness of the point of view from which excursions are undertaken and upon the skill with which they are planned, conducted, and utilized. Those who have appraised them most critically, from the time of their earliest use, have been in marked agreement as to their potential values. There is some very substantial evidence, moreover, which indicates that the values claimed for excursions or field trips have not been exaggerated. Of all the experiments reviewed in the preparation of this volume, the one that gave the largest proportion of adequate ideas, the fewest "howlers," and the greatest ability to use the knowledge gained was one in which the predominant instructional element was the field trip.[44]

Out of several years' experience with excursions taken in this country in connection with geography and the social studies, the following conclusions seem to have emerged:

1. Excursions should be strictly subordinated to the course of study in the social studies. Pleasure jaunts or sightseeing

[43]*Fourteenth Yearbook,* Department of Superintendence; Briggs, Thomas H., "The Excursion as a Means of Education," *Teachers College Record* XXII (November, 1921), p. 415; Herchmer, Cordelia A., "Getting to Know Nature," *Childhood Education* V (May, 1929), pp. 469–470; Tyson, Mildred E., "Visual Aids in the Teaching of History-Geography in the Primary Grades," *Baltimore Bulletin of Education* VIII (December, 1929), pp. 62–64; Dillon, Jessie M., "Field Trips in Geography in the Elementary School," *Thirty-second Yearbook,* National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, pp. 519–524; Preble, "Field Trips"; Miller, *Geography;* Straw, H. Thompson, "A New Kind of Geographic Field Trip," *Peabody Journal of Education* XII (November, 1934), pp. 120–122.

[44]Curtis, Dwight K., *The Geological Interpretation of Geography in the Intermediate Grades of the Elementary School.* Unpublished master's thesis, State University of Iowa, Iowa City, 1936.

trips may be justified as a part of the school's recreational program, but in most cases they cannot be defended on the ground of their contribution to the social studies.

2. Excursions should be selected and planned because they make a contribution greater than or different from that of any other school activity.

3. An important factor in choosing an excursion is the student's background of experience. It is obviously a waste of time to take students on excursions to gain concrete knowledge that they already possess.

4. There should be a clear recognition on the part of both students and teachers of precisely what is to be accomplished on the excursion.

5. The greatest value is obtained from excursions that have been carefully prepared for in the regular work of the school, through readings, discussions, and, in case some industrial process is to be observed, carrying out certain parts of the process in a simple way in the classroom. For example, the value of a visit to a woolen mill is enormously enhanced for students who, as a part of their classroom work, have actually carried out in a simple way, the processes of washing, carding, spinning, and weaving.

6. Excursions should be carefully planned with a view not only as to what is to be accomplished but also as to the manner in which the trip is to be made. It is essential that the teacher, or in the case of older students, some responsible committee should go over the route, make a careful study of the resources of the place to be visited, and make sure that permission and co-operation are secured from the owner or custodian. The most successful excursions are those which are planned co-operatively by pupils and teacher and in which the pupils themselves take a large part of the responsibility

for making the excursion a success. Excursions in which students assume a large part of the responsibility for planning and management are not only more profitable but very much more smoothly carried out than those under the rigid direction of a teacher. Learning to co-operate is, under these conditions, a very important by-product.

7. Any excursion worth taking is worth spending time on after it is over. At least one period should be spent in discussing it. The information gathered should be used to solve the problem for which the excursion was undertaken. If it has been a success, there will be many questions to talk over. Care must be taken, however, to see that the activities that grow out of it are clearly needed. Excursions are sometimes made unpopular by burdening the students with so many subsequent tasks as to lead them to look forward to the next excursion with very little enthusiasm.

8. It is essential that the co-operation of parents be secured. Many schools follow the practice of requiring the written permission of parents, usually by requesting their signature to a printed or mimeographed form that states the purpose of the excursion, the way in which it is to be taken, and the cost.

9. It is imperative that every precaution be taken to guarantee the safety of the students in transit. Whether the students walk or ride, the danger of accidents is minimized by leading them to accept the responsibility for meeting the requirements of safety. An important by-product of this is the understanding of the ways in which the hazards of highways may be reduced.

10. One of the most important values of the excursion is an interest in the problems and resources of the community. One student, for example, traced his interest in pottery to a school journey, and another reported that she had returned to the

Metropolitan Museum five or six times after visiting it with her class and had induced her parents to go with her. Not all communities have access to museums, but every community has resources that should not be neglected.

3. CONSTRUCTIVE ACTIVITIES

Attention has been called repeatedly to the tendency of instruction to become formal, verbalistic, and irresponsive to the needs of life. Of the methods that have been developed to redress these trends, none has grown more steadily in the estimation of teachers than various forms of overt activities: the making of models of utensils, costumes, and houses; the construction in miniature of natural and cultural landscapes, such as mountains, villages, and farms; the reproduction of processes, such as curing skins, making pottery, and testing seed corn; the direct participation in out-of-school activities, such as Clean-Up Week, the beautification of the city, and safety campaigns. This list is merely illustrative of the great number and variety of types of enterprises that have been used extensively in teaching the social studies.

The fundamental conceptions lying back of these enterprises have been obscured not a little by a kaleidoscopic shifting of pedagogical terminology and theory in the last thirty years. Overt activities were used to some degree during the Pestalozzian, Herbartian, and Froebelian movements, in each of which they were described with characteristic terminology. Subsequently they have been included under terms peculiar to various later movements. Nearly twenty-five years ago, for example, when a hen was set by a primary class in a school that was under the dominance of the problem method, setting the hen was a "problem." In a few years setting a hen was a "project." Still later it was an "activity," a "unit of work," a

"center of interest," or an "enterprise." At the moment this paragraph is written, setting a hen is most commonly called an activity; yet the purposes of the children, the interest accompanying the enterprise, and the enlargement of knowledge and insight are essentially the same under all of these terminologies.

It is really difficult to find a single satisfactory name under which such experiences can be grouped. The pedagogical term "project," as used in the years preceding 1920, was very serviceable, and although wholesomely flexible in its connotation, was commonly understood to include just such concrete activities as have been enumerated above.[45] The term was soon taken over, however, by those who had little interest in the unique value of these concrete experiences in enriching and clarifying meaning, was made vague and ambiguous by the emphasis on other connotations, and was soon abandoned as unsuited to the purpose for which it had been appropriated. It is doubtful whether it can now be revived in general pedagogical usage. The designation "constructive activity," which is here employed, is not wholly satisfactory. It is used in the sense of its plain English connotation and should not be confused with the activity movement, in which, however, it sometimes plays an important part.

A comprehensive survey of the published accounts of constructive activities for more than fifty years[46] shows that the activities differ widely not only in type, quality, and emphasis,

[45]Horn, Ernest, "What is a Project?" *The Elementary School Journal* XXI (October, 1920), pp. 112–116.

[46]A detailed description and critical evaluation of the theory and practice pertaining to these activities are given in Anderson, Marion A., *A Description and Evaluation of the Constructive Activities Used in Teaching the Social Studies from 1880 to 1930.* Unpublished doctor's dissertation, State University of Iowa, Iowa City, 1934.

The following study describes and evaluates constructive activities as used in the primary grades: Hogan, Sister Mary Muriel, *A Description and Evalua-*

but also in the ends that they are believed to serve. This is borne out by the first-hand experience of living persons who have used or observed them for all or part of this period. These differences are accounted for by the great variety of theories and influences that have helped to shape this type of instruction: the theory of apperception, which not only held that education should be built on the child's experiences but which also required, in practice, the provision of concrete experiences deemed essential to the development of important generalizations; the growing importance attached to interest and purpose in the process of learning; the need of enriching the child's present life; the reaction against verbalistic, formal, and pedantic instruction; the spread of manual training, home economics, and industrial arts; the growth of the laboratory method in science; the demand for concreteness; the training of the hand in the pedagogical trinity, "the head, the heart, the hand"; learning to do by doing, the concept of the active life, behavior as the end of education; lifelikeness in subject matter and in procedure; the theory of social utility in curriculum making; the need for self-expression and creative enterprises; the theory of play, education through play and games; the concepts of correlation, concentration, and integra-

tion of Constructive Activities Used in Teaching in the Primary Grades from 1926 to 1936. Unpublished master's thesis, State University of Iowa, Iowa City, 1936.

For theory and practice in earlier times see Bennett, *History of Manual and Industrial Education up to 1870.* For a history of "activism" see Woody, Thomas, "Historical Sketch of Activism," in *The Thirty-third Yearbook,* Part II, National Society for the Study of Education, Chap. II.

Helpful guides to modern practice are: Bonser, F. G., and Mossman, L. C., *Industrial Arts for Elementary Schools.* The Macmillan Company, New York, 1924; Bonser, F. G., *Industrial Arts for Public School Administrators.* Teachers College, Columbia University, New York, 1930; Welling, J. B., and Calkins, C. W., *Social and Industrial Studies for the Elementary Grades.* J. B. Lippincott Co., Philadelphia, 1923. See also Carey, A. E., Hanna, P. R., and Meriam, J. L., *Catalog of Units of Work, Activities, Projects, etc. to 1932.* Teachers College, Columbia University, New York, 1932.

tion, which sometimes led to the organization of instruction around some constructive activity; the provision for individual differences in interests, as well as in capacities; the achievement of such concomitants as co-operation, resourcefulness, and the integration of personality. The list is by no means complete. All of these influences, and others, have had a part in shaping the theory and practice of constructive activities. Each has had its day of dominance in some professional group. The overemphasis upon one or upon some few of them to the neglect of others and the failure to co-ordinate them in a harmonious theory of education account in large measure for the confusion shown today in the use of constructive activities in teaching.

That activities, at their best, may serve most of the purposes implied in the preceding paragraph is freely admitted. In particular, they aid understanding, stimulate thinking, give atmosphere and a sense of reality, combat verbalism, and generally vitalize and motivate those parts of the curriculum with which they appropriately deal. Yet no instrument has been more perverted by a wrong perspective regarding its relation to the course of study or by misconceptions of the nature of interest, thinking, understanding, and imagination.

A careful evaluation of the published accounts of these activities, past and present, reveals many shortcomings that prevent their potentialities from being fully realized. In many cases the shortcomings are so serious that the activities constitute an educational liability rather than an asset. This is particularly true when their use, as is not uncommon, is indiscriminate, uncritical, and ritualistic. As a result, constructive activities commonly fall far short of their possibilities and often degenerate into forms that frustrate the achievement

of the very purposes to which they should contribute, if properly conceived.

It is necessary, therefore, to posit general principles by which constructive activities in the social studies may be selected and guided. First, any activity must contribute directly to the understanding of some important concept or process of social life. Second, it must be guided by and be a stimulation to critical thought. Third, it must be authentic. Although the majority of constructive activities do not meet these criteria, there are now and have long been numerous activities that do satisfy all of them to a reasonable degree.

Each activity should contribute directly to the understanding of some important aspect or process of social life; that is, it should be strictly subordinated to the important concepts that make up the curriculum in the social studies. These basic concepts provide the norms by which all instructional methods, including this one, must be selected, guided, and evaluated. Yet one gets the impression that frequently the teacher or the maker of "activity programs" looks around for something that can be constructed and then, either as an afterthought or as a subordinate purpose, tries to discover what concepts, knowledges, or attitudes may be associated with it. When carried out in this wrong perspective, it is inevitable that constructive activities should fall far short of their potential possibilities, if indeed they do not degenerate into empty, sentimental, and ritualistic exercises. For example, the study of the development of the textile industry should not be merely incidental to spinning and weaving; rather, the understanding of the industry is the end to which spinning and weaving contribute. Several undesirable effects usually follow when the activity is made the end rather than the means of instruction: more

time is consumed than is warranted by the results obtained; the significance of the activity is obscured; thinking is discouraged and tends to stop with the completion of the activity; the students become satisfied with representations that are highly or wholly inaccurate. As will be shown later, only a small number of the important concepts included in the course of study in geography, history, and other social studies can be taught directly by constructive activities even at their best.

Activities must be guided by and be a stimulation to critical thought. Learning to do by doing is the controlling principle in primitive forms of education. It has been prominent in manual training, home economics, and elementary agriculture, as well as in physical education, typewriting, music, and art; *i.e.,* in all types of training in which efficient behavior is the goal. Now we are coming to recognize that constructive activities may stimulate thinking and contribute knowledge, sympathy, and insight as well as skill in performance. By doing, one learns to understand as well as to do. It is chiefly in the light of this contribution that the use of activities in teaching the social studies should be evaluated.

Since the time of the introduction of constructive activities into the school, distinguished observers have seen in them a challenge to careful and vigorous thought. James approved the introduction of manual activities into the schools "not because they will give us a people more handy and practical for domestic life and better skilled in trades, but because they will give us citizens with an entirely different intellectual fibre. Laboratory work and shop work engender a habit of observation, a knowledge of the difference between accuracy and vagueness, and an insight into nature's complexity and into the inadequacy of all abstract verbal accounts of real phenomena, which, once wrought into the mind, remain there

as lifelong possessions. They confer precision; because, if you are *doing* a thing, you must do it definitely right or definitely wrong. They give honesty; for, when you express yourself by making things, and not by using words, it becomes impossible to dissimulate your vagueness or ignorance by ambiguity."[47]

The unique contribution of such experiences was early recognized by Dewey and by other proponents of their value in instruction in the social studies. No one who is familiar with the use of the highest types of constructive activities in schools will question their worth in enriching meaning, in clarifying ideas, and in stimulating vigorous thought.[48]

Activities must be authentic. Whether the aim be to develop proficiency in action, to clarify ideas, to enrich experience, to invigorate thinking, or to stimulate fruitful interest, it is crucial that these activities be guided by the dictum, "wie es eigentlich gewesen." When the activities are unsound, the thought is unsound also. This relation cannot be stressed too vigorously. The more important the matters to which the activities pertain, the more essential it is that fidelity to the truth be maintained. Failure here is serious not only because of the resulting distortion of ideas but also because of the detrimental influence upon the student's habits of thinking. Neither valid understanding nor effective habits of work can be attained by fictitious representation. The purpose must be to teach the truth and the means by which it is attained.

[47]James, William, *Talks to Teachers.* Longmans, Green & Company, London, 1899, pp. 34–36. See also Rugg, Harold, "Do the Social Studies Prepare Pupils Adequately for Life Activities?" *Twenty-second Yearbook,* Part II, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1923, pp. 1–10.

[48]Dewey, John, *The School and Society.* The University of Chicago Press, Chicago, 1900; Dewey, John, *Democracy and Education.* The Macmillan Company, New York, 1916, Chap. XX; Bonser and Mossman, *Industrial Arts.* For a description of their early use in the laboratory school of the University of Chicago, see Mayhew and Edwards, *Dewey School.*

What is meant by authenticity can perhaps be best understood by discussing it in connection with the common types of activities that are now used in teaching the social studies. Activities range from those that have little, if any, authenticity to those which are as real as life itself. They may be classified, for convenience, into groups according to the degree of reality that is achieved.

(1) Lowest of all are the constructions that are largely fanciful and almost wholly erroneous. An Indian peace pipe is represented by a large bowl with enough stems so that all members of the council can smoke at once;[49] a paper tepee typifies an Indian home in a locality where no tepee was ever built; and a drawing of a single person climbing a steep hill to reach a lone hut at the top depicts the capture of Vicksburg. Closely akin to these unbridled fabrications of the imagination are many that have become traditionally symbolic. Pointed paper hats of a pattern unknown in any age are made for soldiers of the Revolutionary War; paper hatchets are cut out in preparation for Washington's birthday; a frieze of jinrikishas and Fujiyamas is drawn or cut from paper to symbolize Japan; "very effective" polar bears are made by gluing cotton on patterns cut from paper; and farm life is made "real" by having city children give the conventional quack-quacks for geese, cluck-clucks for hens, and baa-baas for sheep. Such enterprises are *prima facie* evidence of slovenly thought. Teachers sometimes defend or even approve them, however, on the ground that they are "real to the child" or "the child's very own," thus manifesting an indisposition to seek the truth, as well as a flagrant misconception of the healthy and vigorous use of the imagination. Such experiences not only fail to contribute to

[49]All of the examples given in this chapter have been taken from reports of actual practice.

valid understanding but are an actual detriment, since they give the student concrete ideas of the way things are *not* and discourage any effort to discover the truth.

(2) A little higher in the scale are various types of construction that are illustrative, in a limited sense, but that are so far removed from the realities they purport to represent as to distort rather than clarify the student's ideas. Most paper construction belongs to this class. Trees, animals, garden vegetables, bridges, boats, trains, castles, and whole cities are made with scissors and paste. In the same category are most representations of scenes and episodes in sand, clay, and similar materials. Although such constructions are generally ludicrous in their inadequacy, many show a degree of effort and ingenuity that deserves a better outlet. A castle is made of Portland cement, and the water in its moat, of crumpled silver paper; a pond in a farm scene is made by placing a pane of glass over a piece of blue paper; Eskimo dog meat is furnished by painting strips of paper red; a Roman house is built with floors of colored glass, colonnades of curtain rods, a couch made from a crackerjack box, and marble seats carved from Ivory soap; the Parthenon is constructed of candles and pasteboard; a sand-table scene is said to illustrate the struggle between England and Spain; Mt. Vesuvius is "made of cement, conical in shape with bits of cotton (dipped in red ink) fastened to toothpicks sticking up out of the crater."

If the printed reports of the construction of scenes, noted buildings, and cultural landscapes are characteristic of general practice, one must conclude that much time is wasted in such work. At best, the miniatures are representative of the superficial appearance only, with no serious attempt at accuracy either in scale or in essential features. The representations are usually so far-fetched and reflect reality so inadequately as to

distract rather than aid the student in his attempt to understand the phenomena with which they deal. The "massiveness of a castle" cannot be brought out by a paper model a few inches high. An "appreciation of the grandeur of the Parthenon" is not enhanced by a pasteboard structure with columns made of paraffin candles. A "sense of the icy wastes of the Arctic archipelago" is not to be achieved by the use of a small sand-table model covered with tinsel and flaked mica. Such miniatures are symbolic in a very objectionable sense. They are often very elaborate, moreover, and usurp time that would be much more profitably devoted to extensive reading, the use of pictures, and to more genuine types of activities, such as those described below under types 3, 4 and 5. It seems likely that they fix a great many false ideas in the student's mind.

From the examples that have been given up to this point, and they could be multiplied many times over, one is led to suspect that these types of construction are subterfuges for teachers who know or care little about the truth and significance of the basic materials of the social studies. The tendency to use such constructions as "escapes" from the demands of scholarship and from sound thinking is increased, moreover, by attempting representations that are far beyond the student's ability.

If anything beyond the descriptions of the products themselves is needed to show the uncritical spirit in which most constructions of this type are undertaken, it is furnished by the comments of the exponents, thus: "A soap sphinx links us to the distant past"; "the clay figure of a knight evokes the holy paganism of the crusades"; "the blinding snow and ice and a glacier," "a yawning crevasse," and "dizzy heights" are exhibited in a model two by three feet. It is unfortunate that the attitude expressed in these statements permeates so many of

the discussions of activities, for it is the antithesis of that which the social studies should seek to develop.

(3) Other types of models are on a much higher intellectual level than those described above. Modeling natural features and regions in relief with sand, clay, paper pulp, or other plastic materials is no longer used so extensively as it formerly was, but the practice is not uncommon even today. Parker,[50] Fry,[51] and Redway[52] were among the most prominent of the early proponents of this method in the teaching of geography. As used in this subject, such models usually involve much more careful study than in the case of most of the historical and geographical scenes described above, yet they suffer from the same limitations that are always found in the attempt to reproduce extensive and complicated features in miniature. The objection to such small models is that unless they are made to scale, they distort the physical features, and if they are made to scale, they fail to bring out the significance of these features. Made to scale, for example, the Ozark Mountains would hardly be perceptible in a relief map of North America. It seems likely that natural features are more quickly and adequately understood through other means. Nevertheless, these models are not entirely without merit. Certainly they are not likely to result in the sentimental and uncritical attitudes noted in the preceding paragraphs.

It is in the understanding of more simple objects, however, that models have proved most useful. There is probably something to be gained from the construction of models that indicate form and structure only, although not usable: a log house, a tepee of the Plains Indians, or a dugout canoe. Much

[50]Parker, *How to Study Geography.*

[51]Fry, Alexis, *The Child and Nature, or Geography Teaching with Sand Modeling.* Bay State Publishing Co., Hyde Park, Mass., 1888.

[52]Redway, Jacques, *The Teacher's Manual of Geography.* D. C. Heath, Boston, 1892. (First Edition, 1889.)

more valuable, however, is the construction of working models. Some of these, such as a flail, a simple loom, a primitive fire drill, or an hourglass, can approximate life size and be used precisely as were the objects that they represent. Crudity in construction detracts little from their worth. Such models have many advantages. They help to make clear the function and significance of the object represented. They are a vigorous challenge to careful thought whose adequacy is tested by their successful use. Acceptable also are models that are working models only in an illustrative sense, such as the simple representation of a canal lock, a steam engine, or a cotton gin.

(4) Closely akin to the construction and use of working models are those constructive activities that help the student to understand the processes by which fundamental material needs are satisfied. The value of reproducing these processes in school was early recognized,[53] and activities of this type have increased steadily both in laboratory schools and in public schools.[54] They have been facilitated especially by the introduction of industrial arts into the curriculum and by the integration of this work with geography and social studies.[55] The methods of obtaining food, clothing, and shelter are most

[53]Dewey, *The School and Society;* Dopp, *Industries in Elementary Education.* The industrial process, as here illustrated, is in harmony with the fundamental place accorded social processes in Marshall, Leon C., and Goetz, Rachel Marshall, *Curriculum-Making in the Social Studies.* Charles Scribner's Sons, New York, 1936.

[54]See, for example, *Francis W. Parker Year Book,* Vol. I (1912), Vol. III (1914), and Vol. IV (1915), *Speyer School Curriculum;* California State Department of Education, *Teachers' Guide to Child Development.* California State Printing Office, Sacramento, 1930.

[55]For examples of this integration see references under footnote 10 above. For more detailed illustrations see Gillett, Norma, and Snedaker, Mabel, *Course of Study in Pioneer Life.* University of Iowa Extension Bulletin, No. 375, State University of Iowa, Iowa City, 1935.

