THE TEACHING OF READING

A TEXTBOOK OF PRINCIPLES AND METHODS

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TO MY PARENTS

ALFRED A. AND TAMSON B. WHEAT

MY FIRST AND BEST TEACHERS

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PREFACE

This book has been prepared for use in normal-school classes and in teachers' reading-circles. It is the outcome of some eight years' experience by the author in the work of training teachers for service in the elementary schools—three years as a school superintendent and the rest as a teacher of professional subjects in a state normal school. It represents an attempt to make accessible to teachers the significant results of the recent scientific investigations of reading by Huey, Judd, Gray, and others and to present for the consideration of teachers a somewhat explicit statement of the underlying principles, the aims, and the important outcomes of a course of study in reading for the various grades.

The book represents, moreover, the point of view of the author with respect to the whole body of professional courses for teachers. He believes that the methods and devices of teaching a given subject are, in the main, purely personal and are the effective application by the individual teacher of the ideas he has secured of the guiding principles upon which work in the subject is based. He holds that the methods course in reading, for example, should help the student to form some ideas of his own of the nature of the reading process and of the various stages of its development among children in the grades, to the end that when he undertakes the task of teaching the subject he will be able to go to one or a dozen manuals or to observe the methods of one or a dozen teachers, and to secure from each specific suggestions without being overwhelmed by a multitude of devices because he has no plan of his own. There is the teacher who is skilled in the use of certain devices of in-

struction, but is unsuccessful because he does not have in mind a purpose in using them; and there is the teacher who knows *what* he wishes to do and *why* and *when* and *how much.* The latter can use a dozen manuals, or receive suggestions from a dozen teachers, and not be confused, or he can get along with the help of none, because with practice he can make his own devices. In accordance with this point of view the author has undertaken a statement of *what* instruction in the various phases of reading the teacher should give, *why* it should be given, *when* to give it, and *how much* to give. He has, therefore, knowingly run the risk of giving too few specific suggestions as to the methods and devices of instruction in order that he might not at any point be in danger of beclouding the main issue. His purpose in every chapter has been to help the teacher of reading to get an idea, not merely a device.

Many a teacher who reads this book will no doubt be surprised when he notices the absence of the customary chapters on Reading Tests, Supplementary Reading, How to secure the Audience Situation in Oral Reading, Memorizing, and Teaching a Masterpiece of Literature. Although the author recognizes the importance of every one of these chapters, he has refrained from discussing them, because such discussions would lessen the emphasis he has wished to place upon the teaching of *reading for meaning*. He has considered it the wiser course to make the book somewhat *exclusive* in the treatment of one topic than to make it *inclusive* in the treatment of many related topics.

The author's point of view as expressed in this book has resulted from a number of influences, many of which it would be difficult to acknowledge. He is under special obligation to the following: to Superintendent W. W. Trent of Elkins, West Virginia, under whose supervision he taught his first school, for bringing for the first time to his attention the fact that prevailing methods of teaching reading are not always as successful as they might be; to the primary teachers under his supervision in Williamstown, West Virginia, especially Miss Pearl Gould and

Miss Bethel Ingraham, for striking demonstrations in practice of superior methods of teaching beginners to read; to Professor Charles H. Judd and others of his teachers in The University of Chicago for an interpretation through their class instruction and writings of the nature of the reading process and an explanation of its development; and to his wife, Florence Bodey Wheat, for encouragement at every stage of the work, for many helpful suggestions which have led to rearrangement of topics, and for much-needed assistance in reading the proofs. To his colleagues in the work of teacher-training in West Virginia, to Mr. J. F. Marsh, Secretary of the State Board of Education, and Professor Hunter Whiting of the Foreign Language Department of the Glenville State Normal School, who at various times read parts of the manuscript, and to Professor Walter Barnes of the English Department of the Fairmont State Normal School, who read the whole manuscript, the author is indebted for many valuable suggestions which have been included in the text. Finally, from his students in Special Methods in the Glenville State Normal School, for whom the material in this book was organized originally, the author has received many helpful ideas and illustrations.

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H. G. W.

GLENVILLE, WEST VIRGINIA

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THE TEACHING OF READING

PART I. INTRODUCTION

CHAPTER I

THE AIMS OF READING INSTRUCTION

The first task that confronts the teacher who would undertake a study of principles and methods of teaching reading is the one of determining the aims of reading instruction. The underlying principles of methods and the methods themselves must accord with the aims to be accomplished. If the aims are clear-cut and definite, principles and methods will tend to take shape in the teacher's thinking and practice in forms that are clear-cut and definite; whereas, if the aims are vague and undefined, principles will be obscure and methods will be wavering and inexact. A mistake in the aims reveals itself throughout the whole course of instruction; its results are wasted time and effort, for the teacher either accomplishes nothing or else that which is of little value.

Mistaken aims are wasteful. The importance of a correct understanding on the part of the teacher of the aims of reading instruction can be illustrated by numerous observations of wasted efforts resulting from mistaken aims. The following are typical:

Teacher A takes her first-grade pupils through numerous and varied phonic exercises and drills. Phonograms are sounded

and learned from the first day of school. Her pupils become adepts in word-pronunciation, in word-sounding. Her pupils learn that reading is word-calling; they seldom learn that reading is to secure meaning.

Teacher B taught first-grade pupils in a rural school some years ago. Ability to spell the words in the reading books was the criterion of progress in his school. In order to win promotion to the second grade his pupils were required to learn the spelling of every word in McGuffey's "First Reader."

Teacher C requires her second-grade and third-grade pupils to "learn the story" in their lessons through study at home. The time of the recitation period is consumed in discovering how well the pupils remember the story. The pupils learn the stories in their reading books well. Whether they learn them through their own efforts at reading or through hearing them read by their parents is a question that never seems to give the teacher the least disturbance.

Teacher D requires his fourth-grade pupils to read and re-read a selection until they have *mastered* it. Every unusual word, every allusion, every striking phrase, every turn of the story, is made the subject of closest scrutiny and analysis. The teacher prides himself on being "slow, but sure." The reading of his pupils is intensive, not extensive.

Teacher E is a stickler for *expression*. Her sixth-grade pupils engage in oral reading exclusively. When one pupil stands and reads, the others listen for mistakes in pronunciation and emphasis. The pupil re-reads until he *expresses* the paragraph to the satisfaction of the teacher.

Every one of the teachers just described is a conscientious teacher, striving very earnestly to teach reading. Each secures an abundance of results; each is successful in accomplishing his aim of instruction. As teachers of reading they all are failures, for the reason that in each case the aim is wrong or only partly correct. Mistaken aims are wasteful of time and effort and public funds.

Aims in reading are variously interpreted. In the observations that are related in the foregoing topic it is to be noted that of the several teachers described, each was dominated by a different aim of instruction. The fact that a variety of aims seems to prevail among teachers generally serves to impress the point that attention needs to be turned to the matter of determining the aims that should direct the process of teaching children to read. The point receives added emphasis in the variety of interpretation which educational literature gives to the aims of reading instruction. The quotations that follow illustrate how great is this variety.

The importance of oral reading as preparation for the study of literature is voiced as follows:

> Primary as it may sound, I cannot help emphasizing as the foundation of all study of literature the training of students in reading, pure and simple.
>
> The practical value of simple reading aloud seems to me to have been too often overlooked by teachers of literature. Teachers read to their pupils, and this is or should be of great importance; but the thing of which I am now speaking is the reading of the students to the teacher and to the class. In the first place a student cannot read aloud without making evident the degree of his intelligent comprehension of what he is reading. He must show how much he understands and how he understands it.[1]

Quite a variety of aims of reading instruction are proposed in the quotations which follow:

> In teaching reading there are just two ends to be sought: (1) to make the learner automatic and quick in the recognition of word and letter forms and values; (2) to secure his interest in the *content*, the spiritual element, of the printed forms. Under the first is included the *mechanics* of reading—distinct and clear articulation and correct pronunciation, as well as skill in instant interpretation of words and letters. In the second is involved the character-growth of the learner, his intro-

[1] Arlo Bates, Talks on Teaching Literature, p. 61. Houghton Mifflin Company, Boston, 1906.

duction to an enjoyment of truth, goodness, beauty, as seen by others and expressed by them in the world's literature.

The ultimate purpose in reading is to get thought and inspiration, knowledge and enthusiasm, help and pleasure, from the written or printed page.—R. N. ROARK[1]

The function of reading is to interpret written and spoken words and to express their meaning to an audience. The first phrase—*to interpret written and spoken words*—refers to silent reading. Both phrases taken together describe oral reading.

The standard of good reading lies in the ability of the reader to enter into the experience of the author and to make his audience enter into the same experience. Time, pitch, quality, and force are all secondary standards derived from this. With rural school children, teachers should be satisfied if the pupils understand what they read and read well enough to make the audience understand. The expression of deep or complex emotions, or of any emotion, should be incidental to the understanding of what is read.—W. W. CHARTERS[2]

Paul Klapper assigns to reading three important outcomes, or *elements*: namely, (1) to extract thought; (2) proper vocalization; and (3) literary appreciation.

The foregoing quotations show that the aims of reading instruction have been subjected to various interpretations. The need of a definite, properly formulated aim is emphasized at every point. The quotations illustrate also the almost hopeless muddle into which one's aim in reading would resolve itself if such statements were considered with too great seriousness.

The purpose of the chapter. The definition and characteristics of reading. Accordingly it becomes the purpose of the discussions of the present chapter to determine the aim of instruction in reading. In order to consider this purpose in somewhat definite terms it will be necessary for us to be more explicit in our statement of it. To this end let us examine the definition of reading and its possible characteristics.

[1]From "Methods in Education," pp. 103, 113. Copyright by Ruric N. Roark. By arrangement with the American Book Company, publishers.

[2]Teaching the Common Branches, pp. 105, 113. Houghton Mifflin Company, Boston, 1913.

The word *reading* is derived from the Anglo-Saxon *ræd,* which meant "counsel," and *rædan,* which meant "to counsel, to advise." To read originally meant to take counsel or to give advice. The double meaning was retained in its later development. *Reading* came to mean the double process of seeking counsel from writing and of passing on this counsel to others. We think today of reading as being the process of "getting meaning from the printed page" and of vocalizing, "in the words of the author, the thought that was gained." Unless we think or speak specifically of *silent* reading, or "reading to oneself," the latter definition, *vocalizing*, stands out in our minds with the greater prominence. When the word *reading* is mentioned to us, we are apt to think of one reading aloud for the benefit of others. The idea of reading for meaning for one's own benefit usually does not have so prominent a place in our consciousness.

Two important characteristics of reading are thus stated in the definition. To these it is necessary to add a third; namely, speed. Speed is an important factor in reading. Too much speed is a hindrance to good expression; but if one is reading silently, speed may be increased so long as it does not interfere with getting the meaning. The characteristics of reading, then, may be stated as follows: (1) comprehension; (2) speed; and (3) vocalization, or expression. Comprehension and speed, taken together, apply especially to silent reading. Getting the meaning from the printed page in the shortest possible time may be considered as the purpose of silent reading. Vocalization, or expression, is the chief and only important characteristic of oral reading.

In terms of the three characteristics named above, the process of reading and the outcomes of reading instruction may be thought of as (1) *effective rapid silent* reading and (2) *expressive oral* reading. Which of these outcomes is the important one and the one that reading instruction should aim to secure is the problem for the discussions of the present chapter to solve.