For a discussion of the place of industrial arts in the curriculum, see Russell, James E., and Bonser, Frederick G., *Industrial Education.* Teachers College, Columbia University, New York, 1914. See also Bonser and Mossman, *Industrial Arts;* Welling and Calkins, *Social and Industrial Studies.*

frequently illustrated, but considerable attention is given also to related problems, such as those involved in transportation, communication, recreation, the improvement of health, the keeping of records, and the making of tools and utensils. Primitive processes and those of the period of relative self-sufficiency are most often duplicated. The chief steps in the transformation of raw materials into usable products are illustrated. Among the processes that are most often carried out are the following:

a. Food—making butter and cheese; bread making; primitive stone boiling; drying fruit and vegetables; smoking meat; primitive methods of grinding grain; making hominy; drying and canning fruits and vegetables; flailing grain; purifying water.

b. Clothing—washing, carding, spinning, dyeing, and weaving wool; raising silkworms and making simple reels for taking the silk from the cocoons; removing cotton seeds by hand to show the epoch-making significance of the cotton gin; making a simple cotton gin; making dyes from materials found in the immediate locality; tanning leather; curing skins; caring for clothing; providing decoration.

c. Shelter and furnishing—constructing various types of dwellings of Indians and other primitive peoples; making rugs, dishes, pottery, and simple articles of furniture; making sun-dried and kiln brick; using paint for decoration and for preserving woods.

d. Utensils and implements—making pottery, baskets, lamps, weapons, simple tools, flails, spindles, looms, dugout canoes, hourglasses, water wheels.

e. Miscellaneous—making soap, paper, simple models of a telephone, candles, simple castings in lead; printing; book binding.

Authenticity, of course, is no less imperative in the reproduction of these processes than it is in the construction of scenes or models. For example, there is obviously little to be learned about how the Indians cooked fish by pretending to cook a paper fish over a few unlighted sticks, with streamers of red paper agitated by a fan, but a simple experiment in stone boiling definitely aids the student in understanding one way in which the Indians prepared their food. These two representations are in sharp contrast, both in their methods and in their results. The former, by sentimental and undisciplined use of imagination, proceeds *away from the truth;* the latter, by honest investigation, *toward the truth.* By the very nature of activities that represent processes, however, fictional fabrications are less common than in any of the preceding types, with the exception of working models.

The following criteria have proved helpful not only in keeping the reproduction of a process authentic but also in giving it meaning. (1) The activity should start with a clear recognition of the need to be satisfied, either from the point of view of understanding the people of the place and period being studied or from the point of view of understanding the evolution of the process from primitive times up to the present. (2) The materials used should be essentially the same as those actually used in the process of the time or place to be represented. Occasional substitutions may be allowed when the materials function in much the same way as the actual materials that were used. Thus it is permissible sometimes to make candles of paraffin rather than of tallow, provided the children see the reason for the substitution and understand clearly that the genuine materials have not been employed. There is always the danger, however, that such substitutions will be misleading. (3) Steps in the process must be the same

as those of the actual process that is being illustrated. (4) The activity must result in a product that can be utilized, at least for illustrative purposes. For example, if the process to be duplicated is that of making soap, then the efforts of the students should result in actual soap. The product is the best proof of the accuracy with which the process was carried out.

It is, of course, possible for a constructive activity to be authentic in a technical sense and yet fail to give an appreciation of its social or historical significance. Shearing, carding, spinning, and weaving wool, as representative of any stage in the development of this general process, may be duplicated with essential accuracy and yet not convey the crucial importance, in the lives of the people of the time, of this manner of providing clothing. This is but another reason for demanding that the attention be centered on the intellectual significance of an activity rather than upon its physical aspects alone. An understanding of the historical setting of the process and an appreciation of its social significance are facilitated by such procedures as the following: picturing conditions before the process was devised; duplicating the process in an authentic manner; showing how labor is saved; pointing out the effect upon the conditions of labor, upon standards of living, and upon problems of distribution; and showing the relation of the process to social policy. It is easy to see the fundamental contribution that such a treatment of industrial processes can make to understanding changes in economic and social conditions.

These activities, as earlier indicated, serve as a useful and often indispensable introduction to field trips or excursions. The student who has performed the primitive processes of washing, carding, spinning, dyeing, and weaving wool and has followed these with experiences in carrying out the proc-

esses as they were performed in the pioneer home has had an excellent preparation for a visit to a woolen mill. Without such a basis for understanding, the complicated operation of the mill becomes what James described the infant's world to be a—"blooming, buzzing confusion." But the student who has gone through the steps of this process in their simpler forms and has attained a sense of their significance in times when families were wholly or largely self-sufficient is better prepared not only to understand how the processes are performed in the factory but to appreciate the social significance of labor-saving devices and specialized industry.

The use of these concrete experiences is even more important as a preparation for reading than as a preparation for a field trip. While not many children can have the opportunity of visiting any kind of textile factory, all of them will read about the industry in the various stages of its development. Statements that would otherwise be empty, vague, or misconceived take on a substantial degree of valid meaning. The contribution of such enterprises to the understanding of pictures is no less marked. Without such experiences the student may get little even from the pictures that deal with the simplest processes. For example, after looking at a series of pictures that showed the evolution of harvesting, one student said that the cradle had five or six blades on it, and assumed that therefore many times as much grain could be cut with it as with the scythe. That such blunders are common is shown clearly in the reports of experiments in reading and in the use of pictures.

(5) The direct participation in the solution of community problems, while not adequately described by the term constructive activity, has, nevertheless, much in common with the type described in the preceding section. For example, the

children of one elementary school improved a track on a hillside for winter coasting and formulated rules for its safe and equitable use; the Junior Civic and Industrial League of Lincoln, Nebraska, working in co-operation with the Department of Entomology of the State University, the Civic Affairs Committee of the Commercial Club, the local press, and the city officials, planned and carried out a successful campaign for the extermination of the tussock moth, which had threatened serious damage to the shade trees of the city. Student participation in such enterprises as safety campaigns, Red Cross drives, clean-up week, and plans for making the community more beautiful is reported in many centers, both rural and urban.[56]

Many advantages inhere in these out-of-school activities. They display social problems in all of their complicated human relationships. Because they demand the solution of practical difficulties, they strengthen moral and intellectual fiber to a degree not easily matched in the protected circumstances of the school. They give a sense of the responsibility and dignity of induction into citizenship that is not equaled by any other type of project, and certainly not by types of instruction that consist only in make-believe or even in reading and talking about community problems. They are pre-eminent in the development of the various concomitants usually claimed for activities in the school. For example, the school children of Lincoln in their campaign to exterminate the tussock moth must have developed an appreciation of the need for co-operation, an understanding of how it is achieved, and a realization of its effectiveness in actual practice to a degree not even remotely approached in setting up a miniature city

[56]Woellner, Fredric P., *Education for Citizenship in a Democracy.* Charles Scribner's Sons, New York, 1923, Chap. X; Hatch, Roy Winthrop, *Training in Citizenship.* Charles Scribner's Sons, New York, 1926, Chap. V.

government in the schoolroom. The significance of methods of co-operation is in a real sense determined by the specific purpose for which co-operation is sought; and it is a long way from the co-operation developed in connection with petty projects in the school to that which the world demands. It is possible, at a time when both necessity and policy prohibit young people from procuring remunerative occupations, that such participation in the solution of community problems may afford an opportunity to secure some of the values that come from useful work. This phase of the training of youth in Russia has many suggestions for American teachers.[57]

Other values claimed for activities.—It is true that the aiding of understanding and the encouragement of critical thinking are not the only values claimed for the use of activities. Indeed, in the minds of some writers, these values are apparently held secondary to creative self-expression, to the stimulation of interest, and to the achievement of a host of concomitant values, such as initiative, freedom, and co-operation. Yet, as will be shown below, authentic understanding and critical thought are not antagonistic to the achievement of these other values but fundamental to it.

In the period that marked the introduction and growth of constructive activities in the school there was considerable emphasis on the psychological principle that James stated as, *"No reception without reaction, no impression without correlative expression. . . ."* In elaborating this statement James said, "An impression which simply flows in at the pupil's eyes or ears, and in no way modifies his active life, is an impression gone to waste. . . . Even as mere impression, it fails to produce its proper effect upon the memory. . . ."

[57]Harper, Samuel N., *Civic Training in Soviet Russia.* University of Chicago Press, Chicago, 1929, Chap. XII.

James believed that even verbal reaction as in a recitation or reproduction was a valuable type of reactive behavior. He adds, however, "Verbal reactions, useful as they are, are insufficient. The pupil's words may be right, but the conceptions corresponding to them are often direfully wrong. In a modern school, therefore, they form only a small part of what the pupil is required to do. He must keep notebooks, make drawings, plans, and maps, take measurements, enter the laboratory and perform experiments, consult authorities, and write essays. He must do in his fashion what is often laughed at by outsiders when it appears in prospectuses under the title of 'original work,' but what is really the only possible training for the doing of original work thereafter."[58] It is, of course, true that all forms of expression, the oral report, the written paper, or the constructive activity, are tests of what has been learned, but they are more than that; they are the incentives and accompaniments of learning itself.

The value of self-expression is recognized also by Dewey and by most writers who have made critical appraisals of the value of activities in the school. It is no sentimentalized creative self-expression, however, that these writers have in mind, but rather, an approach to reality, the development of the power of vigorous thought, stimulation of growth, and provision for the retention of worth-while ideas. An authentic and intimate relation to fundamental ideas is therefore the basis for desirable forms of self-expression.

In recent years, however, creative self-expression has sometimes been taken out of its proper setting and exalted in such a way as to make it appear that it can thrive, and perhaps thrive best, when completely divorced from dependable data and when operating wholly outside the restrictions imposed by

[58]James, *Talks to Teachers*, p. 32.

scholarly methods of work. One teacher, for example, encouraged the building of medieval castles and Greek landscapes because, since the child had seen neither, his imagination would be freed, but discouraged the building of a bridge that could be visited because the actualities would hamper his construction. Such an attitude is romantic individualism run wild.

It is a common experience that unusual interest is shown by students in those parts of the course of study with which the authentic constructive activities are associated. This is not due to the influence of a mere device; it results from the operation of fundamental principles of motivation. Interest, in any desirable sense, comes from the enrichment of meaning and from the development of a competent sense of values. While it is not always true that interest increases in the proportion that understanding improves, this is the tendency, and it is certainly difficult to maintain interest without understanding. Attention, moreover, is held more easily by concrete activities than by words. The child readily becomes absorbed in the process of construction, and when this process, as is true in the highest types of constructive activities, is seen in its relation to the satisfaction of some fundamental human need, the interest in the construction leads to an interest in the fundamental social process itself. The more basic, then, the problem that is illustrated by the constructive activity, the greater, the more significant, and the more permanent is the interest that it develops.

It is unfortunately true, however, that interest can also be stimulated in activities that are trivial and unauthentic. When the student's attention is focused upon such enterprises, when he is encouraged in irresponsible and uncritical modes of thought, satisfied with fantastic and erroneous representation,

and made complacent in the possession of fictitious symbolisms, whatever interests are developed are likely to be harmful rather than beneficial. This is especially true when the activities, and the interest developed in or by them, become the ends rather than the means of instruction. Growth comes not from interest *per se* but from interest that leads to desirable goals.

What has been said of self-expression and interest holds also for other concomitant values, such as initiative and originality. The more important the concept to which the activity is related, the more authentic the representation, and the more it is accompanied by critical use of dependable data, the better are these accessory values achieved. The frequency and extravagance with which they are claimed for petty and unauthentic constructions lead one to suspect that here, as elsewhere, these claims are put forward to justify types of construction that have little educational value. There is no concomitant worth achieving whose development necessitates the use of trivial and fallacious activities.

There has been too great a tendency of late to talk of such traits as initiative, originality, and self-expression as though they developed *in vacuo*. Thorndike's discussion of initiative and originality is the sort of wholesome corrective that might well be applied to other concomitants also. He points out that self-reliance, initiative, and originality are neither "little deities of the mind which act according to caprice" nor "intelligent slaves that hasten to act when bidden." He calls attention also to the loose thinking in regard to the manner of their development and the degree to which they transfer to a variety of social situations. He remarks, "To cultivate a general diffuse initiative would be to become a busy-body. For a man whose every thought was original we should have

to go to our hospitals for the insane. . . . The truly independent thinker does not make less use of other men's ideas than the servile thinker, but more."[59]

Certain undesirable tendencies have been noted in the preceding evaluation of constructive activities. It is a testimony to the soundness and vitality of the fundamental concepts lying back of them that activities have survived so much fuzzy thinking and so much malpractice. The commonest and most serious abuses of constructive activities are, as has been suggested, first, distortion that comes from regarding them as ends in themselves rather than as means to the understanding of some important aspect of life; second, a failure to subject them to critical thought; and third, a lack of authenticity. Correlated with these defects are (1) wasting time through needless illustration, (2) undertaking constructions that are too ambitious or too difficult, (3) devoting more time than can be justified by what is learned, (4) stressing the manual to the exclusion of the intellectual aspects of the construction, and (5) profuse and sentimental thinking and writing.

Much time is wasted in constructions that are not needed to clarify or enrich understanding. This abuse has been sharply criticized from the time of the introduction of constructive work in school. In 1887, for example, Brown wrote, "Would they teach a boy to come in when it rains, they must use a watering-pot and a rag-baby to show the effect of the shower."[60] The course of study for one state recommends that rural school children cut cows, horses, vegetables, and farm buildings out of paper, and the excursions of city children to the farm are often followed by similar representations.

[59]Thorndike, Edward L., "Education for Initiative and Originality," *Teachers College Record* XXIX (November, 1927), pp. 89–93.

[60]Brown, George, "Illustration that Does Not Illustrate," *Education* VII (June, 1887), p. 731.

Constructions that are too ambitious or too difficult almost inevitably degenerate into a poor form of symbolism that is not only unauthentic in itself but also a block to efforts to find out what the truth really is. Examples are the construction of a medieval village, the Roman Forum, or a large harbor. In such constructions there is likely to be no serious attempt to discover or represent the truth in any adequate fashion but rather to escape the difficulties by the adoption of a playhouse attitude.

The time given to any construction should be proportionate to its value in relation to the end that is served and in comparison with other possible approaches, such as readings, excursions, and pictures. Many activities require more time than can thus be justified. Particularly is this true of the elaborate representations of scenes, cities, and the like. The time consumed in these constructions is more than can be warranted, even if they were authentic, which they rarely are. Less time is required for simple models, reproductions of processes, and the direct participation in community affairs, which are vastly more valuable. Even these activities, like all methods for aiding understanding through concrete or detailed illustration, are time-consuming. While they must be chosen and evaluated in the light of their effectiveness as compared with other means of clarifying or enriching meaning, it is easy to justify a larger emphasis than is now accorded them. When concrete experiences are needed for understanding they are not educational extravagances. There is no greater waste of time than that found in the formal and verbalistic teaching of a meager textbook.[61] It is true, however, that if understanding and thinking are to be stressed, the number of different units to be learned must be reduced.

[61]See Chapters IV and V.

It has already been suggested that one should avoid stressing the physical to the exclusion of the intellectual aspects and significance of the construction. The enrichment of meaning rather than proficiency in performance or manual dexterity is the primary purpose of these activities. Referring to clay modeling, for example, Parker wrote, as early as 1883, "If the mind sticks in the 'mud pie,' as it is often called, the mud is of little or no use."[62] The overemphasis on physical aspects is in large part due to viewing the activity as an end rather than a means of instruction. It is a common fault, moreover, to become so absorbed in making a pretty or clever exhibit that the purpose of the representation is obscured. Whenever this occurs, there is a tendency for authenticity and understanding to be subordinated to art, with very sad consequences for the student's ideas and habits of work. The leading exponents of constructive activities from the time of Parker down to the present have repeatedly warned against restricting the pupil's mental vision by centering upon these constructions as ends in themselves.

Perhaps the most common and serious defect found in the literature on constructive activities is the loose and sentimental way in which such terms as "reality," "understanding," "doing," and "activity" are used. Flagrant and extreme forms of what the psychologist calls associative shifting are common. The slippery use of the phrase "real to the child" is an illustration. From authentic activity and concreteness the teacher moves to forms that are false or distorted. Instead of curing a skin to gain insight into one way of satisfying the need for clothing, a make-believe skin is cut from paper; instead of chipping flint as an introduction to the making of implements

[62]Parker, Francis W., *Notes of Talks on Teaching.* (Reported by Leila E. Partridge.) E. L. Kellogg Co., New York, 1883, p. 134.

in the Stone Age, arrowheads are made of clay and axes cut from pasteboard; instead of raising silkworms that spin actual cocoons, paper worms are fed on paper leaves.

Such misconceptions of the nature of social truth and the means by which it is achieved reflect a mental outlook and sense of values more indicative of the mud-pie and playhouse stage of development than of the scholarly attitude to be expected in a teacher of social science. Very likely teachers and writers who encourage such enterprises do not have competent knowledge of the objects, processes, or activities so improperly and erroneously represented. Make-believe activities are "escapes" for such teachers, as well as for their pupils.

Materials and equipment for authentic construction should be an important item in the budget for instruction in the social studies.[63] Teachers are hampered in this type of work by a lack of equipment, and in some cases are limited to what they purchase with their personal funds. There is, of course, no more reason to expect the teacher to buy this type of equipment than to expect him to furnish the textbooks or the blackboards and crayons. In the past, however, much money has been squandered by schools on expensive materials, such as colored paper, required for types of activities which are of little value. The expenditure for such materials cannot be justified in terms of their relative value as compared with other items in the budget for instruction.

While it is true that first-class equipment and workrooms are found in few schools, Bonser, who did more than any other person in encouraging the use of high-type activities,

[63]Bennett, Charles A., *The Manual Arts.* The Manual Arts Press, Peoria, Ill., 1917; Bonser and Mossman, *Industrial Arts;* Edgerton, A. H., *Industrial Arts and Prevocational Education in Intermediate and Junior High Schools.* Bruce Publishing Company, Milwaukee, 1922; Welling and Calkins, *Social and Industrial Studies.*

showed that many of the most valuable of these enterprises could be carried out in the regular classrooms of the average elementary school at small cost and with little additional equipment. He believed, in fact, that because of the likelihood of close integration with the phases of instruction that activities serve and because of the atmosphere that they add to the classroom itself, there are many advantages in doing much of this work in the classroom even though other rooms are available.[64] In junior and senior high schools, the regular shop equipment should include facilities for constructive activities related to the social studies.

Perhaps the most serious handicap to the use of constructive activities is the lack of interest and training on the part of teachers. In addition to sound scholarship in the social studies, as ordinarily conceived, there is needed much technical information that most teachers have had no opportunity to acquire, either in courses in social studies or in courses in education. Helpful direction, however, is afforded by a number of excellent guides to the use of industrial arts in the school.[65]

The five types of activities that have been described above have been shown to vary enormously in authenticity, in the quality of thinking that they stimulate, and in pertinence to fundamental matters in the course of study. It is unfortunate that types 1 and 2, which are the lowest in value from every point of view, should be the very types most frequently used in school. It may be too much to say that activities of these two types are always and inevitably detrimental, but their value at best is very slight. Most of them consume much time in petty manipulation, inculcate an objectionable attitude

[64]Bonser, *Industrial Arts for Public School Administrators*, Chap. II.
[65]See references under footnote 63.

toward truth, encourage slovenly habits of thought, impress fictitious concepts, and distract the mind from the fundamental problems of social science. Yet these faults should not lead to a condemnation of all constructive activities. Rather, they suggest a purging process in which these vacuous and harmful types should be removed, along with other activities in which the materials, processes of construction, and results are not accurately illustrative. It is a good rule, for example, to make from paper, sand, and clay only those objects which, in life, are made of these materials. Since there are more activities that contribute to the valid understanding of important concepts than can be undertaken in school, one cannot justify the use of those forms that lack authenticity, that deal with petty matters, and that foster slovenly and undisciplined habits of thinking.

More use than at present should be made of types 3, 4, and 5 as described above: the construction of accurate models, the authentic illustration of processes by which important material needs are satisfied, and the direct participation in the solution of community problems. These types are not merely methods of teaching; they possess valuable content in and of themselves. They have been most widely employed in the elementary school, but they are serviceable as well in junior and senior high schools. It is difficult to understand why the writers on instruction in geography, history, and other social studies have given so little attention to these desirable types. Books on teaching history and geography sometimes contain brief sections on modeling natural features and occasionally on making working models. Books on civics sometimes contain suggestions for the direct participation by pupils in the solution of community problems. The duplication of processes, which has been shown to be pre-eminently fruitful of

insight and understanding, is almost completely ignored. All three of these types of activity have proved their worth in practice.

It is obvious that a large part of the course of study in geography, history, and other social studies cannot be taught through constructive activities. They have little or no place, for example, in arriving at an understanding of the growth of religious freedom, the formation of the Constitution, or the causes and effects of the World War. They contribute to the understanding of the nature and significance of a limited number of concrete social phenomena, consisting chiefly of relatively simple subjects and processes. Even in this area, they are but one of many approaches; they supplement rather than supplant other means of instruction, such as readings, excursions, pictures, and group discussions. They must be thought of as *a* method rather than *the* method of teaching social studies. Their usefulness is enhanced rather than restricted by keeping in mind their unique but limited functions and by viewing them always in their proper perspective as means rather than ends.

Chapter XI

DEVICES FOR STIMULATING THE IMAGINATION

INTRODUCTION

The active and thoughtful construction of meanings as contrasted with verbal memory or passive learning has been strongly emphasized in previous chapters. All meanings or concepts must be built by the student; they cannot be given to him. The reconstruction in imagination of events, places, conditions, movements, and relationships makes up a large part of the study of geography and the social studies. Imagination is here used in the broad sense that includes all mental constructs; for while concrete imagery has an important place in learning, many meanings, relationships, generalizations, and emotional concomitants go far beyond such imagery. Imagination, thus defined, is utilized not only in the achievement of meaning but also in setting up ideals or purposes and in all thinking, whether the general movement of thought is inductive or deductive. It is customary, however, to distinguish between the mere apprehension of the ideas that are presented by others and the organization of data that, from the point of view of the learner, is original with him.

A large number of pedagogical devices have been suggested as "aids to the imagination." Those most widely used and most commonly recommended are: (1) graphic aids, including the drawing of maps, charts, diagrams, and imaginary pictures; (2) the writing of imaginary letters, diaries, and autobiographies; (3) imaginary journeys; (4) dramatizations; and (5)

constructive projects.[1] These devices are termed pedagogical because, with the exception of the making of maps, charts, and diagrams, they are used chiefly in teaching. The designation "aids to the imagination" is not particularly appropriate, since the devices also purport to serve other purposes, such as the stimulation of interest, and since they probably do not aid the imagination as much as do pictures, excursions, models, and books. They are more aptly described as devices for stimulating the imagination.

In the preparation of this volume a large number of examples of these pedagogical devices were examined very critically. Most of them reflected serious misconceptions of the nature, function, and limitations of imagination, as well as of the conditions under which it operates effectively. Before entering into a discussion of the various types of these devices, therefore, it may be well to sketch very briefly the status of psychological theory in this field.[2]

Psychologists recognize two types of imagination, the reproductive and the constructive. The latter type includes creative imagination, which is, however, sometimes listed as a third type. These types are closely interrelated. The chief distinction between them is found in the purpose to be served. When the student's problem is to build a new concept, to discover a relationship, or to solve a problem, constructive imagination is demanded; when, in conjunction with such a process or independent of it, the need is to recall something that has been previously learned or experienced, reproductive imagina-

[1]Constructive projects were discussed in the preceding section, but these activities stimulate imagination to a degree that is probably not equaled by any of the other devices here listed.

[2]For a summary of present psychological theory, see Cadman, S. Parkes, *Imagination*. E. P. Dutton & Co., Inc., New York, 1930; Kirkpatrick, Edwin A., *Imagination and Its Place in Education*. Ginn and Company, Boston, 1920; and Murphy, Gardner, *General Psychology*. Harper & Brothers Publishers, New York and London, 1933, Chap. XX.

tion is called into play. It is the former type that characterizes the larger movements of thought in the study of geography and the social studies.

All types of imagination are closely related to and dependent upon memory. Psychologists point out that the best way to train the imagination, therefore, and the only safe way, is to root it firmly in dependable knowledge and to validate its products according to pragmatic principles of reality and usefulness.[3] There is thus no conflict between the demands of sound scholarship and the principles of psychology. The dictum, *as it really was,* and its counterpart, *as it really is,* are as sound from the point of view of learning as from the point of view of historical or geographical research. In fact, psychologists, and particularly the specialists in psychopathology, are even more insistent in their emphasis upon the need for facing reality than are the leaders in geographical and historical research.[4]

The use of the imagination does not always bring desirable results. It may lead as readily to the formation of constructs that are essentially false as to the formation of those that are essentially true. It may contribute to prejudice, fantasies, and unsocial conduct as well as to sympathy, authentic ideas, and effective thought and action. There are limits, moreover, to what the imagination can do. It must have proper substances with which to work; it cannot make cheese out of water. And

[3]Calkins, Mary W., *A First Book in Psychology.* The Macmillan Company, New York, 1914, Chap. VII.

[4]For an extensive treatment of the disorders of imagination and its management in healthy mental life, see: Burnham, William H., *The Normal Mind.* D. Appleton and Company, New York, 1924, pp. 540, 630, 668–669; Chase, Robert H., *The Ungeared Mind.* F. A. Davis Company, Philadelphia, 1918, pp. 29–43; Groves, Ernest R., *Personality and Social Adjustment.* Longmans, Green and Co., New York, 1925, pp. 231–247; Morgan, John J. B., *The Psychology of the Unadjusted School Child* (revised ed.). The Macmillan Company, New York, 1936; Thom, Douglas A., *Mental Health of the Child.* Harvard University Press, Cambridge, Mass., 1928, p. 39.

even when essential data are at hand, rigorous and specialized discipline is required if we are to avoid stocking the student's mind with concepts that are useless or even dangerous, and habituating him to practices and attitudes that block effective thinking.

Appraised either from the point of view of squaring with reality or from the point of view of the disciplined use of imagination, the great majority of imaginative devices manifest grievous sins, both of omission and commission. All too frequently the point of view is like that of a man who was criticized by a clever lady for forgetting "that imagination consists in seeing things as they are, and not as they are not."[5] These devices are frequently initiated and carried to completion without bringing adequate data or criticism to play upon them. The student is led to turn away from reality rather than to face it. Ludicrously erroneous constructs are defended by teachers and supervisors on the ground that they are "real to the child" or that they are "his very own." These escapes into an unreal world obscure the importance of social problems and cheat the student of the sense of dignity that arises from direct, sincere, and vigorous efforts in the achievement of an intelligent understanding of these problems.

Ray's statement concerning daydreaming is applicable to all types of imagination that move too far from the base of supply of authentic data and experience or that operate without sufficient discipline. He says, "It begets a distaste for exact knowledge, for that is the fruit of laborious study; it indisposes the mind to habits of continuous thought, and quenches all thirst for intellectual excellence. . . . This would be bad enough if the evil stopped here, but it extends much further.

[5]Perry, Bliss, *A Study of Prose Fiction.* Houghton Mifflin Company, Boston, 1902, p. 185.

It actually incapacitates the individual for those intellectual efforts that are required for the great purposes of life, and circumscribes the sphere in which he can move with any degree of credit to himself or good to others."[6]

Such warnings as have been cited above should not be taken lightly. The danger to sound scholarship and to mental health is very real. Nor does it appear that social inventiveness, desirable as it is, is likely to be hampered by the insistence upon facing reality or upon the careful control of imagination. Woodworth points out, "Invention in the service of art or of economic and social needs is controlled imagination, realistic, socialized, subjected to criticism. It cannot afford to be autistic, but must meet objective or social standards."[7] Inventions, mechanical or social, are made by persons who have thought long and hard about the problems of which the invention is a solution. Murphy says on this point:

"In Rossman's recent book on *The Psychology of the Inventor,* not a single case of valuable invention from a person unacquainted with the field of his contribution is reported.

"One *learns,* moreover, to invent, that is to say, how to combine ideas in fruitful ways within a given field."[8]

It is necessary, therefore, to examine very critically all so-called devices for aiding the imagination, in order to make sure that they encourage the type of disciplined use of the imagination that is free from such objectionable features as have been pointed out above. And if the criteria for judging these devices seem at any time to be too rigorous or narrowly conceived, their justification is found in the seriousness of the problems that are involved. The following questions suggest

[6]Quoted by Chase, *Ungeared Mind,* pp. 40–41.
[7]Woodworth, Robert S., *Psychology* (revised ed.). Henry Holt and Company, New York, 1929, p. 490.
[8]Murphy, *General Psychology,* p. 425.

useful criteria for appraising the devices treated in the succeeding sections:

(1) Do they help the student to obtain or construct concepts that are clear, accurate, and well organized?

(2) Do they direct his attention to the essence of the problems that they purport to serve?

(3) Do they increase the interest and persistency with which a student seeks to discover the truth about these problems?

(4) Do they develop disciplined habits of thinking that are dependable and efficient in the discovery of the truth?

(5) Do they provide satisfactory protection against the disposition to escape either from reality or from the rigor of sound thought by turning to fantasy and make-believe?

I. MAKING GRAPHIC AIDS

Graphic work by pupils is by no means a new thing, but it has been especially emphasized during the last few years both in England and in America.[9] Knowlton lists four types of drawings: (1) the cartoon or picture, (2) the diagram, (3) the time line, the chart, and the graph, and (4) the map.[10] All of these types are recommended also by many other writers, both American and British. The making of diagrams, charts, time lines, and maps has long been a fairly common practice in the teaching of both geography and history. The drawing of

[9]The most useful references on making graphic aids, as a teaching device, are: Drummond, H. Ann, *History in School.* George G. Harrap and Company, Ltd., London, 1929; Happold, F. Crossfield, *The Approach to History.* Christophers, London, 1928; Keatinge, M. W., *Studies in the Teaching of History.* Adam and Charles Black, London, 1913; Knowlton, Daniel C., *Making History Graphic.* Charles Scribner's Sons, New York, 1925; Madeley, Helen M., *History as a School of Citizenship.* Oxford University Press, London, 1920; Parker, F. E., *History and Handwork for Young Children.* George Philip & Son, Ltd., London, 1925; and Rockliff, Edward, *An Experiment in History Teaching.* Longmans, Green and Company, New York, 1912.

[10]Knowlton, *Making History Graphic.*

cartoons, pictures, and friezes is a more recent development, although there has undoubtedly always been some drawing of this sort, surreptitious or otherwise.

The evaluation of graphic aids is a difficult task. It involves many issues, and since experimental evidence is lacking, each issue must be resolved chiefly on the basis of classroom experience and logical analysis. In appraising graphic aids, it is necessary to differentiate vividness from accuracy, fanciful conceits from critical thought, the influence on motivation from the influence on understanding, the contribution to interest and proficiency in art from the contribution to interest and insight in social studies, the value for learning from the value for testing, the ability to read or interpret such aids from the ability to make them. These distinctions should be kept in mind in reading the following sections.

It is futile to attempt an evaluation of any type of graphic aid apart from the ends it purports to serve. We must first ask what purposes are to be achieved, and what difficulties are likely to be encountered because of the child's limited experience. When these questions have been answered, we can inquire into the probable effectiveness of any kind of graphic aid. In this way graphic work takes its proper place as a means rather than an end. Unfortunately, if one may judge from printed accounts of school practice, this perspective is not maintained. Knowlton says, for example, "The selection of particular material has often been determined as much by the method to be used as by the inherent informational or utilitarian value of the material itself."[11] It is difficult to see how a course of study could be organized effectively under such a plan.

Any graphic device that is used by reputable social scientists

[11] *Ibid.*, p. 1.

or geographers is appropriate for use by students, providing it is not too difficult to make or to understand. Maps, diagrams, photographs, and representative drawings are all a part of the tools with which the social scientist works. Departures from the accepted practice in using these tools may be justified if they are found to facilitate learning, but the burden of proof is on those who make such departures. Both because of their immediate value in learning and because of their importance in future reference reading, the best graphic representations, generally speaking, approach those used by the social scientist in type, in the functions served, and in the standards set up for their construction.

The student's efforts at graphic representation are fruitful in their contribution to social science only to the degree that he utilizes dependable methods of securing and interpreting social data, or to the degree that he produces constructs that are essentially accurate. The standards for making and judging graphs, diagrams, and maps should be determined from the practice of modern cartography.[12] Any deviation from these standards is likely to result in confusion. Standards for drawings and for cartoons are difficult to establish. A drawing may be crude or poor as judged by artistic standards and still be acceptable if it represents the essential truth that it is supposed to symbolize. The general criterion for appraising any graphic production, easy to state but hard to apply, is that it tell the truth.

Cartoons, Pictures, and Friezes.—An examination of the literature on pictures, friezes, and cartoons, shows that two purposes are badly confused: the development of ability in art and

[12]Brinton, Willard C., *Graphic Methods for Presenting Facts.* The Engineering Magazine Company, New York, 1914; Fordham, Sir Herbert G., *Maps, Their History, Characteristics and Uses.* The University Press, Cambridge, 1921.

the formation of essentially accurate concepts in social science. The factors that contribute to one are not necessarily or wholly those that contribute to the other. For example, the design used for the decoration of a tepee in a drawing may be good from the point of view of design but completely lacking in authenticity from the point of view of social science. While it is not possible to discuss here the qualities that make a drawing artistic or the ways in which ability in art is best developed, attention should be called to the fact that the philosophy and techniques of some of the modern schools of art are far removed from the purposes and ideals of social science teaching. This divergence is perhaps less marked in those schools of art that have built progressively upon the philosophy and techniques of the great art of the past. It is self-evident that the ends of social science instruction are best served when the primary emphasis in drawing is on the qualities that pertain to those ends, and only a secondary emphasis is on the artistic qualities. From published accounts, one must conclude that a proper subordination is rarely achieved. When the attention of the student is focused chiefly upon the art of graphic production, scientific attitude is usually diminished. Frequently, when "creative art" comes in at the door, critical thought goes out at the window.

It is admittedly difficult to secure a harmonious relationship between the purposes of graphic aids and the purposes of social science, but there is no necessary incompatibility between them.

It may be helpful to point out, as Dewey does, two closely related groups of processes that enter into the production of art: the first pertaining to perception, thoughtfulness, understanding, insight, and appreciation; the second to the control of the medium and other technical matters involved in overt

expression.[13] The first group of qualities is as essential to the achievement of meaning in social studies as it is in art, and it is in this identity that we find hope for proper co-ordination of the purposes of art and social science. It is especially important to recognize the fundamental place that thinking plays in artistic expression, for, as Dewey points out:

"Any idea that ignores the necessary rôle of intelligence in production of works of art is based upon identification of thinking with use of one special kind of material, verbal signs and words. To think effectively in terms of relations of qualities is as severe a demand upon thought as to think in terms of symbols, verbal and mathematical. Indeed, since words are easily manipulated in mechanical ways, the production of a work of genuine art probably demands more intelligence than does most of the so-called thinking that goes on among those who pride themselves on being 'intellectuals.' "[14]

It is difficult for the student to make pictures, friezes, or cartoons that are accurate representations of the truth in either geography or social science. In the case of pictures and friezes the best results seem to be obtained when the drawings are made either from actual objects, seen in museums or elsewhere, or from authentic drawings. The child's drawing need not be a mere copy, although this method is frequently used, particularly in England. It seems permissible to make reconstructions from a number of drawings. The child's creative endeavor must at all times be guided by the best data that can be secured. The data from verbal descriptions are of very limited use, unless supplemented either by pictures or actual objects. For example, if the child has never seen the sky line

[13]Dewey, John, *Art as Experience*. Minton, Balch & Company, New York, 1934, Chap. III.
[14]*Ibid.*, p. 46.

of New York City or a picture of it, it is hardly worth while to encourage him to draw this sky line from a verbal description. Cartoons involve an additional difficulty; namely, that they represent by exaggeration or by some form of symbolism a quality rather than an objective reality. The drawing of cartoons appeals to many children and may even increase the interest in social studies; yet such efforts may distort rather than clarify the student's ideas. Although the pursuit of truth should be the guiding principle in drawing as a part of social-science instruction, it is possible to be too meticulous in minor details. For the truth about any social phenomenon is not learned all at once. As long, therefore, as the essential truth is portrayed with respect to important matters that are in the focus of attention, minor errors may be left to be cleared up by future experiences. Firth makes a very liberal allowance for the imagination but cautions against allowing it to get out of hand.[15] Madeley's statement on imaginative drawing is worth quoting:

"Conjecture, as long as it is carefully made, and *resolutely treated as conjecture,* seems to me unlikely to do harm, and capable of doing much good. If it is properly handled, it should help to keep the minds of the children open to the difference between conjectured and ascertained facts; it often awakes the desire to investigate for purposes of verification; and it occasionally produces in this way really useful local information."[16] That the students should thus distinguish between fact and fancy cannot be overemphasized.

A common fault in the drawing of friezes, posters, pictures, and murals is the marked tendency to emphasize inadequate symbolism and to dwell on relatively unimportant details.

[15]Firth, Catherine B., *The Learning of History in Elementary Schools.* Kegan Paul, Trench, Trubner & Co., Ltd., London, 1932, Chap. IV.
[16]Madeley, *History as School of Citizenship,* p. 86.

Holland, for example, is symbolized by windmills and wooden shoes; Japan, by jinrikishas and Fujiyama; George Washington, by the traditional hatchet and cherry tree. That such a tendency is not inevitable, however, is shown by the practice of many schools where all of these types of drawings deal with subject matter that is more representative and more important. Thus a series of maps shows the westward movement; a frieze of boats, the development of water transportation. Even in these better schools, however, there is a tendency to attach more importance to friezes and the like and to spend more time upon their production than is warranted from the point of view of their value to social studies. Where the work in art is correlated with that in social science, however, the required expenditure of time may be more readily justified.

Time Lines, Time Charts, and Graphs.—It is quite generally agreed that although the student's time sense is weak and its development exceedingly difficult, an appreciation of chronology and of time relationships is essential to the understanding of social science. "A mere knowledge of the dates does not give to the full the sense of proportion or of relative duration."[17] The time line and the time chart are used as aids in developing a more adequate comprehension of time relations. They are apparently used more extensively in England than in the United States.

The time line or time chart varies from the short, informal type that is kept in the pupil's notebook to the extensive production that is placed along the wall of the classroom; from the representation of a brief period upon which the discussion of a single day is focused, to that covering the course for an entire year; from the simple form consisting of dates and events to one that is combined with pictures, maps, and

[17]Keatinge, *Teaching of History*, p. 142.

diagrams; from the single line that follows the sequence of leading events in a single country to the more complicated chart that shows the relationship between events or movements in various countries or the several aspects of the history of any one country.

Firth suggests that the extensive use of time lines should be postponed until the pupils are somewhat familiar with the idea of drawing to scale and are able to understand that periods of time may be represented by such lines.[18] Drummond recommends that the charts should at first be very simple, gradually increasing in scope and complexity as the higher grades are reached. She suggests the use of pictorial charts for younger children.[19]

Success in developing a sense of time relationships by means of the time line or chart depends largely on the research and enterprise that enter into their preparation. There is agreement that the forms should be kept simple and that much elaboration should be discountenanced. Although pupil initiative and originality as to form are to be encouraged, correctness should be stressed rather than novelty or even artistry. Like other devices, time lines are merely a means to an end and too much time should not be consumed in their preparation.

There is no objective evidence as to the value of time lines. A conservative estimate is shown in Drummond's statement that these charts ". . . give many children a clearer idea of what they have read, for they help to simplify and to tabulate the complexities of different periods. In consequence, through using charts children often understand their history better, and also remember the outstanding facts much more easily.

[18]Firth, *Learning of History*, pp. 89–94.
[19]Drummond, *History in School*, pp. 129–132.

How far, however, these charts really give children a sense of time it is, I think, quite impossible to say."[20]

In the chapter on visual aids, it is pointed out that the inability of students to read graphs largely negates whatever potential advantages these devices may have in the presentation of quantitative data.[21] Shortcomings in the skills needed to read various types of graphs are almost certain to be reflected in the ability to make them. Training in the construction of graphs might well go hand in hand with their interpretation, since the purposes that they serve, the standards that they should meet, and the related skills are much the same in either case.

The Construction of Maps.—The drawing of maps by students of geography and history has long been advocated.[22] This practice was particularly prominent in the latter part of the nineteenth and in the early part of the twentieth century, but the extremes to which it was carried, the amount of time required for the work, and the tendency to focus upon the making of an artistic production as an end in itself caused this type of work to be supplanted by map sketching and the filling in of outline maps. During the last twenty-five years map drawing seems to have been more popular in Europe, and especially in England, than it has been in America.[23] The Committee on the Teaching of Geography of the National Council of Geography Teachers has very little to say about map drawing, although its report gives an extensive treatment of the use of maps. The use of the sketch map, the filling in

[20] *Ibid.*, p. 132.

[21] See pp. 386 to 388.

[22] Potter, Jefferson R., "History of Methods of Instruction in Geography," *Pedagogical Seminary* I (1891), pp. 415–424.

[23] Mill, H. R., and others, *Guide to Geographical Books and Appliances.* Geographical Association, George Philip & Son, Ltd., London, 1910; Wallis, B. C., *The Teaching of Geography.* Cambridge University Press, Cambridge, 1915.

of authentic outline maps, and even the drawing of maps themselves are regarded at the present time as valuable parts of the teaching of geography and social sciences.[24] Map drawing should not be limited, however, to mere copy work.

There is very little experimental evidence regarding the effect of map drawing upon learning in either geography or history. Such evidence as exists indicates that pupils do not have much ability in either map drawing or map reading.[25] The data that have been obtained incidental to the construction of standard tests and from the experimental study of students' concepts in geography and the social studies indicate that map drawing is a promising field for thorough experimental investigation.[26]

Conclusion.—To summarize, the construction of posters, friezes, maps, and other graphic aids undoubtedly lends atmosphere to the social science classroom, gives a sense of reality, and stimulates the interest and imagination of the pupils. That such effects are real and valuable seems to be the commonly accepted belief of those who have used these devices extensively. It is true, however, that a large proportion of the examples found in the published literature emphasize just the kind of imagination that sound method in social science teaching seeks to combat.

[24]Crawford, Claude C., and McDonald, Lois P., *Modern Methods in Teaching Geography.* Houghton Mifflin Company, Boston, 1929; Goode, J. Paul, "Maps: Foundation Stones in Geography," *Ohio State Educational Conference* VIII (1928), pp. 234–243; Johnson, Henry, *Teaching of History in Elementary and Secondary Schools.* The Macmillan Company, 1928, pp. 256–268; Knowlton, Daniel C., "The Teaching of History in the Junior High School—The Use of the Concrete: Time Charts, Maps, Pictures, Cartoons, Graphs," *The Historical Outlook* XVI (April, 1925), pp. 171–175; Tryon, Rolla M., *The Teaching of History in Junior and Senior High Schools.* Ginn and Company, Boston, 1921, pp. 219–221, 238 ff.

[25]*Thirty-second Yearbook,* National Society for Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933, pp. 486–492.

[26]Kelley, Truman L., and Krey, A. C., *Tests and Measurements in the Social Sciences.* Charles Scribner's Sons, New York, 1934; and "Testing Map Reading Ability," *The Journal of Geography* XXX (January, 1931), pp. 38–42.

There is no reason for believing that either desirable atmosphere or motivation is lessened when graphic representations are made under the guidance of the standards that have been proposed above. In fact, quite the reverse is true.

The making of graphic aids, in addition to its contribution to atmosphere, concreteness, and motivation, gives valuable assistance in appraising the accuracy and adequacy of the concepts that pupils have formed. It is admittedly difficult, by means of verbal tests alone, whether oral or written, to discover what the student's concepts really are. Earlier reference was made to the varied and erroneous meanings demonstrated in the drawings of students after reading a paragraph about a pioneer fireplace.[27] Similar variations and deficiencies were shown in the drawings of fourth- and fifth-grade children after reading the following paragraph:

"Over the door was the gun-rack made by driving prongs of deer antlers into holes bored into the wall. On this gun-rack hung the powder-horn, and against the wall by the door rested a tall rifle. Into the wall on the left of the door, were driven two wooden pegs on one of which hung a hat, and on the other hung a pair of trousers."[28]

Many erroneous concepts not detected by a verbal test were made apparent by these drawings. Some children, for example, drew for the two wooden pegs, two pigs. Obviously such errors are not due to lack of skill in drawing. Similar shortcomings have been shown in experiments where pupils have been required to sketch data on outline maps. It is evident that the making of graphic representations may be a valuable aid in combating verbal memory and in bringing

[27]See p. 172.

[28]Rhynsburger, Amelia H., *A Study of Comprehension in Silent Reading.* Unpublished master's thesis, State University of Iowa, Iowa City, 1930, p. 49.

both teachers and pupils into a more aggressive and critical-minded attitude toward what is read.

One should not, of course, confuse the *production* of graphic aids with the *use* of such representations as are found in references. It is one thing, for example, to learn to interpret a bar diagram; it is another thing to make it. That the study of good diagrams, authentic pictures, and well-constructed maps contributes to learning is generally admitted. The value of cartoons and imaginative drawings is not so well established. It seems quite possible, however, that something is obtained from making graphic representations that is not gained by merely studying them. No doubt their construction contributes to the effectiveness of their interpretation and *vice versa*. In terms of either present or future use, the ability to interpret these aids seems vastly more important than the ability to make them.

It is apparent that graphic aids at their best are serviceable in helping the student obtain concepts that are clear, accurate, and effectively organized. At times their contributions are so unique that their use is mandatory. Unless very carefully controlled, however, they undoubtedly tend to focus attention and interest upon the device rather than upon the problems of social science, and to give too prominent a place to matters of relatively small moment. If inaccurate, these devices give impressions that, though vivid and appealing, are erroneous. Through an uncritical use of symbolism they may block or distort thinking and impede æsthetic development. These limitations are brought out not as arguments against the practice of making graphic aids but as a warning against its abuse. When made to serve its proper function of bringing vitality, interest, and concreteness into the study of social studies, the

construction of graphic aids undoubtedly contributes to efficiency in learning at all levels of instruction.