The needs of society should determine the aim of reading instruction. Let us examine our problem from the social point of view. Fully stated, this viewpoint takes form somewhat as follows: (1) Society, through its laws and its various administrative officials and functions, requires and makes provision for a certain amount of reading instruction in the public schools. (2) Society insists that reading be taught in order to meet certain definite social needs. Since society makes the necessary provisions that reading be taught, it has the right to make such a demand. (3) Therefore instruction in reading should be so organized—should so aim—as best to meet the needs of society.

Considered from the social point of view our problem resolves itself into the questions: What are the needs of society with respect to the teaching of reading and the outcomes of reading instruction? Are these needs met by instruction in *expressive oral* reading or by instruction in *effective rapid silent* reading?

In his chapter on "Selecting Subject Matter,"[1] Professor Parker gives the following answers to our questions: (1) the social needs of former days required the teaching of expressive oral reading; (2) the social needs of the present require the teaching of effective rapid silent reading. In order to emphasize the demands of present-day social conditions Parker depicts them in very sharp and striking contrast with the demands of the social conditions of the past. The contrast is evident in the following outline of his chief arguments:

THE FORMER NEED FOR EXPRESSIVE ORAL READING	THE PRESENT NEED FOR EFFECTIVE RAPID SILENT READING
1. Reading material *was* scarce.	1. Reading material *is* abundant.
2. Only a few *were* able to read.	2. Reading *is* universal; only a few *are* unable to read.
3. Communication *was* very slow.	3. Communication *is* very rapid.
4. Spoken language *was* the chief means of communication.	4. Written language *is* the chief means of communication.

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, chap. iv. Ginn and Company, Boston, 1919.

Our interest centers in the demands of present-day social conditions, but in order rightly to appreciate their force we should consider them in the light of the demands of the social conditions of former days. For the sake of contrast, then, let us examine the social needs of the past as they relate to instruction in reading.

In the past reading material was very scarce. The outstanding social condition relative to reading of the days that are past was the extreme scarcity of reading material. Little reading was done, for the reason that there was but little to be read. In colonial days the total printed matter in many a home consisted of the family Bible, the almanac, and an occasional newspaper. In the schools the children had the opportunity to read as textbooks the hornbook and the "New England Primer"—nothing more. Of the lack of books in the schools and homes of the colonists Parker makes the following statement:

> There it was indicated [referring to a preceding chapter] that until 1750 all the reading matter in most of the elementary schools consisted of the "New England Primer," or some similar primer, and the Bible. In many of the poorer homes in the early colonial period the Bible was the only book for adult reading, supplemented in some homes by a few other religious books such as Wigglesworth's "The Day of Doom, or a Poetical Description of the Great and Last Judgment with a Short Discourse on Eternity." In a few favored homes a small "chest" of books constituted a treasured library.[1]

The weekly newspaper added a negligible quantity to the total supply of reading material. The newspapers were few in number, they printed little news, and their combined weekly circulation at the opening of the Revolution barely reached five thousand copies. Their scarcity and general character are spoken of by Sparks as follows:

> Newspapers had not yet assumed importance as disseminators of news. When the Revolution broke out there were only thirty-seven

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, p. 86.

newspapers in the American colonies, and no dailies. Massachusetts had seven, New York three, and Pennsylvania eight. They were not much larger than a large pamphlet page of the present day, and of four pages only.

The latest news from Europe which the *New York Weekly Post Boy* of February 25, 1750, could find was just four months old, that from Charleston one month, Philadelphia one week, and from Boston three weeks old. The class of news illustrates the simple life of the people. From Charleston came nine lines on a "violent storm of wind." Boston contributed sixteen lines on a "most violent storm. The Rain descended and the Floods came in a most shocking Manner." From the same place appeared a story in four lines of a child falling into a cellar, four lines on a Captain Benjamin Blaney thrown from his horse, and eight lines on the drowning of two sailors.

Paper was scarce and the printer was often puzzled to get his matter into condensed shape. To this scarcity of paper is due the variety of sizes and tints shown in a file of colonial papers. The margin was often used for advertisements, generally of slaves to be sold.[1]

Only a few were able to read. Another social condition of the past which exerted its influence on the character of reading instruction in the schools as well as on the kind of reading demanded in the home was the prevalence of illiteracy among the people generally. We may secure an idea of the extent of illiteracy among the people of colonial and Revolutionary days if we consider to what degree elementary education was neglected during that period. The following statements give evidence of this neglect:

North Carolina was probably the most backward of all the colonies, but even here a few schools were established during the first two decades of the eighteenth century, chiefly through the efforts of the Anglican Church. The net results, however, were small, and in 1736 Governor Johnston reproached the assembly with having "never yet taken the least care to erect one school which deserves the name in this extended country."

[1] E. E. Sparks, The Expansion of the American People, pp. 60, 61, 63. Scott, Foresman and Company, Chicago, 1900.

The results, however, in practice did not come up to the excellence of the laws, and while in some towns in both Massachusetts and Connecticut a public rate was levied for education, more generally the parents had to pay the teachers, and they were hard to secure. When obtained they taught but two or three months during the year. Bad spelling and wretched writing were features of the age from which New England was not exempt. Real learning was confined, after all, to the ministers and the richer classes in the New England colonies, pretty much as in the mother country. In Plymouth and Rhode Island, where the hard conditions of life rendered any legal system of education impracticable, illiteracy was frequent.[1]

Professor Cubberley illustrates the wasteful character of colonial school training in the following statement:

> The greatest waste of time came from the individual methods of instruction universally followed in teaching. Children came forward to the teacher's desk and recited individually to the master or dame, and so wasteful was the process that children might attend school for years and get only a mere start in reading and writing. Hearing lessons, assigning new tasks, setting copies, making quill pens, dictating sums, and keeping order completely absorbed the teacher's time.[2]

When we consider that the schools of colonial days were exceedingly poor and that they provided training for only a small percentage of the population, we become impressed with the fact that the ability to read was the exception and not the rule. Only a few people were able to read, and, as it was pointed out in preceding paragraphs, reading material was very scarce. Let us now consider how slowly and infrequently reading material (written news) was communicated.

Communication was very slow and infrequent. We may be enabled best to secure an idea of the slowness and infrequency

[1] A. B. Hart (Ed.), Social and Economic Forces in American History, pp. 60–61, 7–8. Copyright, 1904, 1905, 1906, 1907, 1913, by Harper & Brothers, New York.

[2] E. P. Cubberley, Public Education in the United States, pp. 36–37. Houghton Mifflin Company, Boston, 1919.

of the communication of written news by considering the hardships and difficulty of travel in colonial days and the consequent very inefficient postal service of the time. The hardships and difficulty of travel are discussed by Sparks in the following paragraphs:

Travel by land or water was a hardship. When Benjamin Franklin ran away from his brother's printing office in 1723, he was three days sailing in the sloop from Boston to New York. Between New York and Philadelphia the small boat in which he had taken passage to Amboy was caught in a squall and he was thirty hours without food and water. He next walked fifty miles to Burlington, and afterwards spent a night on the Delaware when rowing down to Philadelphia. Travelers with plenty of money fared little better. Packets sailed only at intervals between Boston and New York, New York and Philadelphia, and between Philadelphia and Charleston. On some of the rivers, sailing vessels passed but twice per week. It required usually about six days to go from New York to Albany.

Land travel was developed slowly since roads had to be made and ferries or fords provided. It was 133 years after the landing on Plymouth Rock before a stage ran regularly between New York and Philadelphia.[1]

Of the inefficient postal service Sparks offers the following description:

The printer's office was a kind of colonial clearing house. Many of the advertisements closed with, "Inquire of the printer." He had to circulate his papers and therefore was early identified with the carrying of mail and with the post office. A printer of Boston was also postmaster as early as 1654, but the old practice of using travelers as post-boys for short distances and taverns as post offices continued a century later. In rural Virginia, where there were no printers, a mail bag was sent from plantation to plantation, each planter taking out his mail and being required by law to pass the bag to the next.[2]

As deputy postmaster-general for America, Benjamin Franklin began in 1753 to carry into practice a number of radical im-

[1] E. E. Sparks, The Expansion of the American People, p. 56.
[2] Ibid. pp. 63–64.

provements in the postal service. He established postal routes, formed a regular system of officers and carriers, "originated the advertising of uncalled-for letters, straightened post roads, and increased the Philadelphia-New York mail to three times per week in summer and once per week in winter." Yet with all these improvements the postal service was able to extend its benefits to only a fraction of the population. We read:

> Franklin continued to hold his office until the Revolution broke out, but even then the line of posts extended only from New Hampshire to Charleston, South Carolina, and in no place penetrated the interior of the continent one hundred miles. That vast region was as yet a sealed book.[1]

The foregoing statements are impressive of the fact that the very small amount of reading material which was published in the colonies did not have a very extended circulation.

Spoken language was the chief means of communication. The natural consequence of the scarcity of reading material, of the slow and infrequent communication of news, and of the prevailing condition of illiteracy was that spoken language prevailed as the chief means of communication. The people of the time learned of the events of the day *not through reading*, but by word of mouth. Printed information was scarce, the little that was printed was very inadequately distributed, and when that little did reach the people it could not be read by 90 per cent of them. Travelers were welcomed in every corner of the land for the news they brought, and the demands imposed upon them for information by everyone they met are hardly believable in this day of newspapers and magazines.[2] The people were hungry for news, and as a consequence of the very poor reading facilities that existed spoken language attained such an importance as to exert an undue influence even down to the present. Oral discussion, elocution, and oratory were the chief language interests of the people.

[1] Ibid. p. 65. [2] Ibid. pp. 58–59.

The importance of oratory was emphasized by the prevailing democratic interest in public questions. The following quotation illustrates this emphasis:

> Yet there were many public questions in which the common people of the colonies were vitally interested and concerning which the leaders wanted decisive action. These questions centered in the struggle with England before the Revolution and in the political struggles between the various parties after the Revolution. Consequently oratory was depended upon to arouse and influence the people to an extent that it is difficult for us to appreciate today, unless we live in a part of the United States where the schools are very poor, newspapers and periodicals very scarce, and oratory, as a consequence, still flourishing. An exaggerated parallel to our colonial condition is found in the Russian revolutionary situation of 1917. In Russia there was the same intense interest in a democratic revolution as there was in America. Reading matter was equally scarce in the rural districts and the illiteracy probably more general. In Russia, as a consequence of the illiteracy, the revolutionary government became largely an orgy of oratory. The illiterate soldiers being unable and unaccustomed to read and to study out problems for themselves were easily swayed by the glowing promises of persuasive orators.[1]

Expressive oral reading met the demands of past social conditions. The kind of reading that was taught in the schools of the past was expressive oral reading. Of necessity good expression was the criterion. The prevailing interest in oral discussion, in elocution, in oratory, was reflected in the reading textbooks of the time.