2. IMAGINATIVE WRITING

Various types of imaginative writing are frequently associated with the teaching of the social studies.[29] The writing of imaginary letters, diaries, autobiographies, and editorials is commonly recommended among the devices for aiding the student to enter vicariously into the life of other times and places. In such exercises the pupil either attempts to put himself in the place of some historical character or pretends to have witnessed or participated in an event of past times or other localities, writing in the first person what are supposedly the exact words of the character that he assumes.[30] Textbooks, courses of study, and workbooks usually include specific suggestions for these activities; they are, for the most part, approved in books on methods of teaching, but without much discussion of their unique values, their definite limitations, or the way in which they are to be used.

The principal claims made for these devices are that they increase interest, aid imagination, and stimulate creative thinking and self-expression. Some accounts of their use in practice, however, as well as occasional discussions of their value and direction, exhibit the same misconceptions of the nature of interest, imagination, and creative work that have been noted

[29]Throughout this section what is said about the written forms of imaginative expression applies as well in its essential principles to the various oral forms, such as imaginary conversations, debates, speeches, and radio broadcasts.

[30]The best references on imaginative writing include: Happold, *Approach to History,* Chap. III; Hasluck, Eugene L., *The Teaching of History.* University Press, Cambridge, 1926, pp. 40–42; Johnson, *Teaching of History,* pp. 221–222; Knowlton, *Making History Graphic,* Group V; Tryon, *Teaching of History,* Chap. VI.

in other sections of this volume.[31] Interest in the device itself is confused with interest in the method and content of the social studies. There is a tendency to verge toward fantasy and away from the disciplined use of the imagination that is essential in historical and geographical reconstruction, ignoring the fact that all thinking, as well as the formation of all concepts, is creative and involves the use of the imagination. Actually, a paper that deals directly with a straightforward historical or geographical problem is just as creative and just as much an act of the imagination as any of the exercises listed above. For example, writing a description of how the Plains Indians hunted buffalo is just as real a challenge to creative imagination as composing an imaginary letter about it.

Whenever imagination and creative thought are erroneously conceived, the effect upon the student's methods of work and his attitudes toward truth is definitely unsalutary. Anachronisms are frequent and are sometimes naïvely suggested or approved by teachers themselves. Students prepare newspaper headlines and editorials for imaginary newspapers of a period a thousand years before newspapers existed; compose imaginary letters in the person of a character in whom literacy would be most improbable; and write script for imaginary radio programs purporting to be of times long before radio was invented, as in a reported instance of a broadcast, "play by play," of a gladiatorial combat, beginning, "This is station SPQR, Rome's largest arena, the Circus Maximus, broadcasting." Exercises such as these are not likely to develop either historical-mindedness or a sympathetic understanding of the problems and attitudes of other peoples.

However, anachronisms and such unbridled use of the

[31]See Chap. IV and the sections in this chapter on: graphic aids, the imaginary journey, and dramatization.

imagination are not necessary accompaniments of these devices. In fact, an examination of a large number of examples of imaginative writing shows that they meet the demands of scholarship more generally and to a greater degree than do imaginative drawing, the imaginary journey, and dramatization. The value of their occasional use in stimulating students to attempt to enter into the life of other times and places is attested by many writers who have made notable contributions to the improvement of instruction in social studies. It is evident, nevertheless, that if this purpose is to be served, the use of these devices must be guided by critical standards.

Only rarely, if at all, should students pretend to write in the character of some noted historical or modern person. It is true that in the past historians have sometimes indulged in such fabrications, bringing about thereby an unfortunate confusion of these spurious productions with authentic documents. The student should know that such inventions are contrary to modern conceptions of scholarship. If any imaginary writings of noted characters are allowed, they should probably be limited to instances where actual speeches, diaries, and letters are available, so that the student's productions can be checked against the authentic remains. For example, when a student writes a letter purporting to be from Robert E. Lee to a friend concerning his attitude toward the impending war between the North and South, he might compare it with letters that Lee really did write.[32] This comparison would disclose the shortcomings of his invention and would conceivably convince him that it is safer and more beneficial to read the actual sources.

More profitable are the imaginative forms of writing that

[32]For an example and a bibliography of these letters, see Craven, Avery (ed.), *"To Markie," The Letters of Robert E. Lee to Martha Custis Williams.* Harvard University Press, Cambridge, 1933, pp. 56–60.

attempt to represent what a typical person might be expected to have written under given circumstances. What the student writes is to be judged according to the degree that it is reasonable, probable, or necessary in the light of the known facts. These criteria imply the availability of adequate sources of information, the critical use of these sources by the student, and the production of imaginary reconstructions that are consistent with the data provided. In other words, these devices should never be used to fill in gaps caused by a lack of dependable knowledge but should represent the judicious interpretation of ideas and insights that have been thoroughly authenticated.[33]

The amount of training necessary to meet these criteria, even in moderate degree, raises a question as to the soundness of the frequent suggestion that imaginative writing is more appropriate for young children than for more mature students.[34] There are many reasons for questioning this assumption. Writing an imaginary letter that is free from anachronisms and significant in its content is more difficult than writing a simple exposition or description. The degree of ability necessary to do this type of work satisfactorily represents attainments more likely to be found at the advanced levels. The fact that young students are somewhat deficient in their ability to differentiate between fact and fancy does not lead to the conclusion that fanciful writing should, therefore, be emphasized in the earlier years; it suggests, rather, the use of exercises that develop a sense of what is true in contrast with what is purely imaginary. That the quest for truth is not foreign to young children is indicated by the frequency with which they ask such questions as: Is that a true story? Did

[33]See Happold, *Approach to History;* Tryon, *Teaching of History;* Knowlton, *Making History Graphic.*

[34]Hasluck, *Teaching of History,* p. 40.

it really happen? Imaginative writing is doubtless interesting to some students at all ages, but not peculiarly so to children in the elementary school. It is uncongenial to many students at all age levels.

The most serious danger in the composition of imaginary letters or diaries is that they may hamper the development of critical methods of thought in geography, history, and the other social studies. Many readers will recall the old fable of the camel's nose. The moral is applicable to the introduction of any element of pretense, for, once admitted, it tends to crowd out critical modes of thought.[35] Attention has already been called to the fact that the fabrication of writings is now discountenanced by most historical scholars. Imaginative writing does not represent, therefore, an approved method of working in the social studies but is a pedagogical device; yet it may involve, and indeed should require, the use of fundamental methods. This device may lead the student to a thorough

[35]THE CAMEL'S NOSE

Once in his shop a workman wrought,
With languid head and listless thought,
When, through the open window's space,
Behold, a camel thrust his face!
"My nose is cold," he meekly cried;
"Oh, let me warm it by thy side!"

Since no denial word was said,
In came the nose, in came the head;
As sure as sermon follows text,
The long and scraggy neck came next;
And then, as falls the threatening storm,
In leaped the whole ungainly form.

Aghast the owner gazed around,
And on the rude invader frowned,
Convinced, as closer still he pressed,
There was no room for such a guest;
Yet more astonished, heard him say,
"If thou art troubled, go away,
For in this place I choose to stay."

search for evidence and to rigorous thinking in his attempt to catch the spirit or to represent the thought of other times and places. It should be used only occasionally, however, and should not be allowed to take the place of other types of writing. As a matter of fact, it is suited to the expression of only a small part of the significant ideas with which the social studies deal. Happold is in agreement with this idea. "Though excellent for its purpose it [the mode of expression suited to the imaginative conception of history] is naturally unsuitable to express the more logical and critical aspects of history to which the pupil is being introduced. Such aspects demand a more exact medium of expression, that of orderly prose. Side by side therefore with expression through eye witness account, diary and poem, the boy must be given practice in expression of a more formal nature. He must be trained to write clearly on simple historical themes."[36]

It is unquestionably true, as has been indicated earlier, that the student's interest, imagination, and creative effort are stimulated by direct types of writing that do not involve in any way the element of pretense. In history, for example, the student may discuss such topics or questions as the following: Man's early attempts at flying. Judging from Washington's *Rules of Civility,* what do you consider to be the principal differences between good manners in his time and ours? How did the California Indians prepare acorns for food? Questions or topics should be limited and explicit. Historical, civic, and geographic problems pertaining to the local community afford unusually excellent material for such reports. In general, papers should be brief, but occasionally extended ones are appropriate in the advanced grades. These straightforward efforts at description, exposition, and narration should un-

[36]Happold, *Approach to History,* p. 67.

doubtedly constitute most of the writing done in connection with the social studies.

All types of composition provide a test of the pupil's knowledge and insight and should be very carefully read by the teacher. This is particularly necessary where the reconstructions are imaginary letters, diaries, and the like, and where, therefore, the temptation to be led away by mere fancy is hard to resist. The total amount of written work in the social studies should not be so extensive as to become burdensome, and "imaginative writing" should probably be *encouraged* rather than *required.* Training in the preparation of systematic papers is, however, indispensable for every student. Although co-operation between the teacher of English and the teacher of social studies is highly desirable, the responsibility for this type of training must, in the last analysis, rest on the teacher of social studies.

3. THE IMAGINARY JOURNEY

The imaginary journey, as exemplified in pedagogical literature, should be distinguished from the vicarious experiences obtained through a study of accounts of actual travel, and from field trips or excursions actually taken by the students.[37] As the name implies, the imaginary journey is fanciful in the sense that it neither takes place nor is the plan for a journey to be actually taken. While this device is used most frequently in connection with geography, especially in the year when the

[37]For four brief accounts of the imaginary journey, all of them favorable, see: Branom, Mendel E., and Branom, Fred K., *The Teaching of Geography.* Ginn and Company, Boston, 1921, Chap. XVI; Hart, Isabelle K., "The Need for and Nature of Journey Geography in the Fourth Grade," *Journal of Geography* XXX (April, 1931), pp. 170–176; Stull, DeForest, *Tentative Course of Study in Geography.* Bureau of Publications, Teachers College, Columbia University, New York, 1927, pp. 75–83; Thralls, Zoe A., and Reeder, Edwin H., *Geography in the Elementary School.* Rand McNally and Company, New York, 1932, pp. 81–85, and examples under various suggested units of work.

systematic study of geography is begun, it is not unknown in history. It may be limited to a single class period or to only a part of a class period, but not infrequently it is made the basis for a whole term's work.

The term, imaginary journey, covers a variety of practices that range in quality and purpose from those approximating the preliminary reconnaissance survey, as used in geographical research, to pretended sightseeing trips that deal with little that is of much consequence to geography or the social studies. The value of the preliminary survey as a basis for actual field work is recognized in geographical research. It is an attempt to construct a region in imagination from the maps, pictures, descriptions, and statistical data that are given in authoritative published sources. It is scarcely an imaginary journey in the ordinary sense of the word, since it centers attention on the qualities of the natural region, the character of the people who inhabit it, and the length and nature of their occupancy, rather than upon the pretended experiences of traveling. Very few imaginary journeys, as pedagogical devices, approach the preliminary reconnaissance in character, the nearest approximation being found in a few widely used textbooks in which the journey organization leads directly to the serious and critical study of geographical data. In such books the purpose is very different from that which controls the ordinary pleasure or sightseeing trip.[88] Unfortunately, the drift of actual classroom practice is away from a focus upon fundamental problems of geography and the social studies and toward the type of imaginary journey in which students become absorbed in the mere incidents of travel. It is primarily to this sort of imaginary journey that the criticisms of the following paragraphs are directed.

[88]For example, see Barrows, Harlan H., and Parker, Edith P., *Journeys in Distant Lands.* Silver, Burdett and Company, New York, 1924, pp. iii to vi.

The advantage most often claimed for the imaginary journey is that it gives the child clear and vivid concepts; that is, it helps to make the world more real to him. The illustrations cited to support this claim, however, show a lack of distinction between reality and fiction. Concepts that are admittedly partial or erroneous are not infrequently defended on the ground that they are real to the child. Such an attitude toward reality, as has already been pointed out, is palpably absurd and opposed to the requirements of clear thinking. It apparently represents, in the language of psychopathology, an "escape" for the teacher who is unfitted by temperament and by training to guide pupils in the rigorous pursuit of truth.

The degree to which reality is approached in any imaginary journey depends, first, upon the adequacy of the data that are used to construct the journey in imagination, and second, upon the critical facility manifested by the pupils and teachers in utilizing these data. An analysis of the published accounts of these journeys indicates that, in practice, no adequate provision is made for either of these two requisites. The sources of information are not critically evaluated and, in the utilization of the data from these sources, fancy obscures the search for reality. Pupils and teachers become entangled in the inconsequential and the erroneous. In geography, for example, the fundamental concepts are commonly obscured by the great amount of emphasis given to buying imaginary tickets, to making passports, to dramatizing the inoculation against diseases, to packing American flags in "little imaginary suitcases," to ringing bells, to blowing whistles, to shouting and waving good-bys as the boat or train departs, to tipping the porter, to making paper trains that steam "joyously across the desert," to keeping diaries of the imagined trip, to writing letters home, and to carving souvenirs out of soap. Each of

these examples is taken from a published report of an imaginary journey, and while perhaps no one group of children would do all of these things, the illustrations serve to indicate a point of view that generally colors the imaginary journey of the sightseeing type.

It should be pointed out, of course, that such intellectual sloppiness need not accompany the imaginary journey, even of the sightseeing type. Such journeys are sometimes guided by a sincere attempt to build accurate concepts about the places and circumstances that are constructed in imagination. In geography, for example, pupils write for prospectuses of railroads, steamship lines, and travel bureaus, gather pictures, study these, together with reference materials, and carry on other activities that may help to clarify their ideas concerning various aspects of the trip. But if the printed accounts of imaginary journeys are representative, and they probably represent better than average practice, one cannot escape the conclusion that such vagaries as have been described above creep in almost inevitably. This may be due in part to a misconception of the function of the imagination[39] and in part to an overemphasis upon certain matters pertaining to travel, such as buying tickets and selecting hotels. These shortcomings are much less evident in imaginary journeys that approach the reconnaissance type; *i.e.*, they are less likely to occur when students are asked to tell what might be seen on a trip up the Amazon River than when they are asked to pretend that they are preparing for or participating in taking a trip up this river. There is, nevertheless, a real difficulty in maintaining a critical attitude in connection with a device that is based on pretense. When a class pretends that it is making an exploration, in 1804 to 1806, of the country between St.

[39]See pp. 441 to 446, above.

Louis and the northwest coast, an attitude toward reality is created that is almost certain to be different from that assumed when the group attempts to reconstruct imaginatively, from the records, what actually happened on the Lewis and Clark expedition. The pretended trip is in the realm of fancy; the actual expedition is in the realm of fact. This distinction is perhaps more significant than would appear at first thought. Indeed, it is so important as to lead one to question whether or not the sightseeing type of imaginary journey at its best is not definitely inferior, in the study of significant problems, to more direct and sincere procedures that can be substituted for it.

Perhaps the greatest weakness of the imaginary journey is its tendency to neglect the larger and more important concepts of geography and social science. These concepts, if assumed to be valid, should control the selection, organization, and emphasis of the course of study. An inspection of the general objectives set up in the *Charter for the Social Sciences*[40] and of the organizations of ideas suggested in the volumes by Beard,[41] Bowman,[42] Counts,[43] and Merriam[44] will show how foreign their principles of organization are to those of the imaginary journey, which can scarcely be said to have any principle of organization at all except that of traveling from place to place. Yet the contributions of geography and the social studies are not limited to the facilitation and enrichment of travel, either real or imaginary; indeed, this value is prob-

[40]Beard, Charles A., *A Charter for the Social Sciences in the Schools.* Charles Scribner's Sons, New York, 1932.

[41]Beard, Charles A., *The Nature of the Social Sciences.* Charles Scribner's Sons, New York, 1934.

[42]Bowman, Isaiah, *Geography in Relation to the Social Sciences.* Charles Scribner's Sons, New York, 1934.

[43]Counts, George S., *The Social Foundations of Education.* Charles Scribner's Sons, New York, 1934.

[44]Merriam, Charles E., *Civic Education in the United States.* Charles Scribner's Sons, New York, 1934.

ably of minor importance. And when the guiding principle of a unit of instruction is the imaginary journey, it is hardly to be expected that the resulting concepts will be organized on some other basis. The tendency of students during the imaginary journey to become absorbed in superficial and irrelevant details is undoubtedly due, in large part, to the absence of any fundamental principles that provide a satisfactory basis for the evaluation, selection, and organization of significant data.

The imaginary journey is commonly recommended as a motivating device. A distinction should be made, however, between the interest developed in the journey and the interest developed in basic geographical and social problems. It is possible that the device has some value as a transition to interests of a more fundamental and lasting character. Too often, however, students remain absorbed not only in the mere journey but also in its superficial aspects; whereas their interests should be directed to social concepts of a more fundamental character. There is a real danger, moreover, that interest in these more important matters will be distracted by the appeal of the elaborate projects and paraphernalia that so often accompany the imaginary journey—dressing paper dolls in the costume of the country, constructing models, making booklets and diaries in which accounts of the journey are kept, and carrying on innumerable other constructive activities. This criticism does not mean to imply that constructive activities, properly conceived and related to the purpose of instruction, are not desirable. As shown elsewhere,[45] they are effective instruments not only for maintaining interest but also for clarifying ideas. It should be kept in mind that it is not the purpose of the school merely to interest the child from

[45]Pp. 413 to 439.

day to day but rather to develop the interests that will stimulate and guide him in his efforts to become more intelligent about social matters. These interests are inherent in the major problems of the course of study and, if properly utilized, will not require the support of mere devices. While the imaginary journey may, under favorable conditions, afford a transition to the appreciation of the importance of basic problems, it is not an indispensable approach to them and is probably not so effective in providing motivation as is a direct attack upon the problems themselves.

One of the most important purposes of instruction in social studies is to acquaint the student with the ways of thinking and the methods of work by which problems in these fields may be attacked. This purpose is, in most cases, ill served by the imaginary journey. The student is given little knowledge of the sources of information that are most generally serviceable and develops little skill in their use. It is not strange that this should be so. Knowledge of sources, ways of thinking, and methods of work are functions of the problems to be attacked. From the published accounts of imaginary journeys, one must conclude that what is done by students is precisely what competent workers in social studies would not do. Important problems are not clearly defined, criteria for the selection or rejection of data are absent, attention is diverted from the large issues to petty projects, and there is a general lack of critical appraisal. The probable result is that the student is not fitted, and may be even unfitted, for serious and effective study.

To summarize, the imaginary journey, as it is found in common practice, is a pedagogical device pure and simple, and as such must bear the burden of proving its value for instruction. In actual practice most types have been attended

by very serious shortcomings, some of which tend to be inherent in the device itself. If any sort of imaginary journey is to be used, there must be rigorous provisions for escaping these shortcomings. When properly controlled and used only occasionally, it may have some value as a temporary motivating device, as a means of assisting the student to enter imaginatively into the lives of the people of the place or period that is being studied, or as a method of testing the adequacy of the concepts that have been formed. It should, however, be kept strictly subordinate to the purposes of the course of study. Its use should probably be limited to very short periods of time, perhaps to a single discussion period. It certainly should not control the selection and organization of an entire term's work.

4. DRAMATIZATION

The drama has long been valued as an educational instrument, particularly in the development of moral and social attitudes and ideas, and has been produced in schools for hundreds of years. Plato, Bacon, and Comenius are among the early illustrious writers who were aware of its importance.[46] Although inherent differences between drama as an art and dramatization as a pedagogical instrument must be recognized, certain values are common to both.

Entire books have been devoted to dramatic methods of instruction.[47] Most texts on teaching geography, history, and

[46]For an excellent brief survey of the drama in education, see the article "Drama and Education," in Monroe, Paul (ed.), *A Cyclopedia of Education*, II, pp. 361–366. The Macmillan Company, New York, 1911.

[47]See, for example, Cook, H. Caldwell, *The Play Way*. Frederick A. Stokes Company, New York, 1917; Finlay-Johnson, Harriet, *The Dramatic Method of Teaching*. Ginn and Company, Boston, 1912; Hubbard, Eleanore, *The Teaching of History through Dramatic Presentation*. Benj. H. Sanborn & Co., Chicago, 1935; Merrill, John, and Fleming, Martha, *Play-Making and Plays. The Dramatic Impulse and Its Educative Use in the Elementary and Secondary School*. The Macmillan Company, New York, 1930.

other social sciences mention dramatization and are generally favorable to its use. The term is used loosely, however, and is applied to types that vary from brief scenes to elaborate pageants; from wholly informal and spontaneous dramatizations requiring little or no preparation to those that are carefully directed and staged and that may be the organizing center of the work of a considerable period; from those given merely for classmates to those produced for an audience of adults; from those written by the students themselves to those written by others; from those that are purely fanciful to actual duplications of scenes and activities; from those that are essentially authentic to those that are largely erroneous. These variables are combined in such a multitude of patterns that it is difficult to make a single appraisal that is applicable to all. The reports of the use of dramatization in schools are generally enthusiastic but exceedingly uncritical. Most of the discussions that accompany these reports fail to distinguish between the purposes and requirements of dramatic presentation as art and as an aid to teaching the social studies.

The contributions of dramatic activities to teaching the social studies are variously estimated; to some they are pre-eminent, to others, distinctly subordinate. In history, for example, Hubbard has gone so far as to say, ". . . the human elements which form the basic fabric of history may best be portrayed through dramatic presentation,"[48] while Drummond believes, "On the whole, . . . dramatic work in history can come in, but only in a limited sense, as a device rather than as a method."[49] Most critical estimates fall between these extremes; dramatization is not held to surpass all other methods in its value, and its restricted applicability is recognized; yet it is not considered

[48]Hubbard, *History through Dramatic Presentation*, p. vi.
[49]Drummond, *History in School*, p. 123.

a mere pedagogical device but a method, in the best sense of the word, and in the hands of skillful teachers, a very effective one. The acceptance of these more moderate views will do much to relieve the antagonism against dramatization that has been created by extravagant, irrelevant, and trivial claims, and to correct the shallow practices that are all too prevalent.

The contributions of this method to the teaching of social studies are none the less real because they are limited in degree and in applicability. They are akin to those of other methods used to stimulate and aid the imagination. Of the legitimate claims that are commonly made for dramatization, one of the most important is that it assists and encourages pupils to enter imaginatively into the experiences of people of other times and places. This value probably accrues most fully to those who participate actively in the performances, but students who make up the audience also derive some benefit. The interest of most children in social studies is undoubtedly increased through effective dramatization, partly because of the sense of reality that is achieved; partly, and especially in the case of younger students, because of the outlet offered to dramatic impulses; and partly because of the variation from other classroom procedures. Students are also stimulated to do independent research for accurate information regarding the necessary details pertinent to the scene to be dramatized and to interpret their significance in the lives of the people. Only at its best, however, does dramatization contribute to the achievement of all or any of these values.