The prefaces of the readers during the first half of the nineteenth century vie with each other in proving that each offers superior training in enunciation, declamation, and elocution. Even as late as 1854 we find the following statement in a preface:

> As an accurate and distinct articulation forms the basis of good reading, it should receive our first attention in instruction, and be constantly taught until words are habitually delivered out from the lips as

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 88–89.

beautiful coins newly issued from the mint, deeply and accurately impressed, perfectly finished, neatly struck by the proper organs, distinct, in due succession, and of due weight.[1]

We can readily see how the common interest in oral expression prevailed as the dominant note in reading instruction. Reading was looked upon as an important art for the passing on of information to others. When only one in ten could read, it was socially important that he engage in the process, not so much for the sake of getting meaning to satisfy his own private interests as for the sake of expressing the meaning orally to others. When a child was taught to read, he was impressed with the importance of reading so others would hear and understand. The child must learn to read for the benefit primarily of the multitude who possessed no skill in the art. The demands for expressive oral reading were all the more impressive for the reason that the very poor reading facilities imposed no requirements for instruction in effective rapid silent reading. In the schools of the past expressive oral reading was very properly the aim of reading instruction.

The social needs of the present are different. The foregoing discussion has made clear the relation between past social needs and instruction in expressive oral reading. The question that has been constantly before us is, Are the social needs of the present met by instruction in expressive oral reading or by instruction in effective rapid silent reading? Our interest, accordingly, has not been concerned with the social needs of the past except as consideration of them serves to make vivid the contrast with the social needs that prevail at the present time. Little needs to be added here in order to emphasize the fact that the social needs of the present, as they relate to reading, stand out in sharpest contrast with those of a former time. Whereas the social needs of colonial and Revolutionary days were characterized by (1) the scarcity of reading material

[1] Ibid. pp. 91–92.

(2) the inability of the many to read, (3) the slowness of communication, and (4) the consequent importance of spoken language as the chief means of communication, the social needs of the present are characterized by conditions which are exactly the reverse. The free public libraries of our cities and towns provide the people access to books by the tens of thousands. Hundreds of bulletins are published annually by departments of our state and national governments and distributed for the asking. The daily newspaper and the monthly periodical are distributed regularly by the postal service to the most remote sections of the Union. News by wire and wireless is transmitted to all parts of the world in the space of a few hours. The ability to read is practically universal; the census of 1920 reveals only about 6 per cent of the population as illiterate. Written language is the chief means of communication.

The aim of reading instruction should be different. Notwithstanding the marked contrast in social needs that has just been pointed out, the former emphasis on expressive oral reading has hardly diminished in a large number of schools, and effective rapid silent reading has been grossly neglected. The changing times impose upon us new social demands. Information must be secured nowadays in a hurry and from a variety of sources. Every calling, trade, and profession has its own body of literature, and the literature of a single vocation is now so extensive that one can hardly keep himself informed on the number of articles published, not to mention the opportunity to read them all. Nowadays one does not have the time to read orally for expression; indeed, there is little occasion to, and but few have the time or the inclination to listen. To keep abreast of the times one must read *silently* for *meaning* for his own pleasure and enlightenment, and, what is equally important, he must read *rapidly* in order to cover as wide a range of subject matter as possible and to avoid becoming narrow in his views and self-centered.

Moreover, the changing times impose new demands upon the schools. Social needs have changed, and the aim of reading instruction should change accordingly. Because expressive oral reading met the needs of the past is no reason why the schools should continue to emphasize expressive oral reading; it is, rather, one good reason for changing the emphasis to a different phase of instruction in the subject. The demands for a consideration of the problem are voiced in the following excerpt from a well-known textbook which discusses reading methods:

> Whatever side of reading we consider we are challenged to investigate. For instance, we have long known that some readers read four times as fast as others of equal intelligence and yet obtain better results. Yet we have remained content to completely ignore the question of rate in teaching to read; the only times it is mentioned usually being when the pupil is cautioned "not to read too fast." We know that the reading of life is almost exclusively silent reading. Yet in preparing for life we are instructed almost exclusively in reading aloud, and have not troubled ourselves to ask whether habits learned in reading aloud may not be hurtful in reading silently.[1]

That the schools have continued to emphasize oral reading is evidenced by the prevailing social neglect of silent reading. Such social neglect is illustrated in the very common practice we have in shaping our opinions of political, economic, social, and other affairs by reading the short editorials of the daily newspapers rather than by gleaning the essential facts for ourselves in an effective rapid survey of the information from a number of sources. For example, we read a short editorial which discusses the president's message (or any other important topic), and we form our opinion of it according to the political faith of the editor; we usually neglect the reading of the entire message (or topic) as a basis for our own independent judgment.

[1] From Huey's "Psychology and Pedagogy of Reading," p. 10. Used by permission of The Macmillan Company, publisher.

Conclusion: effective rapid silent reading is the important aim of reading instruction. The contrast of the social needs of colonial and Revolutionary days with those of our own time serves to convince us that the need for expressive oral reading which formerly prevailed now no longer exists. We are obliged to conclude that written language is now the chief means of communication, that large amounts of reading are necessary in our complex democratic society, that reading must be rapid, that it must secure the meaning, and that it must be largely for one's own individual benefit.

Summary. The importance of a correct understanding on the part of the teacher of the aims of reading instruction was made clear (1) by a number of observations of wasted efforts resulting from mistaken aims and (2) by several quotations from educational literature which show the very great variety of interpretation of what reading instruction should aim to accomplish. The discussion led to the conclusion that the aim of reading instruction should be clear-cut and definite and that it should be to develop either *expressive oral* readers or *effective rapid silent* readers. Which is the important aim, accordingly, became the problem of the chapter. The problem was examined for solution from the social point of view, and a solution was built up on the basis of the present-day needs of society. It was pointed out that the social needs of a former time required that reading instruction should emphasize *expressive oral reading*, and, further, that the social needs of the present, being *different* from those of a former day, demand a *different* type of instruction from that which formerly prevailed. Thus we reached our solution; namely, that the aim of reading instruction which should now prevail is to develop ability in *effective rapid silent reading*.

The theme of this book is thus established. Skillful silent reading for meaning being the art to be developed through reading instruction, succeeding chapters will describe its nature and trace its development through the grades.

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CHAPTER II

THE IMPORTANCE OF READING INSTRUCTION

The connection with the preceding chapter. The preceding chapter on the aims of reading instruction emphasized the fact that the needs of society demand training in reading of a particular character. The social needs of a former time were discussed, and the contrast with those of the present day was very sharply drawn. The effort of the whole discussion was to make clear that present-day social needs are of the utmost importance. To the extent that this effort was successful the importance of reading was stressed in the preceding chapter. The present chapter is therefore a continuation of the preceding one.

The importance of reading usually conceded, but not generally understood. Elementary-school teachers will as a rule grant the contention that reading is the most important subject that is taught in the schools. They are aware that success in all the other subjects of the curriculum depends upon the very fundamental ability to read. They are not willing, however, always to grant that the problem of teaching history, geography, nature study, etc. in the grades is primarily a problem in reading. They are more often influenced by a suggestion to neglect reading in favor of "content" subjects, which are said to be "more important to children," than they are by the necessity of confining their efforts to perfecting the art of reading in conjunction with and as a preparation for instruction in content subjects. The following quotations from "Course of Study for the Elementary Schools and Junior High Schools of West

Virginia, 1918,"[1] are illustrative of the conflict in attitude toward reading which is quite prevalent among teachers. Ordinarily reading is held to be the most important subject of study:

> Reading is the most important subject in the curriculum. It is the most important study because nearly all of the other subjects depend upon it. Arithmetic, geography, history, and other branches are studied in large part through books which the pupil must read. (P. 29.)

In practice, however, reading is very frequently neglected in favor of other and more attractive activities:

> The best authorities agree that we have hitherto given too much time to primary reading to the exclusion of other subjects more important to children of this age. The first year of school life should be given to the child's "own experiences," to use Professor Huey's expression. Nature study, handwork, story-telling, memorizing poetry, conversation about the child's home interests, and group games are the most important means of leading the child from home life to the larger, more organized life of the school. Reading in the first year should be subordinated to real life. For example, directions for handwork and for playing games may be written on the blackboard instead of being given orally. In this way children learn that reading is a means of communicating thought, since they cannot do the desired thing unless they can read the directions. This habit of connecting action with reading should begin with the first school year. (P. 36.)

The conclusion to be drawn from the very evident contradiction in belief which is expressed in the two quotations above is that though teachers are quite ready to concede that reading is the most important study to be taught in the schools, they are not as a rule sufficiently impressed with the importance of the subject always to give it the place of most advantage in their teaching programs. The need of having our attention quite frequently called to the importance of reading instruction is very clearly demonstrated. Let us direct our attention, therefore, to the various reasons why reading is the study of most

[1] Issued by the Department of Free Schools, Charleston, West Virginia.

importance in our schools. We may do this by considering (1) the importance of reading as a necessary preparation for the study of other subjects, (2) the importance of reading as an occupation for the enjoyment of leisure, and (3) the importance of reading as a qualification for good citizenship.

The relation of reading to other subjects. The quite intimate relationship that the subject of reading bears to the other studies of the school is not inherent in the subjects themselves; it is rather a relationship resulting from the methods of instruction that are practiced in our schools. That the relationship is not one of subject matter is easily discernible in a comparison of the types of learning represented by the various subjects. For example, reading is a type of *perceptual* learning; arithmetic and number must be learned through *abstraction*; history and geography require the exercise of one's *imagination*. It is entirely possible for a student to make considerable progress in learning the number concept and to become proficient in number manipulation long before he has acquired the mastery of the difficult art of reading. Likewise, the materials of history and geography may be made familiar to him by means other than reading. It is obvious that ability to read is important in learning other subjects only as use is made of it as a *tool* of learning. As a *tool* of learning, reading is fundamental to all other subjects. Because the *methods* of learning every other subject in school (except handwriting and the manual arts) employ reading as a necessary instrument of learning, it becomes the most fundamental subject in the curriculum and likewise the most important. The importance of reading as a fundamental subject is emphasized in the somewhat distinctive methods of instruction which prevail in American schools.

American schools are reading schools. The methods of instruction which prevail in American schools are not usually thought of by teachers as being at all different from the methods employed in the schools of other countries. The important fact is that the methods used in American schools are distinctly

American in development and in spirit. When compared with the methods which prevail in European countries, those that are peculiar to American schools stand out in sharp contrast. For example, the German boy of a decade ago learned his geography and history and formed his ideas of German power and greatness and of the infallibility of German institutions and political privileges not by an independent study of his textbook nor through the use of a number of supplementary reading books; he developed the ability by means of his schooling to listen attentively to lectures by his teachers and to absorb verbatim the statements he heard. Independent reading was not an accomplishment of the pupil of the *Volksschule*. The learning he received made practically no demands upon any native ability that might be peculiarly his own. Everything he learned was exactly as his teacher told it to him; he learned that thoroughly—nothing more.

Contrast the methods employed in American schools. Here the pupil is given instruction during the first three years of his school life for the purpose of enabling him to master the mechanics of reading. In the fourth grade, textbooks in geography, arithmetic, language, history, hygiene, etc. are put into his hands, and year by year an ever-increasing supply of textbooks and supplementary reading books are provided for his study and perusal. What is the significance of the fact that textbooks are provided in ever-increasing number after the third year of school? The answer is that the pupil is presumed to be able by the end of the third grade to read well enough to secure the necessary amount of meaning from the printed page to justify an independent study of books. The fact that many pupils in the later grades of the school are unable to secure the required amount of meaning through reading from the textbooks put into their hands only goes to show that the primary grades have failed to accomplish the results intended on schedule time. In the primary grades the child learns to read; in succeeding grades he reads to learn.

The method of teaching in American schools is essentially a textbook method, which is, of course, a reading method. Courses of study are outlined and conducted in accordance with an adopted text or a combination of several texts. The study that is carried on by the pupils is usually individual study of textbooks. It is not implied, of course, that all that a pupil learns of a subject is read out of his text. In the recitation periods and in a variety of exercises the pupil is made acquainted with the concrete experiences which relate to the subject he is studying, and these concrete experiences are employed to enrich the reading material of his textbooks. The important point for our purposes is that the pupil is enabled to classify his concrete experiences and to secure an explanation of them by means of his reading. The point for our consideration is that such subjects as geography, hygiene, nature study, history, etc. would be exceedingly narrow subjects if no opportunities were provided for pupils, or if pupils were unable to classify and to explain and to enlarge through reading their concrete experiences in these subjects. If we will examine the pupils of our classrooms, we can without difficulty make the following discovery for ourselves: the pupils who are not interested and those who fail to perform the required amount of work are the ones whose reading is very laborious and those who do little reading; the pupils who are interested are the ones who have a complete mastery of the art of reading and whose reading is very wide. The method of American schools is a reading method; American schools are reading schools.

The reading method is American in spirit. A brief summary of preceding paragraphs will dispose of this topic. A reading method does not hold out its rewards to those who follow blindly the discourses of another; the rewards go rather to those who have the individual initiative to make use of their individual abilities to secure information and ideas for themselves. Individual interpretation is an important permission of the American method of learning by means of reading.

The reading method is American in development. The essentially American feature of the reading method of instruction is to be seen in the way it developed. It is an outgrowth of the demand of the early Puritans that each person be given the necessary training in the schools to enable him, without the aid of an interpreter, to read the Bible for himself. In 1647 the General Court of the colony of Massachusetts passed a law requiring the establishment of schools for the purpose of giving instruction in reading. The preamble of the law is as follows:

> It being one chief point of that old deluder, Satan, to keep men from the knowledge of the Scriptures, as in former times, by keeping them in an unknown tongue, so in these latter times, by persuading from the use of tongues, that so at last the true sense and meaning of the original might be clouded by false glosses of saint-seeming deceivers, that learning might not be buried in the grave of our fathers in church and commonwealth, the Lord assisting our endeavors,—It is therefore ordered that every township in this jurisdiction, after the Lord has increased them to the number of fifty householders, shall then forthwith appoint one within their town to teach all such children as shall resort to him to write and read.[1]

The general purposes of instruction in the schools have become in these later days considerably broader than those implied in the law of 1647, but the fundamental purpose has remained essentially the same—to develop in each individual the ability of independent interpretation.

In the foregoing paragraphs we have discussed the importance of reading instruction from the standpoint of its relationship to the other studies of the school. We now pass to the second phase of our discussion; namely, the importance of reading as an occupation for the enjoyment of leisure.

Bobbitt on "reading as a leisure occupation." Perhaps the most illuminating chapter that has ever been written on the importance of reading as an occupation for the enjoyment of

[1] Quoted by S. C. Parker, The History of Modern Elementary Education, p. 60. Ginn and Company, Boston, 1912.

leisure is the one by Professor Bobbitt entitled "Reading as a Leisure Occupation."[1] We do well to shape our discussion in accordance with its terms.

The leisure occupation of primitive man. Apart from the physical activities indulged in for the sake of leisure occupation primitive man devoted his leisure hours to the observation of the men and things that made up the restricted world in which he lived and moved. He observed his associates and took note of their actions, dress, property, habits, etc.; he kept watch as well upon animals, plants, climate, and natural phenomena. He studied all these through the medium of direct observation and through listening to the reports of others. His motive was interest in things in general; he enjoyed his personal observations.

Primitive man was motivated to this direct and indirect observation in part by his serious purposes; but in large part simply by his interest in things in general. In the latter there was no conscious purpose of putting his knowledge to practical use. In fact he could not judge the value of the information until he had apprehended it. It was mainly a leisure activity; and leaving aside the purely physical, it was probably by far his most important leisure occupation.[2]

His leisure occupation answered an important purpose of nature. Nature's purpose in providing so adequately for this leisure occupation is clear. The man had to move and act within this circle of things and forces and influences, and to shape his conduct to them all. In the unexpected mutations of human affairs he never could know with which of the many things he was to be concerned. He had to be watchful of the whole pageant of community affairs in order to be prepared for the specific adjustments that conditions should demand. Interrelations and interdependencies were innumerable. Rightly to know any part required that one know the whole, and through this all its parts. The most useful thing was an adequate vision of the total pageant of community life and of the conditioning setting or background.[3]

Nature's purpose remains the same in modern life. So in these later days is the purpose of nature manifested in the pro-

[1] Franklin Bobbitt, The Curriculum, pp. 227–243. Houghton Mifflin Company, Boston, 1918. [2] Ibid. p. 227. [3] Ibid. pp. 227–228.

vision it makes for us to prepare ourselves for any possible contingency which may arise in our lives by endowing us with a lively interest in human affairs. Like the savage, we are unable to foresee the problems we must face on the morrow; like the savage also, we prepare to meet any possible problem which may arise by informing ourselves during our leisure moments upon all possible conditions and circumstances of human affairs. With us, too, "interest in things in general" is the motive, usually not any serious purpose. Unlike the savage, however, we are obliged to meet problems many times more complex, and likewise to observe conditions and customs and motives and affairs in an environment as wide as the world. To the extent that we fail to observe the circumstances and conditions of human affairs in all their various ramifications are we unable to shape our conduct in accordance with them.

Our methods of observation are more elaborate than those of primitive man. Primitive man carried on his observation of human affairs and natural phenomena either directly or by listening to the reports of others. We are compelled to make use of methods which are much more elaborate. Very little of world affairs can be observed either by direct observation or by listening to oral reports. It is a physical impossibility for one to travel to all parts of the world in order to carry on direct observation. Then, too, direct observation and likewise oral reports include only what is present. We need today to know what is past in order rightly to interpret the present. The eyes of sense and the eyes of oral language fail us. The demands of modern life require that a greater and greater use be made of the eyes of written language, which is reading.

The following quotations from Bobbitt illustrate the chief instrument of observation that we have at our command and the means by which it may be employed as a leisure occupation:

> In that early day, learning was experiential. Men were not consciously learning or memorizing facts. They *lived*; and the mind was filled with memories, the normal residua of experience. And general-

ized understanding like the trunk and branches of a tree simply *grew* up imperceptibly and unconsciously so as to constitute the relatively unchanging fundamentals of their mental life, while the deciduous foliage of their transient experiences came and went.

In our day, original human nature is relatively unchanged. We have no reason to think that there is possible any new form of education that can be an improvement upon the experiential education of the past. New conditions demand adaptations, adjustment of proportions, the use of new and improved instruments, etc.; but at bottom, as indicated by all of our progressive recent movements in education, it is still felt that experiential education constitutes the best training for the individual. If the principle holds, then the purpose of the reading is *the reconstruction of experience.* It is to be a *mode of living.* It is not to be a didactic verbal presentation of unrooted facts and generalizations to be memorized, recited upon, examined upon, and then in due process forgotten; leaving little more than the unwholesome residua of disagreeable learning experience.[1]

. . . We are here only saying that that portion of the world which lies beyond the horizon is also to be given the greatest possible degree of reality in the minds of the children. Abstract didacticism does not give them this sense of reality. A half-page exposition of the codfishing industry, for example, off the banks of Newfoundland gives the children no essential realization of the nature of that industry. Let them, however, read Kipling's "Captains Courageous," and thus indirectly participate in the various activities and experiences of the fishing fleet off Newfoundland, and they will have come into contact with that type of human experience almost as efficaciously as if they had been actually upon the waters. Let them in the same vivid way travel in spirit across the wide plains of Russia, up the rivers of China, through the jungles of Africa or Brazil, across the Polar ice-fields, with the ore-fleets of the United States Steel Corporation, live upon the cotton plantations of the South, the great wheat farms of the Northwest, in the timber regions of Georgia and Oregon, etc.,—let them thus know realities from vital contacts with them and only then are they prepared for the geographical problem-solving which should develop an understanding of the more general influences, forces, and relationships. Experiential education aims at the greatest possible educational efficiency, substantiality, and practicality of result. It employs interest for the sake of vividness and

[1] Franklin Bobbitt, The Curriculum, p. 230.

massiveness of experience; not for the sake of pleasantness. It *uses* pleasantness as a means; not as an end.[1]

So long has our profession taught that we think the only way to educate is to *teach*. We have not sufficiently known that *to live* will also educate. We have been busy providing the conditions for teaching. Only recently are we coming to know how to provide the conditions for living. Both have a place; and the main thing is living.[2]

The importance of reading instruction as a preparation for the enjoyment and for the most profitable use of one's leisure is very forcibly demonstrated in the chapter of which the above quotations are a part.

We turn now to the consideration of the third point of our discussion, on the importance of reading as a qualification for good citizenship.

Popular government demands an enlightened citizenship. The necessity of a high degree of intelligence on the part of the citizens of a government such as ours is implied in the definition of a popular government: A popular government, to use the terms of Lincoln, is a "government of the people, by the people, for the people." The success of any government is determined by the intelligence of its governing class. In America the people rule through their representatives, and this government "of the people" is successful and efficient and representative and devoted to the interests of all the people only to the extent that the people themselves are intelligent and well-informed. This fact was keenly appreciated by the founders of our government. Witness the following expressions by Thomas Jefferson and James Madison:

> [Said Jefferson] If a nation expects to be ignorant and free in a state of civilization it expects what never was and never will be. . . . There is no safe deposit [for the functions of government], but with the people themselves; nor can they be safe with them without information.[3]

[1] Ibid. pp. 235–236. [2] Ibid. p. 243.

[3] Quoted by E. P. Cubberley, Public Education in the United States, p. 57. Houghton Mifflin Company, Boston, 1919.

James Madison, fourth president of the United States, wrote:

> A popular government without popular information or the means of acquiring it is but a prologue to a farce or a tragedy, or, perhaps, both. Knowledge will forever govern ignorance; and a people who mean to be their own governors must arm themselves with the power which knowledge gives.[1]

The Russian Soviet government as an illustration. To use the language of Jefferson, "what never was and never will be,"—that is, a nation which is both "ignorant and free in a state of civilization,"—is nowhere better illustrated than in the debacle of Bolshevism in Russia which followed close upon the heels of the revolutionary movement in 1917. Immediately following the overthrow of the autocratic government of the Czar and the establishment of the right of the people of Russia to rule themselves, there began to manifest themselves the inevitable consequences of a "popular government without popular information or the means of acquiring it." The people in whose hands was the authority of government neither had the necessary information on how to govern themselves nor did they possess the means, through the ability to read, of acquiring it. They fell an easy prey to the influence of unscrupulous leaders. The results are familiar to all: out of a semblance of order, there has developed chaos; out of a worthy attempt to set up a government by all the people, there has resulted a dominance of the masses by the unscrupulous few; out of a democracy, there has grown up an autocracy which possesses none of the benefits but all the oppressiveness of the paternalistic, autocratic government which the revolution overthrew in the beginning. The reader will do well to re-read the words of Jefferson and Madison and to apply them to the situation which has developed in Bolshevik Russia.