The sincerity and effectiveness of dramatization are often hampered by allowing its unique functions, which are similar to those of the drama itself, to be obscured by an excessive emphasis on such concomitants as the development of initiative, creative effort, leadership, and co-operation. Although

the importance of these values is unquestioned, they should never be the principal basis for the approval or disapproval of any dramatization. For the more authentic and significant the dramatization, the more likely it is that concomitant values will be realized. One gets the impression, nevertheless, that these concomitants are often claimed as a justification for dramatic efforts that, in conception and execution, would otherwise be rejected.

Dramatization, like other methods and devices, must be appraised according to the manner and degree that it facilitates the attainment of the goals set up for the social studies. It should be strictly subordinated to the course of study, whether the course is organized around the principal fields of knowledge, such as history, civics, and geography, or as an integrated or fusion course. This is the only way to keep dramatization in perspective and to approximate the full realization of its potential contributions. A steady insistence on this point of view will help to correct the tendency of teachers and pupils to become absorbed in theatrical rather than historical, geographical, or civic problems.

Only a relatively small part of the social science course of study is amenable to dramatic presentation, even by gifted playwrights and actors; a still smaller part is suitable for dramatization by immature students. Klapper, among others, has shown the danger of selecting episodes that are so difficult to interpret and depict that their presentation is ludicrous and the subject is robbed of its dignity.[50] Rarely, if ever, should dramatizations center on the lives and characters of noted men and women. Even the greatest dramatists usually

[50]Klapper, Paul, *The Teaching of History.* D. Appleton and Company, New York, 1926, pp. 38–44.

fail in such efforts; either the character is distorted or the play lacks dramatic power.

The decision as to whether or not to use dramatization in connection with any unit or problem depends upon its relative efficacy in comparison with other possible approaches. Even many topics that are adapted to school dramatization are more successfully learned through other means. Not infrequently the student's concepts are distorted and narrowed by substituting imperfectly constructed scenes for the more adequate ideas that he would otherwise gain from direct and systematic study.[51]

An indispensable requirement for all dramatic productions in the social studies is authenticity. By implication they should be limited, therefore, to those problems for which dependable data are available. The imagination should be used not as an escape from ignorance or from the rigorous search for accurate information but as a means to the achievement of valid reconstructions. The degree to which stage settings, properties, costumes, and language of other times and places should be stressed is a moot question. Some writers recommend that these matters be ignored or merely suggested in order to focus attention more quickly and informally upon other ideas to be emphasized in the dramatization. There is ample precedent for this treatment of matters not considered vital to the main idea of the play; for example, the practice of using the language of those who produce and hear the play is thoroughly established in the legitimate theatre. In such cases the children should know, of course, that the settings, the language, and the costumes of the actual time or place

[51]Cf. Judd, Charles H., *Psychology of High-School Subjects.* Ginn and Company, Boston, 1915, pp. 387–388.

represented were different from those used in the play. Occasionally, however, the play may encourage a detailed and thorough study of costumes and furnishings. Teachers and pupils frequently manifest a curious disposition to assume that whatever is foreign to their own time and locality must be like that of the time or place in which the scene purports to be laid. Thus, one class in American history learned a few irrelevant sentences in modern German for the Dutch Peter Stuyvesant to shout when ordered to surrender to the English. In another, a dramatization of the peace pipe ceremony, the peace pipe was a large bowl with enough stems for each person assembled at the council, thus at once making history hygienic as well as "real"! It is not easy to decide what is essential and what is non-essential. For example, in dramatizing the play party games of pioneer days, the games, the conversation, and the manners may be of chief interest, while the stage accessories may be of minor concern. The decision must be made in terms of where the emphasis in the play is to fall.

It is also important that performances have unity, dramatic quality, and a minimum of strained and fantastic symbolism. A plot, in the ordinary sense of the word, is not always necessary; merely an episode, a scene, or some aspect of social experience may be represented. Those who have used dramatization most successfully have urged repeatedly that the performances be kept natural, spontaneous, and simple. Simplicity is to be attained, however, by the selection of an inherently simple subject and not by the oversimplification of a complex subject that is distorted either by symbolism or by making it appear less complex than it really is. The involved trade relations between the United States and Argentina cannot be represented in a brief friendly chat and handshaking between "Uncle Sam and Mr. Argentine." Such attempts

result in serious misrepresentation and sentimentality, and constitute the worst type of indoctrination.

Authenticity, simplicity, the absence of strained symbolism, and the other criteria that have been discussed are more frequently and seriously violated when dramatization takes the special form of the pageant. Almost inevitably the pageant becomes more elaborate and time-consuming than can be justified by its contributions. Indeed, unless rigidly controlled, it is likely to become what has been justly described as "a glorified circus."

The standards that have been set up for selecting and evaluating dramatization, and even plain common sense, suggest the elimination of many types that, if one may judge from reports of practice, are fairly prevalent. What of value to the social studies can be expected when the *dramatis personæ* are: The Spirit of Greed; Mr. and Mrs. Greek Civilization; the Bull in a Bullfight; the Year 1763; the Knight of a Generous Thought; America, with Education, Health, Liberty, Law, and Character as attendants; the North Pole, "in a glistening white robe"; the Gadsden Purchase; Walruses, Icebergs, Avalanches, or a Log Jam? These examples, taken from actual practice, show the extremes and absurdities into which dramatizations too often degenerate.

It is a relief to turn to simpler efforts that are more within the limits of students' ability and more in harmony with the attitudes that should prevail in the study of geography, history, and other social studies. In pioneer history, for example, there are such appropriate scenes as the husking bee, Sunday afternoon in Puritan New England, the evening singing school, the visit of the itinerant peddler to the isolated frontier home, and the night camp of several families migrating westward in wagons in 1840. Unfortunately, such simplicity is

much less often sought or achieved than the more elaborate and symbolic types illustrated in the preceding paragraph. Yet geography, history, and the other social studies abound in opportunities for these less pretentious but more vital attempts to encourage children to develop an adequate and sympathetic understanding of the people of past times or of other communities. Such simple dramatizations range all the way from those that seek an interpretation of attitudes, thoughts, and feelings to those that duplicate some activity, such as flailing grain, weaving cloth, and making fire by means of the primitive fire drill. When actual reproductions of processes or activities are made, however, they should be in a setting that helps to interpret their significance.

In order that dramatization may be kept properly subordinated and contributory to the objectives of instruction in social studies, it should grow out of that instruction rather than lead up to it. To study the history of any period in order to dramatize it is to put the cart before the horse. Usually the play should be a complement or a reinforcement, the means rather than the end. Otherwise, dramatization becomes but another illustration of a sort of innate pedagogical cussedness which tempts teachers to substitute transitory interests in devices and petty projects for the deep and abiding sense of values that comes from focusing the attention on basic social problems. An appreciation of the dignity and worth of attaining intelligent citizenship cannot be achieved when the crucial substance of geography, history, and social problems is seen chiefly in the light of its contribution to giving plays.

The most profitable and impressive dramatizations are those that, under the guidance of the teacher, are planned, constructed, and staged by the pupils themselves. The independent search for authentic information and its imaginative

interpretation in constructing the play are as valuable, for the purposes of social studies, as is the ultimate performance. Too much supervision by the teacher prevents the students from entering into their parts with naturalness and ease. The lines may be written and learned in tentative form, but the players should feel free to modify them in the actual performance.[52]

The scarcity of satisfactory ready-made plays, therefore, may not be wholly a matter for regret. Nevertheless, the use of a few such plays, if simple and well constructed, is not without value in the teaching of social studies; they may also serve as models for teachers and pupils who have had little experience in planning or writing plays.[53]

When a class prepares a play for an audience of adults and the occasion is an important one, there is a tendency to shift the focus of attention to the performance itself and to spend much more time on rehearsals than can be justified from the point of view of contribution to the social sciences. Firth is undoubtedly right in saying that, ". . . the historical value is apt to vary inversely with the size and importance of the audience."[54] Even in the case of informal dramatization, one of the principal difficulties is to keep the preparation within justifiable

[52]In addition to the references already given, the reader may consult the following for suggestions regarding the effective use of dramatization: Branom and Branom, *Teaching of Geography,* Chap. XIX; Firth, *Learning of History,* pp. 53–56; Johnson, *Teaching of History,* p. 221; Knowlton, Daniel C., *History and the Other Social Studies in the Junior High School.* Charles Scribner's Sons, New York, 1926, pp. 78–87, 91–92, 114–118, 167–168, and 182–184; The Francis W. Parker School Year Book, *The Social Motive in School Work.* Volume I, June, 1912, The Francis W. Parker School, Chicago, pp. 54–76. In Kelty, Mary G., *Teaching American History in the Middle Grades of the Elementary School,* Ginn and Company, Boston, 1928, pp. 664–689, there are an explanation and a stenographic report of the writing of a play by a group of fifth-grade pupils.

[53]A list of collections of historical plays is given in Bye, Edgar C., *A Bibliography on the Teaching of the Social Studies.* The H. W. Wilson Company, New York, 1933, pp. 73–74.

[54]Firth, *Learning of History,* p. 55.

time limits. The teacher should have a clear sense of the relative importance of this medium and should adjust the time allowed it according to the values it achieves.

A consideration of the qualifications necessary in the teacher who is to use dramatization in the social studies and in geography will re-emphasize the point of view that has been presented throughout this chapter. Knowlton and others rightly point out that the teacher should have some sense of the drama as an art and some knowledge of the practical problems that arise in planning and producing plays. Yet, if one may judge from actual practice in the schools and from articles on the subject, the errors that are due to lack of skill in dramatics are far less serious than those that arise from lack of knowledge and critical thought in the field of the social studies. It is not intended to imply by this statement that there is a necessary antagonism between the aims and methods of the drama and the aims and methods of the social studies. Nevertheless, there are differences in emphasis, and in the teaching of the social studies, the art of the drama should never be permitted to distort the truth.

Chapter XII

PROVISION FOR FUTURE USE

Mechanical drill and verbatim memorizing were the dominant characteristics of instruction during the first three quarters of the nineteenth century. Concert recitations were not uncommon and questioning was often catechetical.[1] The proponents of the topical method and collateral reading, growing in influence during the last quarter of the century, attempted to shift the emphasis to understanding and thinking. The reaction thus begun was later accelerated by the stress on interest, education by play, active as contrasted with passive learning, the proposals to utilize the pupil's present needs and interests, and the organization of the curriculum in terms of social purpose. "Drill master" became a term of reproach. Score sheets used for judging teachers were weighted in favor of purposing, pupil activity, and thinking, while drill and provisions for retention were either given low weights or actually penalized. In the reaction against formalism, it was perhaps inevitable that theory should go to the opposite extreme. The pendulum swung farther in the case of theory than in the case of practice, however; for, while verbatim memorizing is no longer prevalent, the emphasis upon understanding and thinking is inadequate. Verbalism is still common, although paraphrasing the words of the text is generally substituted for verbatim recitation.

"Man," some one has said, "is man because of his memory."

[1]Kiddle, Henry, and Schem, Alexander J., *The Cyclopædia of Education.* E. Steiger, New York, 1877. See articles on catechetical method, concert teaching, memory, rote-teaching.

This statement, made with regard to the race, applies in principle to individuals as well. Where there is no memory, there is no learning, for in order to improve or grow in skills, knowledges, or attitudes, one must retain the effect of past efforts. Indeed, learning and memory are but two aspects of the same process: learning depends upon the retention of the effects of experience; and nothing can be retained that has not been learned. Practice is needed to achieve and maintain competence in skills, whether in playing the piano, in typewriting, or in the use of references in the social studies. An ample equipment of accurate and well-ordered ideas, thoroughly learned and maintained, has been shown to be essential for thought and understanding. Even creative work of the most imaginative type is dependent upon memory.[2] Definite provisions for maintenance and growth, therefore, are not to be thought of as remnants of an outgrown and formal theory of education but as an essential part of any efficient instructional program. There is ample evidence to show that this fundamental requirement is not adequately met.

Failure to provide properly for the retention of what has been learned is due in part to placing too much confidence in the effectiveness of purpose, clearness, and interest in initial learning and in part to accepting the theory that retention will be adequately provided for by incidental recall and use in future situations. But while these factors are powerful influences for retention, they are apparently not sufficient. There must also be systematic provision for maintenance and growth.

Recognition of the need for the specific provision for retention leads naturally to a consideration of the psychological theory and evidence on the problem. The experimental studies

[2]See Chap. XI.

of memory are reviewed critically by Thorndike,[3] Hunter,[4] Lashley,[5] Grant,[6] McGeoch,[7] and Robinson.[8] The bibliographies appended to these reviews contain practically all of the important published accounts. These writers show that the nature and explanation of the phenomena of learning and retention are matters of considerable controversy. They point out that the "laws" of learning (including retention and forgetting) are more properly conceived of as hypotheses or theories, the verification of which is by no means complete.[9] Psychologists are careful to qualify their statements of conclusions and not infrequently warn against applying them too confidently to the formulation of classroom methods.[10] Nevertheless, these conclusions represent the most valid and useful interpretations of existing data, not only for the purposes of the psychologist but also for the uses of the teacher. In most instances, moreover, the conclusions from psychological experi-

[3]Thorndike, Edward L., *Educational Psychology,* Vol. II. Teachers College, Columbia University, New York, 1913.

[4]Hunter, Walter S., "Experimental Studies of Learning," in Murchison, Carl (ed.), *The Foundations of Experimental Psychology.* Clark University Press, Worcester, Massachusetts, 1929, pp. 564–627.

[5]Lashley, K. S., "Nervous Mechanisms in Learning," in Murchison, Carl (ed.), *The Foundations of Experimental Psychology.* Clark University Press, Worcester, Massachusetts, 1929, pp. 524–563.

[6]Grant, Marion E., "Some Theories and Experiments in the Field of Memory," *Journal of Educational Psychology* XXIII (October, 1932), pp. 511–527.

[7]McGeoch, John A., "Memory," in *Psychological Bulletin,* XXV (September, 1928), pp. 513–549, and *Psychological Bulletin* XXVII (July, 1930), pp. 514–563.

[8]Robinson, Edward S., "Memory," *Psychological Bulletin* XXI (October, 1924), pp. 569–594.

[9]Lashley, "Nervous Mechanisms," pp. 550–563.

[10]Applications of these theories to classroom learning, in so far as is warranted, are made in educational psychologies, such as Thorndike, *Educational Psychology;* Thorndike, Edward L., and others, *The Fundamentals of Learning.* Teachers College, Columbia University, New York, 1932; Gates, Arthur I., *Psychology for Students of Education* (rev. ed.). The Macmillan Company, New York, 1933. See also the chapter on memory in general psychologies, such as Murphy, Gardner, *General Psychology.* Harper & Brothers Publishers, New York, 1933, Chaps. XVI, XVII, and XVIII.

ments are confirmed, at least in principle, by experiments that have dealt directly with the problems of learning and forgetting in classroom instruction.

For the purposes of the present discussion, certain conclusions of general interest need only be listed: (*a*) There is no general faculty of memory but a complex made up of specific memories, and the degree of relationship among these is determined by the amount of identity or similarity in content and in procedure. (*b*) Retention improves steadily through the normal period of schooling, including college, and diminishes slightly during middle age. This statement applies to averages, and there are many exceptions to it in the case of individuals. (*c*) There seem to be no important sex differences in the amount or nature of forgetting.

Other hypotheses have far-reaching implications for instruction in the social studies, and for the most part they are supported by such extensive and consistent evidence that they cannot be disregarded in the determination of methods of teaching. And even where the evidence is less complete or is inconclusive, as in the case of the whole-part method, the conclusions reached at least have the merit of warning against the dogmatic assertions that are sometimes made. Any intelligent formulation of plans for growth and retention, moreover, must make some assumptions as to the nature of forgetting and the ways of providing against it. These assumptions should be based on the best existing data. The following conclusions, while drawn with full realization of the hazards of explicit statement in this field, seem warranted by the evidence.[11]

1. *The fact of forgetting.*—Forgetting is an inevitable and

[11]Many of the following statements assume the qualification, *other things being equal.* Few references are footnoted, since most of the theories are easily identified in the critical reviews that are cited above.

normal characteristic of human beings. There is more than a grain of truth in the child's definition, "My memory is what I forget with." Nor is forgetting an unmixed evil. For while the selective retention of the effects of experience is essential to growth, the obliteration or minimizing of undesirable elments is also important.

2. *Deficiencies in original learning.*—The amount that can be correctly recalled by the average student at the conclusion of a unit of instruction is relatively small. The effect of a single learning experience is usually not great even when tested immediately. This is true of reading a selection, of hearing a lecture, of listening to an oral explanation, of seeing a picture, of referring to a map, or of such first-hand experiences as are gained from objects, field trips, and constructive activities. Unmistakable evidence of shortcomings of students after a single learning exercise, or even after repeated exercises, is given in preceding chapters.[12] It was shown, for example, that when the content of what is read is relatively new and difficult, one cannot expect the majority of students to obtain from one reading as many as half of the essential ideas that the selection contains. Erroneous answers constitute a particularly interesting phenomenon. The student's attempts to recall often result in ideas that are so clear as to give him a feeling of their validity and yet are partly or wholly incorrect. To such ideas some one has humorously given the name, "creative memory." Studies of typical instructional practices indicate, moreover, that even after a recitation or discussion has supplemented a study period, a lecture, an excursion, or a presentation of a motion picture, the average student has a very inadequate grasp of the important ideas that have been presented. It is evident that the poor showing made by

[12]See especially Chaps. IV and V.

students a few months or years after a course has been completed is due in many instances not so much to a failure to remember what has been learned as to a failure to understand and to learn the material in the first place.

3. *The rate of forgetting.*—The general characteristic of forgetting is that it is very rapid in the early stages, even in the first few minutes and hours, the rate gradually lessening with time, until after a few weeks little has been retained. Investigators of learning, beginning with Ebbinghaus, have provided data out of which have been constructed general patterns or curves of forgetting. Most of these curves describe forgetting in relation to skills or the verbatim recall of nonsense syllables, vocabularies, numbers, prose and poetry.[18]

The following table, constructed by Garrett from the data of Radosavljevich, shows the rate of forgetting for two types of material learned verbatim to the point of two perfect recitations.

INTERVAL BETWEEN LEARNING AND RELEARNING	PERCENTAGE OF RETENTION FOR NONSENSE SYLLABLES	PERCENTAGE OF RETENTION FOR POETRY
5 minutes	98	100
20 minutes	89	96
1 hour	71	78
8 hours	47	50
24 hours	68	70
2 days	61	67
6 days	49	42
14 days	41	30
30 days	20	24
120 days	3	7[14]

[14]Garrett, Henry E., *Great Experiments in Psychology.* The Century Co., New York, 1930, p. 65.

The curve of forgetting is a useful concept if its hypothetical character is understood. Hunter rightly points out:

[18]For examples, see Thorndike, *Educational Psychology,* II.

"There is no one curve of forgetting; rather there are many curves the natures of which vary with such factors as the following: the degree of mastery of the initial learning, the character of the material originally learned, the speed of the initial learning, the amount and character of the activity which follows the learning, and the method by which retention is tested."[15]

With few exceptions, such as memorizing parts of the Declaration of Independence, verbatim memorizing of materials in the social studies is not now common. Experimental evidence as to the retention in these instances is not available, but it is reasonable to expect it to follow the general pattern shown for the verbatim memorization of other logical materials. There have been a number of experiments in which the retention of essential information not required to be learned verbatim has been measured. The data from these investigations, although variable and less complete, show the same general trends as in the case of verbatim learning. The variations in results are partly explained by differences in the amount known before the learning exercise, in the degree of original learning, in the way in which learning was distributed, in the nature of the material learned, in the methods of measurement, and in the nature and number of the subjects used.

In a number of experiments on the amount of forgetting at various intervals, materials from the social studies or materials of the same general nature have been used. One of the earliest experiments on the retention of ideas gained from prose selections, the majority of which were historical in character, was conducted by Henderson with students in the higher elementary grades, in high school, and in college. The selections

[15]Hunter, "Experimental Studies of Learning," p. 605.

were short, and the tests involved the reproduction of the essential ideas in them. He found the usual evidence of the curve of forgetting on the part of students at all levels. In the case of the seventh-grade pupils, for example, 28.1 per cent of the ideas in the selections were omitted on immediate recall. Of the ideas correctly reproduced on immediate recall, 6 per cent were forgotten in two days and 15.3 per cent in four weeks.[16]

Dietze and Jones report that the amount retained by high school students as the result of a single reading of a four-page pamphlet on Arkwright was as follows: immediate recall, 54.6 per cent; one day, 46.4 per cent; 14 days, 33.1 per cent; 30 days, 30.3 per cent; and 100 days, 23.4 per cent. The average retention for this and two other similar articles was: immediate recall, 56.7 per cent; one day, 48 per cent; 14 days, 36.3 per cent; 30 days, 32.4 per cent; 100 days, 30 per cent.[17] In an experiment by Jones,[18] as already pointed out, the amount retained by college students from somewhat popular lectures in psychology varied from an average of 62 per cent on immediate recall to 24 per cent at the end of eight weeks. Furthermore, he points out, "After two months, hardly more than ⅓ remains of the amount which could be recalled in immediate tests, and less than ¼, on the average, of the essential points emphasized in the lectures."[19]

Greene reports similar trends in forgetting on the part of college students in zoology, psychology, and physiological

[16]Henderson, E. N., "A Study of Memory," *The Psychological Review*, Monograph Supplements V, No. 6 (December, 1903).

[17]Dietze, Alfred G., and Jones, George Ellis, "Factual Memory of Secondary School Pupils for a Short Article Which They Read a Single Time," *The Journal of Educational Psychology* XXII (November–December, 1931), pp. 586–598, 667–676.

[18]Jones, Harold E., "Experimental Studies of College Teaching," *Archives of Psychology* X, No. 68 (November, 1923).

[19]*Ibid.*, p. 64.

chemistry when measured by the final examination at the end of the course and at intervals of four months, eight months, sixteen months, and twenty months. In psychology, for example, the amount retained at the end of the examination period was 60 per cent and twenty months later, 24 per cent.[20]

Bassett studied the retention of historical information on the part of 1364 children in grades six, seven, and eight. While the amount retained was large as compared with that reported in reading investigations, due perhaps to the nature of the tests that were used, forgetting was marked, the amount retained varying, on the average, from 56.78 per cent on a test given at the end of a semester to 38.65 per cent in sixteen months.[21]

Most of these studies include useful summaries of the rate of forgetting as shown in other experiments. The general conclusion to be reached from these and similar investigations is that information presented in the form of connected discourse is forgotten less rapidly than in the case of nonsense syllables or the verbatim memorizing of prose and poetry. It must be kept in mind, however, that the recall of significant and essential information is perhaps a less rigorous requirement than that of verbatim recall, and that in many instances a good deal of essential content was known by students before the learning exercise. In so far as the curriculum deals with vital problems of general social interest, it is to be expected that many students will know something about these matters prior to their study in the classroom. Indeed, it is not un-

[20]Greene, Edward B., "The Retention of Information Learned in College Courses," *Journal of Educational Research* XXIV (November, 1931), pp. 262–273.