American local governments do not escape the effects of ignorance and illiteracy. It is not necessary to go as far away

[1] Quoted by E. P. Cubberley, Public Education in the United States, pp. 57–58. Houghton Mifflin Company, Boston, 1919.

as Russia in order to note the evil effects of ignorance and illiteracy upon a government "of the people." Writing in 1914 on the "Social Effects of Immigration," Professor E. A. Ross describes the local government of a certain anthracite town as follows:

> There is a certain anthracite town of 26,000 inhabitants in which are writ large the moral and social consequences of injecting 10,000 sixteenth-century people into a twentieth-century community. By their presence the foreigners necessarily lower the general plane of intelligence, self-restraint, refinement, orderliness, and efficiency. . . . [Three eighths of the men are illiterate.]
>
> Barriers of speech, education, and religious faith split the people into unsympathetic, even hostile camps. The worst element in the community makes use of the ignorance and venality of the foreign-born voters to exclude the better citizens from any share in the control of local affairs. In this babel no newspaper becomes strong enough to mold and lead public opinion. On account of the smallness of the English-reading public, . . . the single English daily has so few subscribers that it cannot afford to offend any of them by exposing municipal rottenness. . . .
>
> With the basest Americans and the lowest foreigners united by thirst and greed, while the decent Americans and the decent foreigners understand one another too little for teamwork, it is not surprising that the municipal government is poor and that the taxpayers are robbed.[1]

The local government here described is by no means an isolated example of the undermining effects of ignorance and illiteracy upon our democratic institutions. Like examples are to be found on every hand. The appeal of the "yellow" newspapers; the far-reaching effects of hostile propaganda by the agents of Germany and Austria-Hungary at the outbreak of the World War; the spread of anarchy and syndicalism among certain sections of our population; the new prominence and influence of the I. W. W.; the ease with which "leagues," "societies," and "parties" are formed for other than the national

[1] E. A. Ross, The Old World in the New, pp. 228–229. The Century Co., New York, 1914.

welfare; the alarming proportions recently assumed by the "spirit of unrest,"—these and many like conditions impress the thoughtful citizen with the fact that the ignorant, illiterate, and near-illiterate constitute a social and political menace to the government. The thoughtful citizen becomes impressed by the necessity of substituting a condition of literacy for the condition of illiteracy, wherever it prevails, and of replacing ignorance of the spirit and purposes of the American government with information and enlightenment. "Popular information" for the members of this "popular government" is the only effective remedy for conditions which assail the permanence of our free institutions.

Conclusion: the ability to read is a necessary qualification for citizenship. The method by which the requisite information for good citizenship is to be acquired is quite clear. As it was pointed out in the preceding chapter, written language now is the chief means of communication. Ability to read becomes, therefore, a very important and necessary qualification for citizenship. The following paragraphs are very effective as a summary statement upon this point:

> Illiteracy bears intimately upon many national problems. The government of the United States is a government by representation, and its integrity and effectiveness depend upon the intelligence of all the people. Intelligence rests mainly upon easy transfer of thought and information from one person to another by the printed page. Therefore any material increase in the number of those who cannot read affects quality of citizenship and the representative basis of government. In an illiterate community the sense of civic responsibility is at its lowest, and disease, social isolation, and industrial inefficiency are found in highest degree.
>
> It is difficult for those who can read easily to form even a bare conception of the mental limitations of the illiterate, the near-illiterate, and the nonreader. It is still harder to appreciate the material handicaps to earning a livelihood entailed by illiteracy. While illiteracy does not necessarily imply ignorance, it does predicate lack of information, comprehension, and understanding. It increases prejudice, suspicion, and

passion, and diminishes mutual appreciation and power to coöperate; yet coöperation is the essence of modern civilization, and inability to coöperate is the basis of race hatred. So that illiteracy is clearly a just topic for national solicitude and its eradication a proper subject for governmental action.[1]

Summary. In the present chapter the need of having our attention frequently called to the importance of reading instruction was the first point to be discussed. The need was demonstrated that while teachers usually grant that reading is extremely important, they are often willing to neglect it in favor of more attractive subjects. The importance of reading instruction was then discussed from the following three points of view: (1) as a necessary preparation for the study of other subjects; (2) as an occupation for the enjoyment of leisure; (3) as a necessary qualification for good citizenship.

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Course of study: Examine your city or state course of study for discussions on the importance of reading.

[1] W. Talbott, "Adult Illiteracy," *Bulletin No. 55*, United States Bureau of Education, pp. 18–19. Washington, 1916.

CHAPTER III

WHEN SHALL READING BEGIN?

The preceding chapter has been quite emphatic in its conclusion that reading is the most important subject taught in the grades. Part II of this book will devote itself to the contention that reading is an elaborate, difficult, and highly complex mechanical process which demands in its mastery carefully formulated direction and guidance on the part of the teacher and serious effort and application of no mean order on the part of the pupil. It would seem to follow from a complete evaluation of the foregoing statements, which summarize and forecast important discussions of this book, that reading instruction ought to begin with the first day of the child's school life; that importance of the subject, and difficulty as well, emphasize the need of an early beginning. And it would seem, further, to be entirely proper to take for granted the conclusion just stated and to omit from our discussion considerations at length of the question raised in the heading of this chapter.

But the question cannot thus be lightly pushed aside. There have been in the past deliberate, if well-intentioned, attacks upon the position of prominence that has always been held by reading in the early grades of the school.

In the *New York Teachers' Monographs*, November, 1898, Professor Dewey says that while there are exceptions, "present psychological knowledge points to the age of about eight years as early enough for anything more than an incidental attention to visual and written language-form."[1]

[1] From Huey's "Psychology and Pedagogy of Reading," p. 304. Used by permission of The Macmillan Company, publisher.

These attacks have been made with such vigor and pursued with such far-reaching results as to demand in our present discussion careful consideration as to their validity. There are, moreover, in addition to the ones implied in the opening statements of the foregoing paragraph, other reasons for engaging in a defense of learning to read at an early age. Accordingly the present chapter opens with a twofold purpose definitely marked out: (1) to consider the validity of the attacks that have been made upon the teaching of reading in the primary grades and (2) to present the arguments in defense of the time-honored practice.

The attacks on early reading have been based on theoretical instead of practical grounds. The two attacks on the practice of beginning the teaching of reading in the early grades of the school that have been given most prominence in educational literature are those of Professors Dewey[1] and Patrick.[2] That their attacks have been made from considerations of theory rather than from those of practice can be readily seen in the following brief summarization of their arguments.

1. The child of six lacks a motive for learning to read. Acquaint him with the interesting features of his environment; allow him to engage in physical activities; let him deal with objects instead of ideas; tell him interesting stories. Later he will feel a need for reading. Then the task of teaching him to read will be an easy one.

2. Concrete knowledge should always precede the use of symbols. Reading deals with symbols and should therefore be postponed. Moreover, learning begins with sensations. Sense training, then, should not be set aside to make room for mere language training.

3. The child of six is a social being. Learning to read is such an individual process as to detract from the child's natural interests in society. Reading becomes, therefore, a wholly unintelligible process and, because it is such, it should be postponed.

[1] John Dewey, "The Primary Education Fetich," *Forum*, Vol. XXV, pp. 315–328.

[2] G. T. W. Patrick, "Should Children under Ten Years Learn to Read and Write," *Popular Science Monthly*, Vol. LIV, pp. 382–391.

4. The history of the individual is an abridgment of the history of the race. Since the art of reading had a late development in the history of the race, provision should be made for it to have a correspondingly late development in so far as the individual child is concerned.

5. Eye fatigue, eye strain, myopia and other eye defects result from early reading. Moreover, the sense organs and nervous systems of young children are not adapted to such confining work as learning to read.

6. Bad study habits are formed through early reading. Besides, a certain mental enfeeblement comes from too early an appeal to interest in the abstractions of reading. Let us postpone the teaching of reading and avoid all such dangers.

One is tempted to inquire, after a perusal of the arguments here summarized, whether they were first submitted to a committee of public-school teachers for approval before they were committed to print.

The attacks appear to be not entirely free from prejudice. The terminology of the authors of the attacks on early reading inclines one to the belief that they have not been careful to refrain from the attempt to influence their readers in favor of their contentions by means other than the arguments they present. For example, Professor Dewey is skillful in inviting a favorable frame of mind for the perusal of his article in his selection of a title; namely, "The Primary Education Fetich." His opening paragraphs are not such as to free the reader from this suspicion:

> It is some years since the educational world was more or less agitated by an attack upon the place occupied by Greek in the educational scheme. If, however, Greek occupies the place of a fetich, its worshipers are comparatively few in number, and its influence is relatively slight. There is, however, a false educational god whose idolaters are legion, and whose cult influences the entire educational system. This is language-study—the study not of foreign language, but of English; not in higher, but in primary education. It is almost an unquestioned assumption of educational theory and practice both that the first three years of a child's school life shall be mainly taken up with learning to read

and write his own language. If we add to this the learning of a certain amount of numerical combinations, we have the pivot about which primary education swings. Other subjects may be taught, but they are introduced in strict subordination.

The very fact that this procedure, as part of the natural and established course of education, is assumed as inevitable—opposition being regarded as captious and revolutionary—indicates that, historically, there are good reasons assigned to these studies. It does not follow, however, that because this course was once wise it is so any longer. On the contrary, the fact that this mode of education was adapted to past conditions is in itself a reason why it should no longer hold supreme sway. The present has its claims. It is in education, if anywhere, that the claims of the present should be controlling. To educate on the basis of past surroundings is like adapting an organism to an environment which no longer exists. The individual is stultified, if not disintegrated, and the course of progress is blocked.[1]

Again, in the article by Professor Patrick, one finds that the appeal seems to be made to sentiment and not to reason. The following quotations are illustrative:

. . . It is conceivable, therefore, that the present accepted order of studies in our elementary schools rests upon accidental rather than upon a psychological basis. . . .

. . . Although the appropriateness and economy of this study (nature study) for young children has been known and proclaimed for more than a century, it is still in practice the study of later years, while young children study *letters*.

. . . In practice we are saying to the young child: "Man is a sedentary, reading, writing, thinking, reasoning being, possessing the power of voluntary attention. I am to educate you to be a man. Therefore you must learn to sit still, to read, write, think, reason, and give attention to your work." The child of six or eight years is therefore given a book or pen, and put into a closely fitting seat and left to give attention to his work. This is precisely as if the mother should say to the infant at the beginning of the period of creeping: "You are a man, not a brute. Men go upright, not on all fours. You must walk, not creep."

[1] John Dewey, "The Primary Education Fetich," *Forum*, Vol. XXV, p. 315.

. . . Our schools are exceedingly conservative. Any innovations or radical changes are resisted by the parents of the children even more strenuously than by school boards, superintendents, and teachers. Notwithstanding numerous and important minor improvements, the school system as a whole remains unchanged. Our children of seven and eight years are learning to read and write because our grandfathers were so doing at that age.[1]

On such grounds, if they were valid, the ancient customs of reading the Bible and obeying one's parents might be brought under severe indictment.

The attacks convert specific criticisms into general ones. One becomes most impatient with attacks on the organization of the course of study in reading when they make use of criticisms, valid and otherwise, of prevailing methods of teaching as arguments in favor of a delay in beginning. For example, Professor Patrick would leave the impression that his well-taken criticism of improper methods is an argument against the subject as a whole:

One of the greatest goods which would follow the banishing of the book from the primary and elementary schools would be the cultivation of better mental habits. Children suffer lasting injury by being left with a book in their seats and directed to "study" at an age when the power of voluntary attention has not developed. They then acquire habits of listlessness and mind-wandering afterward difficult to overcome. They read over many times that which does not hold their attention and is not remembered. Lax habits of study are thus acquired, with the serious incidental result of weakening the retentive power, which depends so much upon interest and concentration. With the substitution of the oral for the book method, reliance upon the memory for the memory period will permanently strengthen the child's power of retention.[2]

In like vein are the following criticisms. Speaking of the "utter triviality of the contents of our school primers and first

[1] G. T. W. Patrick, "Should Children under Ten Years Learn to Read and Write," *Popular Science Monthly*, Vol. LIV, pp. 384, 387–388, 390, 383.

[2] Ibid. pp. 391–392.

readers," Professor Dewey suggests taking up the first half-dozen such books you meet and asking yourself "how much there is in the ideas presented worthy of respect from any intelligent child of six years." Moreover,

> [Methods of teaching reading] all lack the essentials of any well-grounded method; namely, relevancy to the child's mental needs. No scheme for learning to read can supply this want. Only a new motive, putting the child into a vital relation to the materials to be read, can be of service here. It is evident that this condition cannot be met, unless learning to read be postponed to a period when the child's intellectual appetite is more consciously active, and when he is mature enough to deal more rapidly and effectively with the formal and mechanical difficulties.[1]

And finally:

> . . . The causes are many [of the increase of myopia and other defects of the eye among school children], but it is scarcely doubted that the chief cause is found in bending over finely printed books and maps, and fine writing, pencil work, and drawing. If pencils, pens, paper, and books could be kept away from children until they are at least ten years of age, and their instruction come directly from objects and from the voice of the teacher, this evil could be greatly lessened.[2]

The foregoing criticisms bring under indictment (1) methods of study that are frequently imposed upon children in the grades, (2) the content of primary reading material, (3) methods of teaching reading, and (4) the unhygienic features of some reading books, the unsatisfactory results of all of which may be overcome by means other than by eliminating reading from the course of study of the primary school. The effort of the educator should be directed toward an improvement in methods and in the content and mechanical features of primary reading books, not against the subject itself.

[1] John Dewey, "The Primary Education Fetich," *Forum*, Vol. XXV, p. 323.
[2] G. T. W. Patrick, "Should Children under Ten Years Learn to Read and Write," *Popular Science Monthly*, Vol. LIV, p. 386.

Criticisms of attacks summarized. The arguments in defense of early reading. Thus far our discussion has constituted an examination of the attacks that have been made upon the teaching of reading in the primary grades. Through a summarization of the attacks, and directly from two of the attacks themselves, they have been shown to be open to the following criticisms:

1. That they have been based on theoretical instead of practical grounds.
2. That they appear to be not entirely free from prejudice.
3. That they convert specific criticisms into general ones.

We come now to the fulfillment of the second important purpose of the chapter, which is to present the arguments in defense of the time-honored practice of beginning the teaching of reading in the first grade. Our effort shall be to impress the point that the age of six is the crucial age to begin, because at that age (1) the child's preparation in oral language is sufficient to enable him to learn written language; (2) his habits of oral speech have not become so fixed as to delay the process of acquiring a command of written speech; (3) his out-of-school interests are not so great as to detract considerably from the activities necessary to the learning of written language; (4) he is actuated through motives of social imitation. Let us consider each argument in turn.

The child's earlier years are spent in acquiring a command of oral language. One of the most interesting periods in the intellectual development of the child is the one in which he emerges from the state of total dependence on his elders for the interpretation of his wants and needs into the state of being able to make his wants and needs known to others. This is the period of development which precedes the age at which he is sent to school. It is the period during which he acquires a command of oral language sufficient to express his wants to others and to understand what others want him to do. It is the period during which his responsibilities develop to the point where he

can safely be intrusted to take his place as a member of the social group of the school. The home and the kindergarten are the institutions which provide the necessary training.

In the home the child imitates the speech of his elders. Gradually, as he acquires a stock of words, he learns to attach to each the appropriate meaning-reaction. Through imitation and inquiry, and at the expense of considerable effort, he learns to group words into sentences. Very often, if not usually, sentences are learned as wholes as the expressions of single ideas. Sometimes words are acquired before the appropriate ideas and meanings; at other times the order is reversed, and the child experiences certain meaning-reactions to which he can assign no name. But gradually, through constant effort, the child acquires in an elementary way a command of oral speech.

What the home does for the child in an incidental way the kindergarten undertakes in a manner that is systematic. Here, through plays and games, he is introduced to an ever-increasing number of objects and activities of his environment. He plays with objects and he plays with other children, and by such means he develops as a physical and social being. His training through plays and games, however, is not entirely in the direction of physical and social development. He acquires at the same time, through his physical activity, numerous and varied mental reactions,—reactions of meaning,—and he learns to designate each with a name. It may be said that the plays and games of the kindergarten are as important as means of language development as they are as means of physical and social development. And, in addition, the kindergarten makes a special effort in the direction of language development. Through stories and songs, recitations and dramatizations, the child adds to his stock of meaning-reactions and increases his vocabulary and his power of expression.

It is clear that it has come about not entirely by accident that children in civilized countries the world over are started to school at the age of six. In the school the child is required to

act as a member of a social group. He must conform to the group in a definite and well-ordered way. Directions and commands as to the manner in which he is to conduct himself are therefore necessary. As a means of development he is called upon from time to time to answer questions and to express what is in his mind. The child of school age must be able to understand simple directions and to convey his thoughts to others. In an elementary way he must have acquired in a preparatory period a mastery of oral language. The experience of the race is that children generally have this mastery at the age of six and not before.

The child at the age of six is able to acquire a new form of speech. The business of learning to read is in the beginning the business of attaching meanings to printed symbols. The process is suggested and the necessary directions are given by the teacher through the medium of oral speech. Not until the child has acquired a mastery of oral speech is he able to learn a new form of speech—written speech, or reading. This he is able to undertake at the age of six, for the reason that at that age he is able to understand the necessary suggestions and directions of the teacher, and he has in his possession, ready to attach to the new form of symbol to which he is introduced through reading, the necessary and appropriate reactions of meaning.

The training that is planned for the child of six may be entirely in the direction of the further development of his ability in oral language, as suggested in the articles of Dewey and Patrick; or, as is suggested here, the training may be directed toward the development of a new form of language through the medium of, and coincident with development in, oral language. On the grounds of theory we may conclude that the child of six is able to learn to read. On the practical grounds of the successful experience of thousands of first-grade teachers our conclusion is completely justified.

Fixed habits of oral speech delay the process of mastering written speech. In order that the child may be provided with

the proper background for acquiring in an economical and effective way a mastery of the process of reading, Professor Patrick recommends that the earlier years of the child's school life be devoted to the development of ability in oral speech:

> More and more attention is given in our elementary schools to the subject of language—more, as some think, than the relative importance of the subject warrants; but without discussing this question, it is indubitably shown by child psychology that it is the spoken language which belongs to the elementary school. The ear is the natural medium of instruction for young children, and all the second-hand knowledge which it is necessary that the child should receive should come to him in this way. It should come from the living words of the living teacher or parent, not through the cold medium of the printed book. In the elementary school, then, the child may be instructed in language as it relates to the ear and the tongue, and this is the real language. He may be taught to speak accurately and elegantly, and he may be taught to listen and remember. He may study in this way the best literature of his mother tongue, and get a living, sympathetic knowledge of it, such as can never come through the indirect medium of the book. Indeed, this language study need not be limited to the mother tongue. There is no age when a child may with so great economy of effort gain a lasting knowledge of a foreign language as when he is from seven to eleven years old.
>
> When the spoken language has been mastered in this way, and when the child has arrived at the reading and writing age, language in its written form may be acquired in a very short time, and that which now fills so many weary years of school life will sink into the position of comparative insignificance in which it rightfully belongs.[1]

The argument is that through the means here suggested an easy road to reading will be opened up for the child in the later years of the school. Whether the argument is as sound as it may seem plausible is a matter of serious doubt.

For example, many boys and young men become expert in the playing of two or more athletic games. They appear to be

[1] G. T. W. Patrick, "Should Children under Ten Years Learn to Read and Write," *Popular Science Monthly*, Vol. LIV, p. 391.

equally good in baseball, basketball, tennis, etc. Others are expert in the playing of one game, but are mediocre in all others. The reasons are that the former group developed skill in their various games concurrently; they developed from unskillful to skillful players in baseball during the same period of years as the one in which they were making like progress in playing basketball and tennis, whereas the latter group learned one game thoroughly by much practice over a period of years, and then turned their energy and attention to the learning of others. With the former group there was no interference of the habits and skills developed in one game with those that were being developed in others; with the latter group the habits and skills which they had perfected in the one game they could play had become so fixed as seriously to retard development of the habits and skills necessary for the playing of other games.

Again, there are children of foreign parents living in this country who appear to learn our language and their own mother tongue with equal degrees of perfection. The development of habits of speech in the one language does not seem to interfere with the development of corresponding habits in the other. The reason is that the two languages are learned at the same time, which renders it impossible for habits in either language to reach such a state of fixity (while habits in the other are in their incipient stages) as seriously to retard their development. On the other hand, adults as a rule find the learning of a foreign language an extremely difficult undertaking. It is true that they have a better background of English for the learning of a foreign language than they possessed as children, and they are able to bring to bear upon their study of the foreign tongue better methods of attack and usually more effective motives. The point is that they are retarded in their study of the foreign language because of the fact that they already have developed fixed habits of interpretation and expression in the English.

So it is with the task of learning to read in the primary school. If children are started in the subject of reading as soon

as they have acquired the necessary amount of preparation in oral language, they have the opportunity of making corresponding and concurrent progress in both oral and written speech. That they are able to make such progress the successful experience of primary-school teachers will attest. Whereas, if the study of reading is delayed, or undertaken in an unsystematic way, their habits of oral speech will tend to become so fixed as to retard the development of the fundamental habits of written speech. The preceding topic made clear that a beginning in oral language must be made before the child can be taught to read. It is equally true that the study of reading may be delayed to the point where the child's habits of oral speech serve as a hindrance rather than as a help. The age of six is the crucial age to begin the teaching of reading, because (1) the child's preparation in oral language is sufficient to enable him to learn written language; (2) his habits of oral speech have not become so fixed as to delay the process of acquiring a command of written speech.

We arrive now at the third point in our argument, which is (3) the out-of-school interests of the child of six are not so great as to detract considerably from the activities necessary to the learning of written language.

The later interests of children are individual rather than social. We may secure an idea of the interests of children of the primary grades by way of contrast with those of children in the grades that immediately follow. Following the period of the primary school, which lasts to the age of nine, comes a period in the child's development which is described in a later chapter (Chapter IX) as the period of individualism. This is the period from nine to twelve years of age, in which the child enters more or less into rebellion against the formal demands of the school and becomes something of an individualist in his tastes and desires and habits of work. From the standpoint of the subject of reading, the child wishes to make use of his ability to secure information which immediately interests him

as an individual. He is willing no longer to enter with enthusiasm into the activities that are necessary to acquire a mastery of the formal and mechanical phases of the subject.