[21]Bassett, Sarah J., *Retention of History in the Sixth, Seventh and Eighth Grades with Special Reference to the Factors That Influence Retention.* The Johns Hopkins University Studies in Education, No. 12, The Johns Hopkins Press, Baltimore, 1928.

common to find students who have not studied a subject in school, American history, for example, but who know much more about it than the average student who has finished a systematic course of instruction in the subject. Tyler suggests that the data accumulated from testing programs indicate that generalizations may be forgotten less rapidly than the data or experiences from which they are formed.[22] It seems probable that this tendency would hold for generalizations formed by the student but not for general statements memorized and vaguely understood. On the contrary, others have reported that anecdotal and other illustrative material is more readily recalled than generalizations. The reciprocal relation between detailed information and the conclusions depending on it is so important, in both understanding and retention, that it merits the most careful investigation.

4. *Interest, attitude, purpose, and feeling tone.*—Both the quality and kind of "effect" in learning, including interest, purpose, and feeling tone, have important influences upon retention. In general, interests and purposes should be positive rather than negative; satisfying or reward "effects" are more influential than failure or punishment "effects." While there is little evidence as to the relative influence of extrinsic, as compared with intrinsic, motives, the latter are believed to be more beneficial. The "effect," for example, of completing a solution of a problem recognized by the student as important is believed to be better than the "effect" of working for grades, for praise, or to escape disapproval. Especially important would seem to be a sense of the present and probable future usefulness of any idea, coupled with the definite

[22]Tyler, Ralph W., "What High-School Pupils Forget," *Educational Research Bulletin*, The Ohio State University, IX (November 19, 1930), pp. 490–493.

intention to remember it.[23] The significance of these conclusions will be dealt with in considering their application to instruction in the social studies.

5. *The effect of meaning.*—Retention is greatly facilitated by understanding, insight, and organization. These factors not only afford the basis for selective recall but are important influences in motivation.[24]

6. *The importance of recall.*—After a certain, not well-defined, amount of impression, such as that gained through reading, through listening to a lecture, or through observation, retention is best provided for by active recall rather than by passive restatement, re-reading, or repeated impression. This is true both in original learning and in reviews. The most favorable condition provides for the interspersing of impression and recall. The exact pattern of interspersing is not well determined but varies, among other things, with the individual and the nature of the material to be learned.

7. *Overlearning.*—In the long run, overlearning is economical in providing for retention. Most of the experimental work on this problem has dealt either with the attainment of a skillful performance or with verbal memorizing. In these instances, overlearning is usually defined as learning beyond the point of one successful performance, or one perfect recall of the material memorized, as a poem. Overlearning in the case of ideas is not so easily defined, but the term might usefully be applied to time spent in thoughtful review after understanding has been reached or after one recall of essential

[23]In addition to the references cited in the critical summaries by Hunter, Lashley, Grant, McGeoch, and Robinson, *op. cit.*, see also Thorndike, *The Fundamentals of Learning,* Chaps. XI and XV; and Thorndike, Edward L., *Adult Interests.* The Macmillan Company, New York, 1935.

[24]McGeoch, John A., "Memory," *Psychological Bulletin* XXV (September, 1928), pp. 513–549.

information. The problem of overlearning is complicated, however, by its relation to motivation, to clearness, insight, and organization, and to the distribution of learning.

The degree of overlearning that is profitable has not been adequately determined, even for memoriter learning, and much less so for the types of learning required in the social studies. The typical study period or class exercise, as has been shown, usually results in marked *underlearning* as measured either by immediate understanding of the essential points in the lesson or the ability to recall them. It seems clear that there should be more than one successful recall.

8. *Sensory appeals.*—The amount retained in verbal learning is not greatly affected by the mode of sensory stimulation (visual, auditory, etc.), although, in general, visual imagery is prominently utilized in most effective learning procedures. In the case of pupils who have normal sense organs, there is little warrant for the use of such terms as *eye-minded, ear-minded,* and *motor-minded,* which indicate either a marked advantage in the use of one type of imagery or marked inability to use other types. Such differences as exist in students are difficult to ascertain, even in the psychological laboratory, and their discovery is quite beyond the ability of the average classroom teacher. The form of presentation should be determined by the nature of the material and the requirements and practical limitations of the learning situation.

9. *The influence of repetition.*—Up to a certain point, not clearly defined, retention is increased by repetition, but beyond this point, again not clearly defined, repetition may hinder retention. There is considerable controversy as to the effect of repetition *per se,* and the problem is complicated in classroom practice by its relation to interest, to the nature of the repetitive exercise, and to the pattern of the distribution of

the repetitions. The evidence indicates that formal repetitive methods are relatively ineffective.

10. *Distribution of effort.*—Distributed effort is more effective than massed learning in providing for retention, and this superiority is more marked in delayed than in immediate recall.[25] The distribution of relearning has been studied both as a problem in pure psychology and as a problem in classroom instruction. In both cases, the materials used have been vocabularies, arithmetic, nonsense syllables, and other subject matter having little resemblance to the content of curricula in the social studies.[26] It is difficult to isolate the factor of distribution of learning from other factors that may influence retention. The consensus of judgment seems to be that in classroom instruction, distributed learning is, in general, better than massed learning and that the pattern of distribution should take into account the nature of the curve of forgetting. Since this curve falls off rapidly at the outset and more gradually as time elapses, it has been assumed that learning exercises should come at short intervals at first and at gradually increasing intervals at later times. Beyond this rather vague hint, however, there is no evidence, and, for that matter, no accepted theory as to the pattern of the intervals that best facilitates the improvement of any type of ability. Regardless of the pattern of the distribution, it seems probable that the reviews or relearnings should involve a minimum of purely repetitive work and a maximum of new associations. In distributing reviews, however, as in all matters pertaining to learning and retention, one

[25]Edwards, while showing definite superiority for experimental groups using review in learning history, believes that the effect of reviews varies directly with the difficulty of the material: Edwards, A. S., "The Distribution of Time in Learning Small Amounts of Material," *Studies in Psychology: Titchener Commemorative Volume,* Worcester, Mass., 1917, pp. 209–213.

[26]For a critical review of these studies, see Hunter, "Experimental Studies of Learning"; Grant, "Theories and Experiments in the Field of Memory"; and Thorndike, *Educational Psychology,* Vol. II.

should be exceedingly cautious in applying to concepts, attitudes, and insights the theories developed on the basis of mechanical types of learning.

11. *Retroactive inhibition.*—Because more and more is forgotten as time goes on, forgetting was long considered to be the effect of disuse or the passage of time. There is increasing evidence, however, that it is strongly influenced by new experiences that interfere with, obliterate, or inhibit the old.[27] The technical term for these unfavorable influences is retroactive inhibition. This hypothesis, if valid, has very important implications for the amount of material to be included in the course of study, as well as for its organization and sequential arrangement.

12. *The relation of retention to speed of learning.*—In the case of meaningful or logical materials, the amount retained after an interval correlates highly with the speed of learning as well as with the amount retained in immediate recall. The old statement, "easy come, easy go," is reversed by the evidence as well as by logical analysis, for conditions that facilitate original learning also facilitate retention.

13. *Individual differences.*—Students vary widely in retentiveness as in all other aspects of learning. The wide range shown in the scores on tests after any interval, however, is due only in part to differences in retentiveness *per se;* it is due also to differences in understanding and performance in the original learning period, as well as to differences in methods of work.

14. *Incidental learning.*—While incidental learning does take place, it is not to be trusted in important matters. Whatever

[27]For a review of this evidence, see Hunter, "Experimental Studies of Learning," pp. 599–605. An extensive bibliography is given in Britt, Steuart H., "Theories of Retroactive Inhibition," *Psychological Review* XLIII (May, 1936), pp. 207–216.

subject matter is of little value may be left to incidental learning, but what is to be remembered should at some time be in the focus of the student's attention and subjected to his determination to remember it.

15. *The whole and part methods.*—The relative value of whole and part methods of learning has not been demonstrated by scientific evidence. Most research in this controversial field has dealt with the memorizing of prose and poetry. These experiments are critically reviewed by McGeoch, who concludes that neither the whole method, nor the part method, nor any variation upon them has been demonstrated to be inherently superior. She holds, therefore, that the customary statements given in textbooks in psychology as to the superiority of the whole method are unwarranted.[28] Undoubtedly, however, there are "parts" too small and "wholes" too large to afford useful units for learning. Very little verbatim memorizing is or should be required in the teaching of the social studies. No data bear directly on these methods as applied to the retention of information and ideas nor are there any that would enable the teacher to answer such questions as: Should a student study his lesson as a whole or topic by topic?

The trend in modern teaching is in the direction of eliminating small and isolated topics and toward the organization of instruction around more inclusive units or problems. There is a good deal of indirect evidence that would seem to justify this trend. While the learning of these larger units cannot be reduced to a formula, it seems likely that some perspective of the large problem must be maintained while subordinate problems are being studied.

[28]McGeoch, Grace O., "Whole-Part Problem," *The Psychological Bulletin* XXVIII (December, 1931), pp. 713–739; and McGeoch, Grace O., "A Revaluation of the Whole-Part Problem in Learning," *Journal of Educational Research* XXVI (September, 1932), pp. 1–5.

In considering the implications of these fifteen conclusions for growth and retention in the social studies, it is important to note four limitations in the experimental procedures: First, the material used in most of the experiments is unlike that of the social studies, and learning is predominantly mechanical and memoriter. Second, the effort to establish refined controls in the experiments results in conditions of learning and in methods of testing for retention that are not representative of the conditions that do or should exist in classroom instruction. Third, the experiments, with very few exceptions, are set up to expand and refine theories in pure psychology, and the practical applications to instruction are either not considered or held of minor importance. Fourth, many of the data have been secured from experiments on animals and on human adults rather than from studies of retention in children. Moreover, the adults used were, in most instances, highly selected and often sophisticated in techniques of psychological experiment.

Perhaps the almost exclusive attention to learning as applied to skill and verbatim memorizing has tended to develop a point of view toward methods of memorizing that is too formal and mechanical and that underestimates the influence of such factors as meaning, thinking, and motivation. Nevertheless, as has been pointed out, the data from experiments in the psychological laboratory seem to be confirmed, in a general way, by the data from experiments in classroom instruction, as well as by critical observation and analysis.

IMPLICATIONS FOR INSTRUCTION IN SOCIAL STUDIES

It is admittedly hazardous to draw conclusions for instruction in the social studies from the results of research in the field of memory. The psychologists themselves have been very cautious—perhaps overcautious—in pointing out the applications

of their conclusions to classroom practice. But the practical problems of providing for the retention and perfection of ideas must be faced, and in the solution of these problems we must use the best data that are available. The data on many aspects of the problem are convincing; particularly those pertaining to the certainty and nature of forgetting. On others, especially those on the best provisions for retention, the data are not so complete or so conclusive, yet they seem to warrant the formulation of useful (though tentative) hypotheses. The following conclusions seem to be justified:

1. *Both teacher and students should know the chief characteristics of forgetting and the best ways of providing for the retention and development of experience.* There are sound reasons for teaching students the basic facts about memory that have been outlined above. Indeed, the most important of these facts can easily be demonstrated to the student as a part of his regular classroom work in the social studies. Learning is, after all, the student's chief business for nearly a fourth of his life, and it is entirely reasonable to insist that he be taught how this important business can be managed most effectively.

2. *There should be a clear understanding on the part of both teachers and pupils of what is to be learned, whether facts, concepts, principles, attitudes, ways of working, or knowledge of sources.* That method is profoundly influenced by the nature of objectives in the social studies has been pointed out repeatedly in the preceding chapters. In no aspect of method is this influence shown more clearly than in the problem of providing for retention. The need of a definite statement of the expected outcomes is here imperative. No mere skeleton of topics will suffice. The statement must be sufficiently explicit to give a clear vision of what pupils and teacher should strive to accomplish. It is not enough, for example, to say that students

should attain a notion of the chronology or sequence of the chief movements in the development of our present civilization. It is necessary to know specifically what chronology, what sequences, and what movements are to be stressed. Similarly, it is not sufficient to say that in geography one should have a notion of the chief natural or cultural areas or of the principles of geography. It is necessary to specify what areas and what principles are to be learned and to make these specifications elaborate enough to provide clear goals for study and teaching. No less important are explicit statements of such concomitant values as ways of thinking, attitudes, and methods of work. Adequate provision for attaining the ultimate objectives of the social studies cannot be made without a clear statement of what students are expected to know, feel, or do as a result of instruction in this field.

Nor is it enough to have well-defined ideas as to the final outcomes of teaching; there must be a statement of the sequences and relationships that are to constitute the course of study year by year, from the primary grades until the end of the period of instruction. Just as there are presumably some ideas, some attitudes, and some abilities that are to be attained by the end of the instructional program, so there must be some efficacious sequence of the experiences through which students are finally to be led to these goals. At no levels can teachers work intelligently unless they have a vision of both the final outcomes and the stages of progress toward these outcomes.

3. *The amount and quality of what is retained are heavily conditioned by what is done in the period of original learning.* There are a number of procedures that seem to be indicated, both by experimental data and by a critical analysis of instructional practice.

a. The instructional materials should be organized in terms

of one or more significant purposes. These may well be formulated in terms of the probable future uses that are to be made of the knowledge or abilities gained. Such purposes provide not only the fundamental motives for learning but also the bases for the selection, emphasis, and organization of ideas.

b. Students should be encouraged in an aggressive, active, and purposeful attitude toward the problems under attack. Of especial importance is the determination to learn and remember. "We learn chiefly by setting ourselves to learn," says Murphy, "not by being impressed."[29] Even the intention to learn that is stimulated by the knowledge of a future test in school seems to increase the thoroughness of work in the original period as well as to aid retention. The determination to learn is not likely to be encouraged by didactic and ritualistic statements of the will to learn, however. Although the student should know the importance of the determination to remember, the motive force behind the attitude should be, as earlier indicated, a conviction as to the significance of the problem and a realization of the value and probable future influence of the data used in its solution.

c. It is imperative that all important ideas be clear, accurate, and well organized. Otherwise, efforts to provide for future use will be largely a waste of time. The student should be impressed with the known facts as to the small amount that is adequately understood and the still smaller amount that is retained as the result of a single learning experience, such as reading, listening to a lecture, or viewing a picture. He should realize that only by vigorous mental effort are correct ideas obtained from any of these sources. The various approaches to understanding and the difficulties in attaining it are discussed in earlier chapters and need not be reviewed here.[30]

[29]Murphy, *General Psychology*, p. 307.

[30]See Chaps. IV to XI.

d. The impression, whether through reading, hearing, or observation, should be interspersed with attempted recalls, in order to show shortcomings in the result of the impression. Attention has already been called to the fact that re-reading, unaided by attempted recall, adds little to what is gained in a single reading. Attempted recalls encourage an active, as contrasted with a passive, attitude toward learning. It is the judgment of some psychologists that as much as three fourths of the time of the early learning periods should be spent on recall. This suggested procedure is in marked contrast to customary practices, in which study is often limited to the passive and desultory reading of required references. The student should be led to appreciate the opportunity afforded by the class recitation or discussion period, no matter how informal, to recall and correct important ideas with the co-operation of his teacher and fellow students.

While the recitation, conference, or discussion period does constitute a recall or review, it is much more than that. It serves to correct, clarify, and organize the ideas gained during independent study, as well as to give an opportunity for the critical evaluation of what is most significant for the solution of the problem at hand. There is some little experimental evidence and much common-sense support for the belief that a summary appraisal in terms of the purpose for which the study was done, a definition of what is to be remembered, and a decision to remember it may be expected to aid retention. Certainly time spent in securing a better view of the relationship of the day's work to the larger problem should enrich understanding, aid retention, and motivate future work.

Properly planned tests are an especially valuable stimulation to recall, since they may be focused upon the facts and relationships that are believed to be of greatest significance. There

is a good deal of evidence to show that tests, both oral and written, tend to retard forgetting, as well as to stimulate improvement. Those that emphasize recall are probably more beneficial than those that emphasize recognition. Tests given during or immediately after the original learning period, and corrected at the time, are probably more beneficial than those given after an interval. Jones, for example, reports that students who were tested immediately after a lecture made scores on delayed tests that were much higher than those made by students who were not so tested. The tests were corrected in class.[31] Delayed tests, spaced in relation to the curve of forgetting, although less efficacious than those during or at the close of the original learning period, are, nevertheless, worth while. Because tests exert a strong influence upon retention, as well as upon methods of study, they should be closely integrated with instruction, and the items should be chosen and constructed under the guidance of the major purposes for which instruction is set up.[32] Pupils as well as teachers should realize that tests are a means of learning, not the end. They are primarily a form of guidance through which teachers and pupils may appraise the results attained at any stage of instruction and work co-operatively for greater success. This potential service is greatly impaired unless the tests are corrected in such a manner as to show precisely the point at which understanding is deficient and at which additional learning is therefore needed. Attention to the total scores or marks on a test is likely to obscure its function as a guide to further learning.

Written tests also afford a basis for adjustments to individual

[31]Jones, "Experimental Studies of Teaching," pp. 45–71.

[32]Excellent advice as to the construction and use of tests is given in Hawkes, Herbert E., Lindquist, E. F., and Mann, C. R. (editors), *The Construction and Use of Achievement Examinations.* Houghton Mifflin Company, Boston, 1936. See especially Chaps. I, II, III, IV, and IX. Chapter IV deals specifically with examinations in the social studies.

differences. Students have been shown to vary widely in the amount retained after a single reading, after hearing a lecture, or after an instructional unit has been completed. They also vary widely in the amount that can be recalled after an interval. Arbitrary reviews with the class as a whole are likely to degenerate into formal exercises. The motive for reviews in the case of any individual student is the recognition of some inadequacy in learning. These inadequacies are shown by corrected tests, which indicate the specific items that the student needs to learn.

c. Overlearning appears to be economical in the long run, even in the early stages of learning. As earlier defined, overlearning in the memorizing of a poem is the effort put forth after the student is just able to recite the poem without error; overlearning in the case of an idea may be applied to the learning that proceeds beyond the point where the student has just gained an insight into or an understanding of the idea.

The question of overlearning in the social studies is exceedingly troublesome. From one point of view, there is no such thing as overlearning in this field. The most eminent authorities on the formation of the Constitution, for example, are still expanding their knowledge of this restricted subject. It is, of course, possible to learn such matters as the place, the date, and the names of members of the Constitutional Convention or, if it seems desirable, even to memorize the Constitution itself. There are also many important facts and many useful ideas that, for the immediate and practical purposes of instruction, can be mastered. In these instances, the principle of overlearning might well apply. But the fundamental significance of the formation of the Constitution will probably be only partially understood by most students. The student, therefore, even under superior teaching, will and should be left with a

feeling that he has only begun what might well be a continuing study of this important period of history.

There is a real dilemma here. It is not unlike that faced by the advocates of the mastery technique in its application to the social studies.[33] An overemphasis on mastery may result in limiting learning to facts and verbal memorizing, while an overemphasis on the never-ending pursuit of knowledge on any topic may make it difficult to secure thorough work at the elementary or high-school level. Yet something must be learned each year, each month, and each day. The practical solution seems to be to define as explicitly as possible the amount of knowledge and the level of understanding that are expected of students at any grade level and for the purposes at hand. This is admittedly difficult and, indeed, is possible only in a limited, tentative, and pragmatic sense. Yet successful teachers have to make such necessary practical decisions.

A review of the examples of inadequate learning presented in Chapters IV and V will show that the original learning is far short of mastery even when limited to matters of information and appraised with a good deal of charity. There is undoubtedly a tendency for a student, in reading, in listening to a lecture, in viewing a picture, or in a class discussion, to stop at the first glimmer of an idea without doing the vigorous thinking that is necessary to make the idea his own. Much more thorough work must be done in the original learning period than at present before the point of overlearning is even approached. Nevertheless, students should know that it is essential to think through a problem at least once, and probably again and again, after a satisfactory understanding, even for immediate purposes, seems to have been achieved.

[33]Morrison, Henry C., *The Practice of Teaching in the Secondary School.* The University of Chicago Press, Chicago, 1926.

f. The contribution of interest is fundamental. The evidence from experiments in learning confirms the common observation of teachers that the affective aspects of learning are very important; satisfying experiences tend to be retained, while unpleasant or annoying experiences tend to be forgotten. The stimulation and development of interest are therefore very important both in the period of original learning and in subsequent reviews.

Interest, including purpose and satisfying feeling tone, increases retention in three ways. First, by providing the drive in the period of initial learning, it makes for more active attention, greater clearness, more thorough learning, and probably for better organization of ideas; second, all of these essential factors in initial learning also exert favorable influences upon retention; third, a persistent growing interest in social problems is the best guarantee for maintaining, expanding, and perfecting the student's ideas. The long-time effect of developing such interests can hardly be overemphasized, for they are not only the stimulation to further exploration but also the nuclei around which further reading and thought may be organized. The development of abiding interests in fundamental aspects of society should be, therefore, a major objective in instruction in the social studies.

The basic appeal to interests should be made through the intrinsic values of the subject matter rather than through the use of such extrinsic appeals as grades, avoidance of penalties, or pedagogical devices. The more real the history, the more substantial the geography, the more vital the curriculum is as a whole, the greater the interest will be. There are many advantages in founding instruction on intrinsic interests. They have greater probable appeal than extrinsic motives, are more

sincere, more permanent, and more likely to make clear to the student the real reasons for the study of any problem or topic. These fundamental interests are valuable, moreover, as bases in selecting and emphasizing the data essential to the solution of the problem at hand. It would seem reasonable, therefore, to demand that students be given at least an intellectual appreciation of the significance of the work that they are to undertake.

Interest in any problem is enhanced or restricted by the extent to which the problem is related to the student's experience and the degree to which his efforts at achievement are successful. The inadequacies of understanding in the social studies were pointed out in several preceding chapters, and especially in those on meaning and reading. Students can hardly be expected to maintain interest in something that they cannot understand, for understanding is *per se* a source of interest. The more closely social studies are related to the experience and value norms of students, the greater the interest appeal. It is not strange that teachers should find considerable difficulty in motivating the study of topics that have no interest for the average intelligent citizen, or that students should not become enthusiastic over didactic printed materials that would not be read voluntarily by most adults. Interest is also increased by the consciousness of success or by a sense of progress in achieving the solution of a problem. Indeed, interest and success are reciprocal. Part of the time of any discussion period, therefore, may appropriately be given to taking stock of accomplishments and to making clear to the students the amount of progress that has been made. Important as interest is, however, one should not put too much trust in it. Doubtless every one has had the experience of failing to remember a story in spite of its interest

and a determination to remember it. Interest, purpose, and feeling tone represent but one of the many groups of important factors that influence retention.