Now reading is a mechanical process (as the second part of this book will undertake to show) which requires in its mastery formal drills in word recognition, in phonics, in word analysis, in reading for fluency, even in reading for meaning. In order to be effective these drills and exercises must be entered into with enthusiasm. For the most part they are, and must be, entered into not because they meet any individual need that the child can understand, but because the teacher has given directions, and in order to do as other children are doing. Consequently if these drills and exercises are postponed until the age of nine—when the child is willing to engage in reading only for the sake of satisfying his cravings for information about interesting things—he has a poor chance of ever acquiring skill in the mechanics of the subject, which is the necessary prerequisite to independent reading for meaning. Reading cannot be postponed until the child wishes to use reading; his interests then are too intensely individual to turn to use in mastering the mechanics.

The child from nine to twelve is interested in the concrete things of his environment, in romance and adventure, in exciting activities. If the mechanics of reading have been mastered to the point where his interests can be satisfied through reading, he is willing to continue in the activities of the subject. On the other hand, if a satisfaction of his interests is retarded because reading to him presents many features of mechanical difficulty, he will turn aside from reading to the concrete activities around him.

The out-of-school interests of the child of six are not so intense. Going to school is a new experience with him. All the activities of the schoolroom are novelties. Whatever the teacher demands of him he enters into with enthusiasm because it is something to do and other children are doing it. A word drill or

an exercise in oral reading interests him just as much as a game of tag, and about as long, because it is an activity different from the one which may have preceded it. The interests of the child of six, both in and out of school, stand out in sharp contrast when we compare them with the interests of the child of nine. This brings us to the fourth point in our argument, which lends itself further toward making evident the contrast which is here indicated.

The period of the primary school is one of social imitation. Professor Judd describes the period of the primary school in the following paragraphs:

> At five or six years of age the pupil comes to the primary school. His experience is very limited; his senses are open to the impressions of color and sound and touch, and he eagerly or timidly mixes in the social group which is often to him bewilderingly large and strange. The key to the understanding of this period is to be found in the simple psychological principle that out of all of the bewildering mass of childish experience it is persons who attract the child's most vivid attention. The experiences of childhood are to be thought of not as meager but as confusing in their abundance. The world is so full of a number of things that one hardly knows where to turn. In the mass of this experience one turns to some person and follows in a docile way the lead of that person. The first grade is a place where children do what others do. First-graders are a flock of sheep. The teacher can lead them into almost anything because they are eager to do whatever they see others do.
>
> Sometimes this period is described as a period when children are absorbed in sense impressions. This statement is true if it means that colors and sounds constitute the content of experience. It is false if it is meant to teach that little children are absorbed in the study of objects. The sounds and colors which hold the attention of primary children are those which attach to people. A little child will give up a plaything which he has in hand for a less attractive plaything in the hands of someone else. Primary children are social creatures first, last, and all the time.
>
> This description of the primary child's mental attitudes gives us the formula for the organization of the primary course of study. There is an eager desire on the part of the first-grader to write his name.

He does not need any artificial stimulation to undertake writing. Other people write; that is enough for him. He is eager to be initiated. Other people look into books; he must do the same. The period is not a period for nature study in any analytical scientific sense. It is a period for social companionships. The primary child likes animals as playthings; he is not interested in studying their structure. Show an animal to a little child and let him ask the questions that are in his mind, and social questions are the only ones which will come. "Where can I get one?" "Will it bite me?"

The judgment of the race has been right; this is the period for the teaching of reading and writing. The oral language which the pupil acquires in the pre-school period is the basis on which the primary work must be erected. The first reading lessons are lessons in the association of known oral symbols with those complicated social devices, the printed symbols. The ability to live in society which the pupil brings to the first grade must be extended through the mastery of language in its written and printed forms.

The utter absorption of the child of this age in society rather than in material things is attested by his credulity for fairy tales, which are full of people but are grotesquely impossible in their description of material facts. In his eager desire to illustrate every story he hears, the child produces drawings which have very little merit as representations of things but are often expressive of action in the highest degree. A child of this age is keen in his observation of people but neglectful of things.[1]

The points to be kept in mind are (1) that the child of six is very docile, (2) that he is interested in people rather than in things, and (3) that he wishes to conform to the customs of people by performing the activities—or playing at the activities —in which older people engage.

The child of six undertakes to read through compelling motives. The critics of early reading argue that the intellectual appetite of the child of six is not sufficiently active to warrant an attack on the formal and mechanical difficulties of the subject (they argue for delay until the time when the child will

[1] C. H. Judd, Introduction to a Scientific Study of Education, pp. 187–188. Ginn and Company, Boston, 1918.

feel the need of learning to read). They state that such a motive is lacking in the early years of the primary-school period. With such contentions we can hardly disagree. Indeed, it would be more to the point to state that nowhere in the child's intellectual growth does he cultivate an appetite for the formal and mechanical phases of reading, and that at no period does he feel the need of learning to read until he has secured some mastery at least of the process itself. It is a mistaken notion that impels teachers to attempt on any such basis to develop in their pupils a motive for reading.

That the child of six does have a compelling motive for learning to read, the foregoing quoted paragraphs would seem to indicate. The child is interested in people and in their activities. What others do he wishes to be known as being able to do himself. Such activities as he cannot perform he will pretend to perform. He sees an adult driving an automobile or a wagon, and he plays at the game of being a chauffeur or a teamster. His elders write, and that impels him to undertake some writing (?) of his own. His elders read newspapers and books, and so he peruses newspapers and books, held upside down or in any other convenient manner. The child of six aims to conform to the group. He is docile and tractable. He will follow the teacher or an older person into any activity that may be suggested. No reason need be assigned. It is enough to know that other people do the same thing; it is enough that the teacher has asked it and has pointed out the way.

Mastering the mechanics of reading is a process without reason to the one who has never learned to read. The same is true of the elementary stages of every subject until the time when the elementary stages have been passed. The point for our consideration is that the process of mastering the mechanics of reading does not need to be a reasonable process to the child of six. He enters into the activities of the process through the influence of a motive that is all-compelling. The motive of the six-year-old is the social one—the motive of social imitation.

The age of six is the crucial age. The child of six has a command of oral language that is sufficient to enable him to learn to read; his habits of oral speech have not as yet become so fixed as to delay the process of acquiring a command of written speech, his out-of-school interests have not as yet become so great as to detract considerably from the process of learning to read, and he is actuated in all that he undertakes through motives of social imitation. The primary teacher has an opportunity to teach children to read that is given to no other teacher. To delay the teaching of reading until the child's habits of oral speech have become fixed, until he becomes interested in the concrete world around him more than he is interested in people, until he becomes self-centered rather than social in his desires and inclinations,—indeed, to attempt to teach reading only as an incident in connection with other subjects,—is nothing short of criminal. It is a crime against the child, and, if our conclusions of the preceding chapter relative to the importance of reading are correct, it is likewise a crime against the State. The teacher of primary children may make use of the opportunity offered by their status of intellectual development and by their nature as social imitators to give them an effective and systematic start in the process of learning to read, or the teacher may hesitate for a year or two only to discover that the opportunity thus offered has been forever left behind.

. . . learning to read is no longer the "scourge of infancy," as Rousseau called it in 1762, and as it was in many places even a generation ago. Instead, our modern teaching early opens to children the road to the fairyland of fable, myth, adventure, and romance as found in the world of children's books. Every step that they take along this road under the teacher's guidance is playful and delightful. At the same time each step is a part of a most systematic and progressive scheme of learning, all parts of which have been definitely planned in advance. Yet so thoroughly are the various teaching processes adapted to the children's instinctive interests and activities that *delight in learning* and *systematic progress* go hand in hand.[1]

[1]S. C. Parker, "How to Teach Beginning Reading," *Elementary School Journal*, September, 1921, pp. 15–16.

Summary. The answer of this chapter to the attacks that have been directed against the time-honored practice of beginning to teach reading in the first grade is as follows:

1. The attacks on early reading have been based on theoretical instead of practical grounds.

2. The attacks appear to be not entirely free from prejudice.

3. They convert specific criticisms into general ones.

4. The age of six is the crucial age to begin the teaching of reading, because at that age

a. The child's preparation in oral language is sufficient to enable him to learn written language, or reading.

b. His habits of oral speech have not become so fixed as to delay the process of acquiring a command of written speech.

c. His out-of-school interests are not so great as to detract considerably from the activities necessary to the learning of written language.

d. He is actuated through motives of social imitation.

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PART II. THE READING PROCESS

CHAPTER IV

THE WORK OF THE EYE IN READING

In Chapters I and II of this text we have discussed the aims of reading instruction and the importance of reading as a school subject. In Chapter III we have decided that reading instruction ought to begin in the work of the first grade of school. It is important, next, that we study the nature of the reading process. We are obliged to carry on such a study before we are able intelligently to devise ways and means of conducting instruction in reading. Accordingly the next six chapters are devoted to a study of the reading process. The present chapter begins the discussion by a study of the work of the eye in reading. A study of the reading process may properly begin with a study of eye movements, because of all the phases of the process of reading, eye movements are most easily observed and records of them most readily obtained.

Experiment. In order to secure an idea of the outstanding characteristics of the movement of the eyes in reading, the reader is invited to observe carefully the eye movements that are made by a friend in the reading of an ordinary prose selection. Conduct an experiment as follows: Seat the subject in front of a good light. Take your position before him, but enough to one side so as not to interfere with the passage of light to his eyes. Have him hold the book or other reading material slightly below the level of his eyes. With this arrangement the subject has no trouble in reading the material before

him, and at the same time you (the experimenter) can see enough of the eye to observe its movements. It may require a little practice to catch the short and rapid eye movements. The method is at best only a crude means to an approximate count of the movements which are made in reading each line of print. The subject should begin at a known place on the page and look from the left to the right margin before beginning to read, for the purpose of giving you a signal. You should, without taking your eyes from the eye of the subject, make note with pencil and paper of the number of fixation pauses made in reading each line. A frequent source of error is to count the eye movements instead of the fixations. This should not be done. The subject should read silently and continuously.

What the experiment shows. If the above experiment is performed conscientiously by both experimenter and subject, after some little practice the following facts become evident:

1. That the eye moves across the page from left to right in a series of sweeps which correspond in number to the number of lines read.

2. That the eye moves along each line from left to right in a series of quick, short movements and fixation pauses of short duration.

3. That the eye returns from right to left to the following line in one rapid, unbroken sweep.

4. That the fixation pauses are fairly regular in number from line to line for a given individual—three to the line, four to the line, five or six to the line, as the case may be.

The fact that the eye does not move continuously from left to right along the line of print, but in a series of sweeps and fixation pauses, is most significant, as we shall presently see. What concerns us now is how a record of the number and duration of fixation pauses might be taken as a means to a more careful study of their meaning.