4. *There must be definite provisions for review.* No matter how well any material is understood or learned in the original learning period, it tends to be gradually forgotten unless definite provision is made for maintenance and growth. One of the chief matters to be decided is how reviews or additional learning exercises should be spaced. It is generally assumed that the distribution of reviews should bear some relation to the curve of forgetting, which, as has been pointed out, drops sharply at the outset and more gradually at increasing intervals of time. Gates concludes that:

"The evidence bearing on this problem [overlearning and reviews] is insufficient to justify a confident statement, but it indicates that one should overlearn somewhat at the beginning and leave the remainder of the overlearning to reviews at constantly increasing intervals. For example, the first review, a relatively long one, should be made within forty-eight hours; the next review, somewhat shorter, a week later; the next, shorter still, three weeks later; the next, two months later, followed by other reviews at intervals of five months or more."[84]

This statement is usefully suggestive if its hypothetical and general nature, as understood by its author, is kept in mind. In practice, as one writer has pointed out, reviews should be determined more by the nature and sequence of the course of study than by the calendar. The implications of the curve of forgetting, on the other hand, must be given full consideration in planning the sequence of topics or problems in the course of study.

What the nature of the review exercise should be constitutes

[84]Gates, *Psychology for Students of Education*, pp. 468–469.

another important problem. In formal teaching, repetitive reviews predominate. It is now generally recognized that such reviews are inferior to those in which old facts and ideas are utilized in new associations and in new organizations. Even in the case of the most mechanical and verbatim types of learning, retention has been shown to be facilitated by meaning, insight, and logical organization. Nevertheless, in the case of important matters of information, such as locations and dates, review methods that are dominantly repetitive may be justified, but these repetitive exercises are to be considered merely as supplemental to those in which the understanding of facts is utilized, re-interpreted, and enlarged in the solution of new problems. The important thing is to keep ideas dynamic, elastic, and growing. The attainment of these desirable qualities is hampered by formal methods.

The problem of the nature of review exercises is closely related to the sequential arrangement or grading of the course of study. Plans of cycling, both in geography and in history, tend to approach the repetitive type of review. In history, for example, the student who completes the junior college is likely to have studied United States history three times, once in the junior high school, once in the senior high school, and once in the junior college. In addition, an elementary, although desultory, treatment of American history is often given in the intermediate grades. Many of the topics in the textbooks and courses of study in each of these cycles are identical, and the content and method of treatment are not differentiated as much as one might expect in view of the differences in the training of the students. Many of the same reference books are used at all three levels. The results of examinations given at different levels are disconcerting, moreover, in the small improvement that students at the college level show over the at-

tainments of students in the senior high school or, for that matter, over the attainments of those in the junior high school.

One effect of cycling is that so many topics are presented at each level that the treatment is almost inevitably abstract and general and that time for detailed experiences that make understanding possible cannot be found. Another undesirable effect is that students, viewing each new cycle as repetitive, lose interest. The trend in geography texts and courses of study is away from the two- and three-cycle plan and toward the modified one-cycle plan. This shift in emphasis decreases the merely repetitive type of review and emphasizes review in new settings. The makers of texts and courses of study in history could well follow the lead of teachers of geography in this matter.

5. *There must be a material reduction in the amount to be learned.* This conclusion is inescapable even when one considers only what must be done in the original learning period to make the topics or problems in the social studies intelligible: the provision for wide reading, for field trips and visits to museums, for viewing pictures, for constructive activities, and for deliberate discussion. It is mandatory when one considers the additional provisions that must be made for maintenance and growth.

Knowledge is infinite and no one can be expected to learn more than a small fraction of it. An inspection of the examinations of either the objective or the essay type shows a large proportion of questions that even the top fourth of intelligent citizens could not be expected to answer. Such questions are clearly not proper challenges to remembrance. What is needed is to determine the fundamental equipment of ideas, attitudes, and methods of work that are most generally useful in the attack on social questions. No adequate statement of this es-

sential equipment exists, and even if one were available, teachers would need to be constantly on their guard lest, as in all statements of minimum essentials, learning degenerate into verbal formalism.

This insistent emphasis upon the reduction of the amount to be learned does not imply a curtailment of details or a diminution of the rigor of the search for truth. The basic theses of this entire volume point to the opposite conclusion. What is needed is more rigorous thought, operating on more details, but devoted to the study of a smaller number of basically important matters. It is a tragedy either to leave students with the impression that thought about social problems is casual and superficial or to leave them with an unwarranted sense of "mastery." Instruction in the social studies ought to open up a new world of interesting inquiry for which the student's accomplishments in school, both in content and in methods of study, are only a partial preparation. A continuing interest in the problems of society and a growing ability to attack them with competence are the best evidences of good teaching.

INDEX

Active learning, 124
Activities, 15; constructive, 413 f.; terms for, 413 f.; evaluation of, 416; guided by critical thought, 418; authentic, 419; values claimed for, 430; types of, 438
Activity movement, 395
Activity programs, 417
Adaptations to individual differences, 67
Adults, the reading abilities of, 151; interests of, 231
Aims, multiplicity of, 4
Alternatives in social education, 113 f.
American Association of University Professors, quoted, 99
American Civil Liberties Union, 88
American Geographical Society of New York, 361
American history, 47 f.; textbooks in, 93
Andrews, Gambrill, and Tall, *A Bibliography of History for Schools and Libraries,* 246
Apperception, theory of, 415
Apperceptive background, 179
Appraisal, methods of, 256
Aristotle, quoted, 268
Arithmetic, topics for demonstration teaching in, 139
Assignment, the, 247; a well-planned, 203; made in a fifth-grade class, 255 f.
Associative shifting, 115
Atlas of the Historical Geography of the United States, 284, 389
Attitude, 490
Ausflug, the German, 404
Authenticity, 426, 477; meaning of, 420 f.; in dramatic productions, 475
Authority, uses and abuses of, 112
Autobiographies, 458
Ayer, *Difficulties in Elementary School History,* quoted, 183, 189
Baker, Ernest A., *A Guide to Historical Fiction,* quoted, 272, 294
Baker, Harry J., *Characteristic Differences in Bright and Dull Pupils,* 65
Ballard, *Thought and Language,* 157
Bane, *Lecture in College Teaching,* quoted, 315, 319, 324 f.
Basedow, 405
Beale, Howard K., *Are American Teachers Free?,* 5, 101
Beard, Charles A., *A Charter for the Social Sciences in the Schools,* 5, 11; *The Nature of the Social Sciences,* quoted, 89, 131, 240
Bedwell, Margaret, *Comprehension of Concepts,* quoted, 190
Biennial Survey of Education, The, 40, 258
Billett, Roy O., *Provisions for Individual Differences, Marking and Promotion,* quoted, 53
Biographical method, 16
Biography, 254, 267
Bloomfield, L. S., *Studies in Class Size,* 73
"Boners," 142
Bonser, *Industrial Arts for Public School Administration,* quoted, 438
Book, qualities making it interesting, 159 f.; waste involved in the purchase of a whole, 262
Books, use of, 128, 151; choice of, 179 f.; on methods of teaching, 245 f.; list of, 256; as sources of information, 302; on motion pictures, 371 f.; on teaching geography and history, 439
Bowman, I., *Geography in Relation to the Social Sciences,* quoted, 389
Broadcasts, educational, 333
Brown, Albert E., *The Effectiveness of Large Classes at the College Level,* 71
Bryan, William Jennings, 335

Buckingham and Dolch, *Combined Word List*, 164
Budget for instruction, 437
Burke, quoted, 199
Burr, Marvin Y., *A Study of Homogeneous Grouping*, quoted, 57
Buswell, G. T., and John, Lenore, *The Vocabulary of Arithmetic*, 143
Butler, Nicholas Murray, quoted, 306
Butler, Samuel, *Thought and Language*, 154
Butterfield, H., *The Historical Novel*, quoted, 277

Camel's Nose, The, 462
Cantril and Allport, *Psychology of Radio*, quoted, 316, 329
Carnegie, Andrew, 158
Cartoons, pictures, friezes, 448 f.
Carver, Merton E., *Listening versus Reading*, quoted, 310
Catechetical method, the, 337
Channing, Hart Turner, *Guide to the Study and Reading of American History*, 297
Charter for the Social Sciences, 5, 287, 468
Charts, use of, 386 f.
Chicago, University of, 301, 395, 407
Child-centered curricula, 21
Child Labor Amendment, 115
Children, needs and interests of, 20; guides to reading of, 298
Citizenship, needs of intelligent, 20; educative induction into, 118
Civic instruction, 114
Civics, 93
Civil War, study of the, 140
Clarke, Katherine, *The Effect on Comprehension of Simplification of Social Science Reading Material*, 166
Class, size of, 68 f.; conclusion on size, 76; discussion vs. lecture, 318
Classical writings, 241
Classroom instruction, 127
Clay modeling, 436
Clean-up Week, 413, 429
Cohen, Morris R., *Reason and Nature*, quoted, 107
Collateral reading, 171, 205 f.; value of, 223 f.; development of, 225; functions of, 229; the effects upon learning, 239 f.; practical problems in the management of, 247
College, oral instruction in, 304
Comenius, 393
Commission, 5 f., 34, 38, 39; report of the, 1
Committee, on Recent Social Trends, 86, 109; on Educational Research of the Payne Fund, 372; on the Teaching of Geography of the National Council of Geography Teachers, 454
Committee of Seven, quoted, 208, 228
Committee of Ten, 266, 391; quoted, 208; resolutions of, 227
Community, the, 404; problems of, 428 f.
Compton's *Pictured Encyclopedia*, 256
Concentration, 8, 11
Concepts, examples of inadequate and erroneous, 187 f.
Conclusions and Recommendations, 3, 5, 6, 35, 84, 89
Conclusions of tables, 48 f.
Conditioning, used, 113 f.
Consitt, Frances, *The Value of Films in History Teaching*, quoted, 363
"Construct," the term, 124
Construction, largely fanciful, 420; types illustrative, 421; time to be given to, 435; significance of, 436
Constructive activities, principles of, 417; evaluation of, 434 f.
Contemporary fiction, 269
Content in relation to method, 8
Controversial issues, 87 f., 118
"Convey," the term, 129
Correlation, 8, 10, 59
Corey, Stephen M., *Learning from Lectures* vs. *Learning from Readings*, quoted, 314
Coulter and Gerstenfeld, *Historical Bibliographies*, 246
Course of study, 8, 17, 395, 458; concepts in, 158; related to textbook, 218; relation of objects, 398; syllabi of, 399
Courses, in methods, 34; in teachers colleges, 37
Creative thinking, 458
Croce, Benedetto, *History, Its Theory and Practice*, 92
Crucial influence of the teacher, 34

Cultural aspects, 10
Culture epoch theory, 394 f.
Curricula, child-centered, 21
Curriculum, content of, 4; as a whole, relation of the social studies to, 13; industrial arts in, 424
Cyclopedia of Education, The, quoted, 337 f.

Dale, *Familiarity of 8000 Common Words*, 164
Dalton plan, the, 33, 52, 338
Data on the words that children understand, 163
Daughters of the American Revolution, 88, 93
Davis, C. O., *The Size of Classes and the Teaching Load in the High School*, quoted, 72
Davis, *A Day in Old Athens*, 241
Davis, Elmer, *Dealing with the Ancients*, quoted, 276
Daydreaming, 444
Declaration of Independence, episode of, 117
Developmental theory of learning, 17
Dewey, John, 124, 125, 138, 394, 407; quoted, 97, 102, 110, 127, 142, 419; *The Public and Its Problems*, 53, 104, 110; *How We Think*, quoted, 107, 178, 342; *Art as Experience*, quoted, 450
Dewey, Joseph C., 188, 431; *Reading Comprehension Difficulties in American History*, 175, 176, 186
Diaries, 267, 458
Dickens, Charles, 273
Dictionaries, 232
Differentiated assignments, 64
Discovery, the spirit of, 23
Dondore's *The Prairie and the Making of Middle America: Four Centuries of Description*, quoted, 298
Donner, Arvin N., *Student's Knowledge of Eminent Persons*, 145
Dorris, Anna V., *Visual Instruction in the Public Schools*, quoted, 360
Downing, Elliot R., *Comparison of the Lecture-Demonstration and the Laboratory Methods*, quoted, 320
Dramatic productions, authenticity in, 475
Dramatization, 441 f.; value of, 471 f.; perspective, 474; planned, 478 f.; effective use of, references, 479
Drill master, 481
Drummond, *History in School*, quoted, 453, 472
Dunlap, Knight, *Social Psychology*, quoted, 82 f.
Dymond, *Handbook for History Teachers*, 283
Dynamic teaching, 223

Ear-minded, 492
Eastburn, Lacey A., *The Relative Efficiency of Instruction in Large and Small Classes on Three Ability Levels*, 74
Economics, 10
Edmonson, J. B., 209
Educational background, 311
Effective learning, conditions for, 68 f.
Effort, distribution of, 493
Elements of style, structural, 169
Emerson, Ralph Waldo, 270
Emotional appeal, used, 113 f.
Emotional conditioning, 114
Encyclopedias, 232
English, teaching of, 227
English Department, the, 204 f.
"Enterprise," 414
Equipment, visual, 378
Era of profound change, 111 f.
Erb, B. P., quoted, 19
"Escapes," 422, 437
European schools, 300
Evidence from other subjects, 71
Ewan, S. N., *Class Size*, 74
Excursions, volume of, 403 f., 410 f.; names for, 404; conclusions regarding, 410 f.; planning for, 411 f.
Exhibit, value of, 401 f.
Exhibits, 396 f., 400
Experience, influence of, 130; interest related to, 132; relation to reading, 177; sources of concrete, 393 f.
"Extensive" reading, 241
Eye-minded, 492

"Fact" questions, 348
Factors influencing effectiveness in speaking, 314
Fascist Italy, 89
Federal Reserve Act, 7

Federal Reserve System, 212
Feeling tone, 490
Ferguson, C. W., *School's Out*, quoted, 405
Fiction, historical and contemporary, 254; adequacy in portraying social life, 269; contemporary, 269; value of historical, 274; contribution to interest in history, 285; use of, in teaching social studies, 288 f.; geographical contributions of, 295; contemporary and historical, 299
Fictional stories, use of, 289
Fidelity to life, 268
Field study, 404
Field trip, the, 26, 404
Films, value of, 363 f.
Finland, 405
Firth, Catherine B., *The Learning of History in Elementary Schools*, quoted, 24, 453, 479
Flag drills, 117
Food, clothing, shelter, methods of obtaining, illustrated, 424 f.
Forgetting, the fact of, 484 f.; the rate of, 486 f.; chief characteristics of, 497 f.
Foster, Charlotte, *The Effect upon Reading Comprehension*, 166
Frame of reference, 6, 38
France, 405
Francis Parker School, 301
Franzen, R. H., and Knight, F. B., *Textbook Selection*, 183
Free Homestead Act, 143
Freedom of teaching, 97 f.
Freedom of thinking, 102
Freeman, Frank N., quoted, 32; *The Learner and the Learning Process*, quoted, 118
Froebel, 393 f., 405
Fuller, Alberta Harriet, *Time-Sense in American History*, 145
Fundamental methods of inquiry, 25
Fundamental problems of learning, 39
Fusion, 12

Gates, Arthur I., *Psychology*, 135; quoted, 134, 137; *Psychology for Students of Education*, quoted, 506 f.; Advanced Reading, Test of, 174
Geographical knowledge, 143
Geographical narratives, 301
Geographical reconstruction, 459
Geographical Review, The, 361
Geography, 10, 11, 93, 118, 157, 467; knowledge of, 193 f.; textbooks in, 213; use of literature in teaching, 266 f.; problems dealt with, 284; use of imaginative literature in teaching, 292 f.; guides to fiction for use in teaching, 295; pictures used in, 361 f.; textbook in, 365; use of pictures in, 380; value of excursions, 409; concepts of, 468; teaching of, 423
Gerberich, J. R., and Warner, K. O., *Relative Instructional Efficiencies*, quoted, 322
Germane, Charles E., *Outlining and Summarizing*, 182
Germany, school journeys in, 406
Goetsch, *Effectiveness of Different Types of Geographical Representation*, quoted, 387
Good, Carter V., *The Supplementary Reading Assignment*, 243
Gould, Arthur, *Experiments in Teaching Large Versus Small Classes*, 73
Grade arrangement, 16
Grade placement, 18
Graphic aids, 441; making, 446; evaluation of, 447 f.; production of, 457 f.
Graphs, use of, 386 f.; value of, 452
Gray and Leary, *What Makes a Book Readable*, 160
Greene, Edward Barrows, *The Relative Effectiveness of Lecture and Individual Reading*, 313
Greene, Harry A., *Measuring Comprehension of Content Material*, 191
Grouping, homogeneous, 66
Guide to Geographical Books and Appliances, quoted, 292 f.

Haggerty, Melvin E., *The Paramount Service of Education to Society*, 101
Happold, *Approach to History*, quoted, 463
Hart, A. B., quoted, 225
Harvard Observatory in Peru, the, 385
Hayes, Carlton J. H., *France, A Nation of Patriots*, 94
Hearing and reading, 156, 317

Hearnshaw, F. J. C., *History as a Means of Propaganda*, quoted, 81
Henderson, E. N., *A Study of Memory*, quoted, 488
Herbart, 393 f., 405
Herbartians, the, 16, 340, 343
Herbers, 188; *Comprehension Difficulties*, quoted, 188
Herodotus, 268
High school level, oral instruction at, 303
Hillegas scale, the, 63
Historian, dependence of the, 112
Historians' History of the World, 241
Historical albums, German and French, 366
Historical and contemporary fiction, 254; value of, 274
Historical construction, 459
Historical geography, 12
Historical information, retention of, 489
Historical narratives, 301
Historically, to think, 139
History, 10, 93, 111, 118, 157; curriculum in, 133; in textbooks, 213; teaching of, 225; relationship to literature, 266 f.; use of literature in teaching, 266 f.; contribution of fiction to interest in, 285; teachers of, 291; story-telling method of teaching, 300; pictures in, textbook, 366; use of pictures in, 382 f.
Holaday, Perry W., and Stoddard, George D., *Getting Ideas from the Movies*, quoted, 363
Hollingworth, H. L., *The Psychology of the Audience*, quoted, 316
Holmes, Eleanor, *Reading Guided by Questions*, 182
Home study, 254
Homogeneous grouping, 63, 66
Horn, Ernest, *Differentiated Courses for Bright Pupils*, 64; *Basic Writing Vocabulary*, 163; *Distribution of Opportunity for Participation*, quoted, 353
Horne, Herman H., *Story-telling, Questioning and Studying*, quoted, 341
How much students should be expected to read, 249 f.
"Howlers," 142, 189, 190, 197, 328, 385
Hudelson, Earl, *Class Size at the College Level*, 71, 73

Ideas, nature and function of, 147; definiteness of, 197; organization of, 357
Identification and classification of students, 40 f.
Illustrations, in textbooks, 365
Imaginary journey, the, 464 f.; advantages of the, 466 f.; weakness of, 467
Imagination, aids to, 441; devices for stimulation of, 441 f.; types of, 442
Imaginative literature, utilization of, 234; the use of, 265 f.; pedagogical value of, 281 f.
Imaginative writing, 458 f.; types of, 458 f.
Implications of a changing world, 110 f.
Incidental learning, 494
Individual differences, 205, 494
Indoctrination, 80 f., 106; through subjects, 92; by description, 94
Industrial arts in the curriculum, 424
Influence of certain administrative factors upon method, 32 f.
Informal discussions, value of, 334
Inhibition, retroactive, 494
Initiative, 433
Instruction, goals of, 133; steps in, 202; in social studies, implications for, 496
Instructional budget, the, 377
Instructional equipment, the crisis in, 257 f.
Instructional materials, 403; for students at the upper ranges, 67
Instructional program in social studies, 120 f.
Integration, 12, 13
Intellectualization, need for, 91
Intelligence, level of, 66; effect of, 134; tests in, 135
I. Q., 135
Intelligent citizen, the term, 233
Intensive reading, the term, 241
Interest, 490, 505 f.; in use of pictures, 362; "center of," 414; stimulation

of, 432 f.; fundamental, contribution of, 504
Iowa Every-Pupil Test, 59; in American History, 47 f.; of Basic Skills, 197
Iowa Silent Reading Tests, 252
Irwin, Manley E., *A Summary of Special Investigations of the Effect of the Size of Class upon the Effectiveness of Instruction*, 71
Isolation, 8; effect of, 10
Items, significant, 344
Ivanhoe, 269

James, William, *Talks to Teachers*, quoted, 431
Japan, 405
Jersild, Arthur, *Modes of Emphasis in Public Speaking*, quoted, 317
Johnson, Henry, 28, 126, quoted, 139; *Teaching of History*, 24; quoted, 210, 231, 286
Jones, Harold E., *Experimental Studies of College Teaching*, quoted, 312, 501
Journal of Geography, The, 246
Journals, 267
Journey, the imaginary, 464 f.
Jugend herbergen (youth hostels), 406
Junior Civic and Industrial League of Lincoln, Nebraska, 429
Justice Holmes, quoted, 97

Kallen, *Freedom in the Modern World*, 98
Kandel, Isaac L., *The Dilemma of Democracy*, 96; *School Excursions*, quoted, 404
Keatinge, *Teaching of History*, quoted, 452
Kelly, Frederick J., *The American Arts College*, quoted, 305
Kerr, Walter E., *A Case Study of Reading Comprehension Difficulties in Geographic Materials*, 149, quoted, 334
Kimmel, W. G., 209; *Observations by a Visitor from Atlantis on Instruction in the Social Studies*, 3; *The Management of the Reading Program in the Social Studies*, 250
Kipling, *Captains Courageous*, 295
Klapper, Paul, *The Teaching of History*, quoted, 474
Knowledge, 106; required for thinking, 107; vs. tests, 185 f.
Krey, A. C., *Dealing with Controversial Topics*, quoted, 90
Kueneman, Huberteen, *The Study of the Effect of Vocabulary Changes*, 167

Laboratory method, 224
Laboratory work, 418
Lagerlöfs, *The Wonderful Adventures of Nils*, 295
Langlois and Seignobos, *Introduction to the Study of History*, quoted, 282
Language, the chief medium, 127; not a mere pedagogical tool, 127 f.; command of skills, 137 f.; the symbolic character of, 154 f.; disability in, 156; limitations of, 206, 403
Lantern slides, use of, 368 f.; making, 370
Latham, *Children's Concepts Concerning Trespass*, 88
Latitude and longitude, misconceptions regarding, 193
Leacock, Stephen, 4
League for Industrial Democracy, 88
League of Nations, 212
Learner and the learning process, the, 31 f.
Learning, organized knowledge as a basis for, 9; developmental theory of, 17; influenced by, 18; psychology of, 31; fundamental problems of, 39; an orderly enterprise, 131 f.; bound up with reading, 203; deficiencies in original, 485; relation of retention to speed, 494
Lecture, vs. reading, 312 f.; vs. class discussion, 318; relative effectiveness of the, 319
Lectures, situations for, 324 f.; synchronized, 376
Letter, writing an imaginary, 461
Letters, 267
Library, facilities of, 211; expenditure for books, 259; policy in regard to purchases, 261
Lincoln, Nebraska, school children of, 429

Lindquist, E. F., 59
Lippman, Walter, *Public Opinion*, 127
Literature, relationship to history, 266 f.; evaluations of, 289; teachers of, 291
"Living together well," 21
Local community, the, 130 f.
Local courses of study, 214
Locke, John, 393
Logasa, Hannah, *Historical Fiction and Other Reading References*, quoted, 286
Logical processes, 30
Lord, Francis E., *The Ability to Make Geographical Uses of the Ideas of Longitude and Latitude*, quoted, 192
Lumley, Frederick L., *Measurement in Radio*, quoted, 327
Lyman, R. L., *The Mind at Work*, 153

Macaulay, 114
McGeoch, Grace O., *Whole-Part Problem*, quoted, 495
Madeley, *History as School of Citizenship*, quoted, 451
Make-believe activities, 437
Manchester University, 405
Mann, Horace, 52
Manual training, spread of, 415
Map symbols, consistency in, 391
Maps, in textbooks, 213; use of, 388; construction of, 454 f.
Martin, E. D., Bernays, E. L., *Are We Victims of Propaganda?* quoted, 81
Material, difficulty of, 310; type of, 311
Mathematics, 14 f.
Matters of fact, 197
Matthews, Brander, *The Historical Novel*, quoted, 270
Meaning, influence of questioning, 344; effect of, 491
Media, through which social realities are approached, 126
Medicine, analogy in, 38
Meltzer, Hyman, *Children's Social Concepts*, 145
Memorization, 152
Memory, 443 f., 481 f.; references, 483; tests on, 488
Mental equipment, of the general public, 109 f.
Mental functions, 311
Merriam, Charles Edward, *Civic Education in the United States*, 88, quoted, 90; *The Making of Citizens*, quoted, 114
Method, of social education, 1; in relation to subject matter, 6 f.; as conditioned by the organization of the course of study, 8; as affected by grade arrangement, 16; biographical, 16; of research, books on, 28; in relation to equipment, 30 f.; courses in, 34; training in the, 235
Method of teaching, 31; in relation to fundamental modes of inquiry, 22 f.; affected, 40 f.; books on, 289 f.
Miller, Earl, *A Study of the Objectives in the Teaching of American History*, 3
Miner, *Our Rude Forefathers*, 298
Mississippi Valley Historical Association, 250; report of the, 229
Missouri, University of, 407
Models, use of, 423 f.
Monroe Doctrine, 364
Montaigne, 405
Moore, Nelle E., *An Analysis of Study Questions in Textbooks*, quoted, 348
Morgan, J. P., 158
Morris, Victor, *Quantitative Measurement*, quoted, 321
Morrison plan, the, 74, 303
Mort, Paul R., *School Surveys and Adjustments of School Organization and Teaching Procedure to Individual Needs*, quoted, 53
Motion pictures, 335; use of, 369 f., 370 f.; investigation of the use of, 371; books on, 371 f.
Motivation, 132 f., 456
Motor-minded, 492
Multiple-choice tests, 148
Murphy, *General Psychology*, quoted, 445
Museums, 396 f.; advantages of, 492 f.
Myths and legends, use of, 289

National Association of Manufacturers, The, 88
National Council of Geography Teachers, 18

National Education Association, 87, 99
National Survey of Secondary Education, 250, 254, 338
Nature of equipment, 30
Nazi Germany, 89
Neilson, W. A., *Charles W. Eliot*, quoted, 304
Newburn, Harry K., *The Relative Effect of Two Methods of Vocabulary Drill on Achievement in American History*, 143
New Stanford Reading Test, 173
New York City, skyline of, 451
Nield, *Guide to Best Historical Novels*, quoted, 297
Nolte, Karl F., *The Effect of Simplification of Vocabulary*, 167
North Central Association, 249
Norton, Laurence E., *Speech Comprehension*, quoted, 313

Objective thinking about controversial issues, 91
Objectives, for teaching American history, 3
Objects, 396 f.; selection and use of, 398; problems in the use of, 400
O'Brien, John A., *Silent Reading*, 200
Ogden list, 166
Ojemann, Ralph H., *The Reading Ability of Parents and Factors Associated with Reading Difficulty*, 161
Oral instruction, 300 f.; in the elementary school, 300; compared with reading, 307; conclusions on, 357 f..
Oral presentation, conclusions on, 309 f.; other forms of, 335 f.
Oral teaching, 206; investigations of, 307
Organization within the subject, 15
Organized knowledge, as a basis for all thinking and learning, 9
Originality, 433
Out-of-school activities, 429
Overlap between grades, 49
Overlearning, 491 f., 502

Pageant of America, The, 256, 366
Pageants, 117
Paper construction, 421
Parades, 117
Parents, cooperation of, 412
Parent-Teachers Association, the, 259
Parker, Francis W., 394; notes of *Talks on Teaching*, quoted, 436
Participation in questioning, 350 f.
Passive learning, 441
Pedagogical literature, 300
People's Lobby, 88
Periodical literature, 234
Perspective, in which method is to be viewed, 1 f.; the broad, 154 f.
Pestalozzi, 393 f., 405
Phonograph record, 335
Photography, influence of, 378
Pictures, advantages of, 360 f.; increase of interest, 362; retention, 362; value of and sense of reality, 362; types of, 364; standards for evaluating, 379 f.; use of, 381 f.; types of, 383
Pierce, Bessie Louise, *Citizens' Organizations and The Civic Training of Youth*, 88
Pink, M. Alderton, *Procrustes or the Future of English Education*, quoted, 305
Political science, 10
Postgate, J. P., in the preface to Bréal, Michel, *Semantics*, quoted, 195
Printed materials, use of, 303 f.
Prints, use of loose, 367
Problems, 15; raising the, 248
Problems of meaning, in the social studies, the, 122 f.
Process, reproduction of, 426; historical setting of, 427
"Project," 413 f.
Project method, 395
Projects, 15
Propaganda, 80 f.
Provision, for individual differences, 254 f.; for future use, 481 f.
Psychology, of learning, 31; schools of, 122 f.; principles of, 443
Public museums, 402
Public questions, 87
Public speaking, emphasis in, 316
Pupils, relatively homogeneous, 58
Pupils' answers, 345
Pupils' questions, 354 f.
Purpose, 490

Quentin Durward, 286

Questioner, attitude of the, 346
Questioning, 336 f.; experimental study of, 338; books on, 339 f.; revealed by its functions, importance of, 342; advantages of, 342 f.; influence of, upon meaning, 344; books on, 346; problems in the technique of, 347; influence on learning, 347 f.; rapidity of, 349 f.
Questions, types of, 346; number of, 349 f.; distribution of, 352 f.; wrong kind of, 356
Question-and-answer, recitations, 303; method, 318; prevalence of, 336 f.; utilization of pupils', 354

Radio, instruction by, 300 f.; value of, 326 f.; effectiveness of, 327; programs for, 332
Raising the problems, 248
Rankin, Paul T., *Pupil Classification and Grouping*, quoted, 54 f.
Raup, Bruce, *Education and Organized Interests in America*, 88
Ray, quoted, 444
Reader, difficulties inherent in the limitations of the, 171 f.
Reading, in relation to learning in the social studies, 151 f.; the nature of, 152; the difficulty of ideas in relation to the difficulty of, 157 f.; nature of material, 158; factors affecting difficulty of, 160; factors pertaining to difficulty of, 169 f.; differences in general ability, 173 f.; the relationship of intelligence, 175; the relation of interest to, 176; relation of experiences to, 177; background for, 178; the effect of a single, 180; the single, 184 f.; under guidance, 185; in the social studies, investigations of, 189; deficiencies in, 198; time required for, 199 f.; in the social studies, the improvement in, 200 f.; speed of, 200; books on ability, 201; bound up with learning, 203; abilities, 204; collateral, 205 f.; ability of students, 212; value of collateral, 223 f.; rates, 251 f.; the influence of general, 265; lectures, 312 f.; preparation for, 428
Reality, the illusion, 278; degree of, 420
Recall, accuracy of, 346; importance of, 491 f.
Red Cross drives, 429
Reduction in amount to be learned, 508 f.
Reference, equipment, 240, 260; use of, 204; the selection of, 244; subordination of the, 248
Rein, Professor, of Jena University, 405
Remmers, H. H., quoted, 322
Repetition, 316; influence of, 492
Report of the Committee of Ten, 15, 216
Report of the Joint Committee on Standards for Graphic Presentation, 388
Representation, methods of, 378 f.
Retention, provision for, 482 f.; amount of, 498; historical information, 489; learning, 494
Review, definite provision for, 506
Rhodes, James Ford, *History of the United States*, quoted, 271
Rhynsburger, Amelia H., *A Study of Comprehension in Silent Reading*, quoted, 172
Rice, Doctor, 71; excursion of, 407
Robinson, James Harvey, *The Humanizing of Knowledge*, quoted, 159, 231; *The New History*, quoted, 267; *The Newer Ways of Historians*, quoted, 271
Rockefeller, John D., 158
Roosevelt, Franklin D., 335
Roosevelt, Theodore, 335, 364
Rousseau, 393; philosophy of, 212
Ruch and Stoddard, *Tests and Measurements in High School Instruction*, 340
Rugg, *Preface to Reconstruction*, 13
Russell, Ralph Douglas, *Relative Effectiveness of Presenting Material*, quoted, 309
Ryan, Grace M., *A Study of the Comprehension of Quantitative Terms*, quoted, 191

Safety campaigns, 413, 429

Salmon, Lucy M., *Why Is History Rewritten?*, 92
Salutes, 117
Scheidemann, Norma V., *Comparison of Two Methods of College Instruction*, quoted, 320
Scholarship, 22; in the social studies, 37
School, innovations of organization of, 41; policy of the, 89; a source of social control, 119; atlases, 232; budget of, 257; book illustrations, 367; the museum, 400; teaching of pupils how to think or what to think, 104 f.
School Journey Association, 405
Scientific methods, 29
Scott, Ernest, *History and Historical Problems*, quoted, 280
Scott, Flora, and Myers, Garry C., *Children's Empty and Erroneous Concepts of the Commonplace*, 143
Self-expression, 458; need for, 415; value of, 431
Sensory appeals, 492
Sequential pattern, the, 20
Shop work, 418
Simplifying vocabulary, 166
Skill, learning as applied to, 496
Skills, importance of, 204; shortcomings in, 454
Slater, Clarence P., quoted, 259
Slogans, 114
Slosson, Edwin E., *Great American Universities*, quoted, 306
Smith, Dora V., *Class Size in High School English*, 71
Social education, 246; in the schools, 1 f.; confusion of, 79; time for, 140
Social group, the, 16
Social heritage, 112
Social inventiveness, 137
Social philosophy, 36
Social problems, hard to understand, 80
Social process, the, 85
Social program?, Shall the schools have a, 84
Social science, teaching, 227; concepts of, 468
Social studies, 13, 133, 157; scholarship in, 37; test in the, 48; evidence in, 72; teachers of, 78; instructional program in, 120 f.; problem of meaning in the, 122 f.; nature of the problems in, 125 f.; topics in the, 140; investigations of reading in, 189; reading in the, 200 f.; teaching of the, 253; use of literature in teaching, 266; problems dealt with, 284 f.; guides to fiction for use in teaching, 296; courses of study in, 357; content of, 459; purposes of instruction, 470
Social utility, theory of, 415
Social vision, importance of, 35
Socialized recitation, 338
Sociology, 10
Sound pictures, use of, 375 f.; problems in use of, 377
Source books, 236; defect of, 237
Source-study, the method of, 27; aims of, 237
Sources, of concrete experience, 393 f.; of data, 248
Soviet Russia, 89
Speaking, effectiveness in, 314; techniques of, 315
Specialism, 2
Specific units in the curriculum, 38
Speed, of reading, emphasis upon, 200; of learning, 494
Spence, Ralph B., *Lecture and Class Discussion*, quoted, 321
Speyer School, 301, 395, 407
Spyri's *Heidi*, 295
Stamp, Doctor, 27
Standard general references, 232
Stanford Achievement Test, 192
Stanford-Binet Scale, the, 134
Statements of objectives, 3 f.
Stereographs, use of, 368 f.
Stereotypes, 114
Stevens, Romiett, *The Question as a Measure of Efficiency*, quoted, 337, 341
Stevenson, P. R., *More Evidence Concerning Large and Small Classes*, 72
Stolte, Helen B., *The Ability of Fourth Grade Children*, 175; quoted, 190
Story-telling method, 300 f.
Strayer, George D., quoted, 69, 259, 339
Structural elements of style, 169
Student, limitations inherent in the,

129; background of ideas of, 138; the individual, 150
Students, number of, 40 f.; classified into groups, 64
Students' knowledge, tests of, 143
Study aids, 150
Sturgis, Cony, *The Spanish World in English Fiction*, quoted, 297
Style, elements of, 159; structural elements of, 161
Subject matter, 15, 35; relation to method, 6 f.
Summarizing, superior to re-reading, 182
Superintendent, work of the, 35 f.
Supervision, effect of, 35 f.
Supplementary reading, 224
Swindler, R. E., *The High School Library*, quoted, 260
Symbolism, 114; used, 113 f.; a poor form of, 435; absence of strained, 477
Symbols, 114
Synchronized lectures, advantages of, 376 f.

Table I—Age-grade table for the elementary school pupils in 100 city schools of Iowa, 43
Table II—Distribution of mental ages by grades, 44
Table III—Distribution of pupil scores on a battery of tests of reading comprehension, 45
Table IV—Distribution of scores of pupils from three high-school grades, 47
Table V—Frequency distribution of pupil scores, 51 f.
Table VI—Scatter-graph of students according to intelligence quotients, 61
Table VII—Showing the relationship of scores of 606 pupils, 62
Table VIII—Median size of classes in all subjects in cities, 69
Table IX—Policies as to minimum and maximum class size in social studies, 70
Tables, conclusions of, 48 f.
Taboos, 114
Taft, W. H., 335
Taine, *History of English Literature*, 272
Teacher, competence of the, 34; crucial influence of the, 34; influence of the, 149; evil of poor questions, 356; qualifications necessary, 480; what she should know, 497 f.
Teachers, of social studies, 78; the load of, 78
Teachers College, Columbia University, 407
Teachers colleges, courses in, 37
Teaching, influenced by, 18; methods of, 31, 40 f.; types of, 33; variations in methods of, 50; freedom of, 97 f.; oral, 206; books on methods of, 245
Technical words, 165
Technique of questioning, 347
Terman, Lewis M., *Genetic Studies of Genius*, 65
Terman and Lima, *Children's Reading*, 246
Terminology basic to the social studies, 166
Test, reliability of, 60 f.
Testing and teaching, implications for, 147
Tests, of intelligence, 58; defect of, 147 f.; written, 182 f.; results of, 188; vs. knowledge, 185 f.; properly planned, 500
Textbook, and collateral reading, 206 f.; prevalence of the method, 207 f.; the use of the, 218
Textbook in American Education, The, quoted, 209
Textbooks, 30, 128 f., 157, 186, 458; in American history, 93; difficulty of, 183 f.; publishers of, 214 f.; authors of, 215; state adoption of uniform, 216; improvement of, 217; bibliographies in, 244 f.; illustrations in, 365
Texts, appraisal of, 171; the limitations of, 210 f.; influences mental to the production of 214
Theories and procedures, 19
Thinking, 107 f.; freedom of, 102; needed in acquiring knowledge, 105

Thorndike, Edward Lee, 63; quoted, 111, 153, 195; *Intelligence and Its Uses*, 58; *In Defense of Facts*, 106; the list of, 162, 167; *Reading as Reasoning*, quoted, 184, 195; *Education for Initiative and Originality*, quoted, 434
Thought, the product of, 23
"Thought" questions, 348
Thousand Books for the Senior High School Library, 246
Thralls, Zoe A., *The Selection and Use of Pictures*, quoted, 380; *The Use of Maps in Geographic Instruction*, quoted, 389
Time, limit of, 250 f.
Time, sense of relationships, 453
Time charts, value of, 452
Time line, value of, 452
Tombleson's *Views of the Rhine*, 378
Topical method, the, 337
Topics, number of, 63; in course of study, 126; difficulty of many, 136; vast reduction of the, 253; used in research, 373; isolated, 495
Tough-mindedness, 137
Traveling libraries, 263
Travels, 267
Trevelyan, *History and Fiction*, quoted, 279
True-false tests, 148
Tryon, Rolla Milton, 17; quoted, 212; *The Social Sciences as School Subjects*, 8; *The Teaching of History*, quoted, 210
Turner, Frederick Jackson, 11
Turney, Austin H., *The Status of Ability Grouping*, quoted, 54 f.
Tuttle, H. S., *Quantitative Measurement*, quoted, 321
Tyler, Ralph W., *Certain Administrative Procedures in Botany and Zoölogy*, 75
Type studies, 15
Types of Teaching, 33

Uncle Tom's Cabin, 269
Underlearning, 492
Understand, ability to, 154 f.
Understanding, fundamental importance of, 122 f.; as an active process, 123 f.; factors which influence, 125; the effect upon, 141 f.
Unification, 9, 12
"Unit of work," 413
United States, histories of the, 233; school journeys in, 407 f.
United States Chamber of Commerce, 88
United States history, 51 f.
Units, 15
Uses and abuses of authority, 112

Vanderbilt, 158
Variations in methods of teaching, 50
Verbal memorizing, 230, 441
Verbalism, 141 f., 198, 343, 360, 393, 481; prevalence of, 151
Vincent, John M., quoted, 282
Visual aids, 359 f.; the term, 359
Visual presentation, 308 f.
Vittorino da Feltre, School of, 405
Vocabulary, index of difficulty, 161; simplification of, 166, 168
Vogel, Mabel, and Washburn, Carleton, *An Objective Method of Determining Grade Placement*, 161

Wandervögel, founding of the, 405
What and how to think, 79 f.
Whitehead, Alfred N., *Symbolism: Its Meaning and Effect*, quoted, 114
Whitman, Walt, 271
Whole and part methods, the, 495
Wilcox, Myron J., *The Effect of a Corrected Inventory Test*, 185
Wilson, Howard E., 19; *Fusion of Social Studies*, 13; and Erb, B. P., *Survey of Social Studies Courses in 301 Junior High Schools*, 19
Wilson, Woodrow, 335
Winnetka plan, the, 52
Wood, Ben D., and Beers, F. S., *Knowledge versus Thinking?* 106
Woodworth, Robert S., *Psychology*, quoted, 445
Worcester, D. A., *Memory by Visual and by Auditory Presentation*, quoted, 308 f.; report of, 328
Word, double relationship of a, 196
Words, difficult, 170
Work, methods of, 138
Workbooks, 150; value of, 220 f.

World Book, The, 256
Wright, *Aids to Geographical Research*, 294
Writers on need of concrete experience, 393
Writing, imaginative, 458 f.; direct types of, 463 f.; fabrication of, 462
Written tests, 501

Yamada, Soshichi, *A Study of Questioning*, quoted, 337, 351
Yates, *Concepts and Attitudes Concerning Slander*, 88
Yearbooks of the Department of Superintendence, 36
Yoakam, Gerald A., quoted, 181; *The Effects of a Single Reading*, 182
Young, W. E., quoted, 309; *The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention*, 155, quoted, 310

1. A Charter for the Social Sciences in the Schools, by Charles A. Beard, formerly Professor of Politics, Columbia University.
2. An Introduction to the History of the Social Sciences in the Schools, by Henry Johnson, Professor of History, Teachers College, Columbia University.
3. Citizens' Organizations and the Civic Training of Youth, by Bessie Louise Pierce, Associate Professor of History, University of Chicago.
4. Tests and Measurements in the Social Sciences, by Truman L. Kelley, Professor of Education, Harvard University, and A. C. Krey, Professor of History, University of Minnesota.
5. Geography in Relation to the Social Sciences, by Isaiah Bowman, Director, American Geographical Society, with a special study, Geography in the Schools of Europe, by Rose B. Clark, Nebraska Wesleyan University.
6. Civic Education in the United States, by Charles E. Merriam, Professor of Political Science, University of Chicago.
7. The Nature of the Social Sciences, by Charles A. Beard.
8. Educational Administration as Social Policy, by Jesse H. Newlon, Director of Lincoln School, Teachers College, Columbia University.
9. Social Foundations of Education, by George S. Counts, Professor of Education, Teachers College, Columbia University.
10. The Social Ideas of American Educators, by Merle Curti, Professor of History at Smith College.
11. The Social Sciences as School Subjects, by Rolla M. Tryon, Professor of the Teaching of History, University of Chicago.
12. Are American Teachers Free? by Howard K. Beale, Visiting Professor of History at the University of North Carolina.
13. Curriculum-Making in the Social Studies, by Leon C. Marshall, Vice-Chairman National Labor Board; formerly Professor, Institute for the Study of Law, Johns Hopkins University, and Rachel Marshall Goetz.
14. The Teacher of the Social Studies, by William C. Bagley, Professor of Education, Teachers College, Columbia University, and Thomas Alexander of Teachers College, Columbia University; with an appendix by Edward Payson Smith.
15. Methods of Instruction in the Social Studies, by Ernest Horn, Professor of Education, University of Iowa.

Conclusions and Recommendations.

लाल बहादुर शास्त्री राष्ट्रीय प्रशासन अकादमी, पुस्तकालय
Lal Bahadur Shastri National Academy of Administration Librar
मसूरी
MUSSOORIE

यह पुस्तक निम्नांकित तारीख तक वापिस करनी है।
This book is to be returned on the date last stamped.

दिनांक Date	उधारकर्त्ता की संख्या Borrower's No.	दिनांक Date	उधारकर्त्ता की संख्या Borrower,s No.

372.83
Hor

108520
अवाप्ति संख्या
Acc No. ~~2584~~

वर्ग संख्या
Class No.

पुस्तक संख्या
Book No.

लेखक
Author Horn, Ernest

शीर्षक
~~Methods of instruction~~

372.83
Hor

~~2584~~

LIBRARY
LAL BAHADUR SHASTRI
National Academy of Administration
MUSSOORIE

Accession No. 108520

1. Books are issued for 15 days only but may have to be recalled earlier if urgently required.
2. An over-due charge of 25 Paise per day per volume will be charged.
3. Books may be renewed on request, at the discretion of the Librarian.
4. Periodicals, Rare and Refrence books may not be issued and may be consulted only in the Library.
5. Books lost, defaced or injured in any way shall have to be replaced or its double price shall be paid by the