Method of recording eye movement. Quite a variety of methods of recording the movement of the eyes in reading have

been followed by different experimenters. Perhaps the most elaborate and at the same time the most successful method is the one which has been in use since 1916 in the School of Education of The University of Chicago. The method consists in taking on a moving film a series of pictures of a ray of light reflected from the eye during the process of reading. It is possible in this manner to secure a record (1) of the exact points of fixation; (2) of the number of fixations per line; (3) of the duration of the pauses; and (4) of the direction of the eye movement, whether forward or backward.[1] Photographic records of these four kinds of data are made (see Figs. 2 and 3.) Such photographs provide a very easy approach to a study of eye movement in reading.

Explanation of the figures. Fig. 2 shows the fixation pauses of a university student in the graduate department during the silent reading of a passage; Fig. 3 shows the fixation pauses of the same reader during an oral reading of the passage. "Fig. 1 reproduces the passage in 11-point type in the exact form in which it was presented to the reader at each reading."[2] Description of Figs. 2 and 3 is made as follows:

> The lines have been separated in the vertical so as to make it easy to insert a number of figures and short vertical lines. The short verticals indicate in each case a point of fixation. In some cases there are oblique or broken lines; these indicate a slight shift of the eye during fixation. The serial numbers above the verticals indicate the order of the pauses; at the lower end of each vertical is a number indicating in fiftieths of a second the length of the fixation.[3]

[1] The apparatus was designed by Dr. C. T. Gray, and its construction and use are explained in his monograph, "Types of Reading Ability as Exhibited through Tests and Laboratory Experiments," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. I, No. 5, pp. 83–90.

[2] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, p. 15. The University of Chicago Press, Chicago, 1918.

[3] Ibid. pp. 15–19.

Characteristics of adult silent reading. Let us study the photographic record of eye movement as it is reproduced in Fig. 2. The plate should be interpreted as follows: In a silent reading of the printed selection the eyes of the subject fixated first at the left of the letter *W* for forty-five fiftieths of a second; next, slightly to the right of *y* for eleven fiftieths of a second; next, to the left of *r* for seven fiftieths of a second; and so on. The first line was read in six fixations, the second line in five,

> When Denny had regained consciousness, and everything possible for his comfort and for the assistance of his distracted mother, had been done; and the physician had assured them that the lad would be as good as ever in a day or two, the men crossed the street to the little white house.

FIG. 1. The passage read, showing approximately the spacing between lines and the size of letters as used in the experiments[1]

the third in four, and so on. It is to be noted that the first pause in line 1 is for an unusual period of time, and that in the first line there is a tendency toward an unusual number of pauses. The facts indicate that the reader is consuming considerable energy in the process of getting started, and that the results shown in line 1 are not characteristic of the reader's usual performance. We will therefore omit line 1 from consideration in our studies and comparisons.

In line 2 the first fixation seems sufficient to carry the reader over the first word; pause 2, to carry the reader over the second and third words; pause 3, over the fourth, fifth, and sixth words; and pause 4, over the seventh and eighth words. Pause

[1] From "Reading: its Nature and Development," by C. H. Judd.

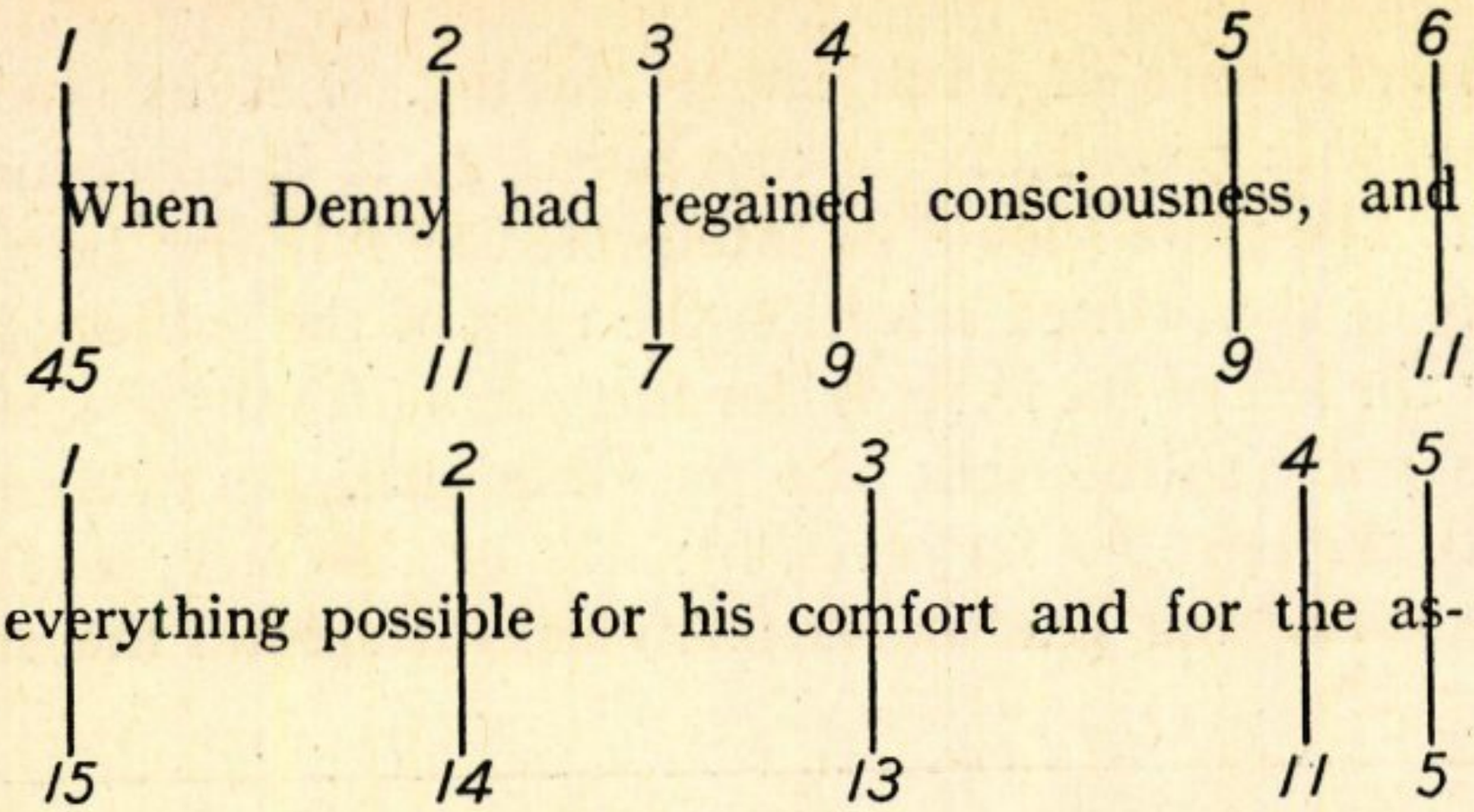

FIG. 2. Silent reading by an adult[1]

[1] From "Reading: its Nature and Development," by C. H. Judd.

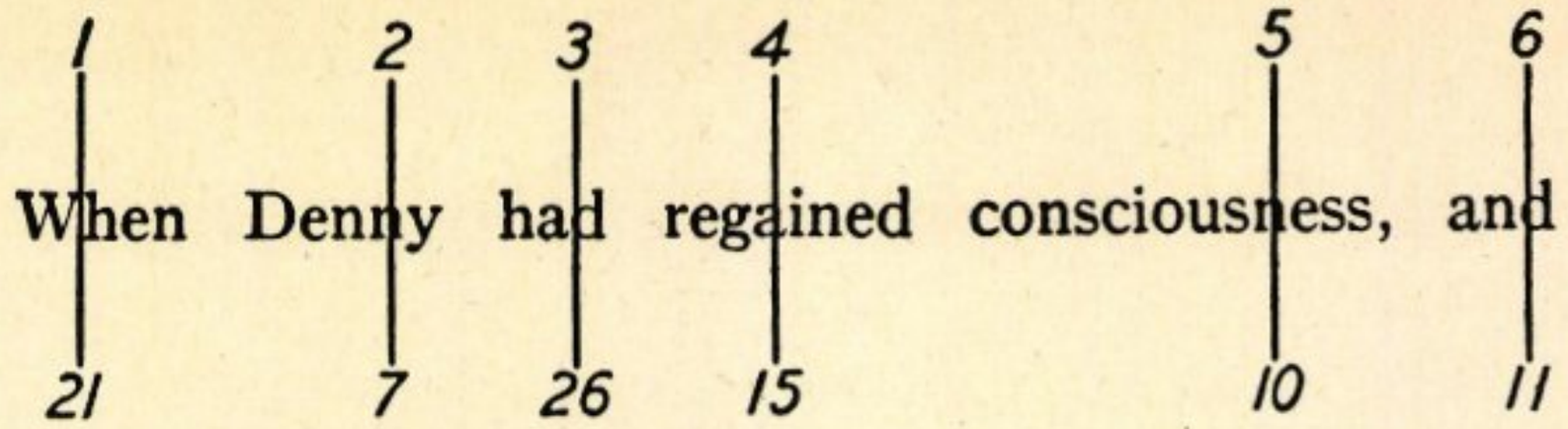

FIG. 3. Oral reading by an adult[1]

[1] From "Reading: its Nature and Development," by C. H. Judd.

5 seems to result from the effort to fit the movement of the eye to the material to be read. The pauses in lines 3, 4, and 5 are very similar, both in position and length, to the pauses in line 2. It would appear that in silent reading the subject has developed a certain characteristic eye-movement habit which is fairly uniform from line to line.

Characteristics of adult oral reading. The record of eye movement shown in Fig. 3 is very different from the record shown in Fig. 2. Fig. 3 reproduces the record of position and duration of eye pauses made by the same subject in an oral reading of a selection. When we compare the two records it is very easy to be seen that there are considerable differences between the movement of an adult's eyes when he reads orally and those he makes when he reads silently. Why are the pauses so many more to the line in oral reading than in silent reading? Why are the pauses of longer duration? How is the fact explained that an experienced reader is able in the silent reading of a passage to take into consciousness a whole line of print in three or four peeps at the line? What is the explanation of the absence of this ability in the oral reading of a passage? These are important questions which following chapters attempt to answer. Before we begin to seek the answers to these questions, let us consider briefly the characteristic eye-movement habits of children in the grades.

Eye movements of children. Records of the eye movements of a good silent reader in each of the third, fourth, sixth, and seventh grades are reproduced in Figs. 4–7 respectively. Figs. 8 and 9 show the records of a poor silent reader in each of grades four and seven, respectively. What are the striking features of the eye movements of children revealed in these records?

The first striking feature that attracts our attention is that good reading in the lower grades is characterized by a large number of pauses per line. The record of the third-grade pupil (Fig. 4) shows seven pauses to the line, that of the fourth-

grade pupil (Fig. 5) six pauses to the line. Our attention is called to the fact that in each case there are almost as many pauses to the line as there are words in the line.

A second striking feature of the eye movements of children is that progress through the grades is characterized by a constantly decreasing number of pauses per line. It is to be noted that the good reader in the third grade requires as many as seven fixations in order to recognize the words in the line, the fourth-grade reader six, the sixth-grade reader five, and that the seventh-grade reader is able to read a whole line in only four fixations.

A third characteristic may be noticed if we turn back to Fig. 3 and compare the oral-reading record of an adult with the silent-reading records of a good reader in the third grade (Fig. 4) and of a poor reader in the upper grades (Fig. 9). The similarity of the three records is very striking. The adult, in his *oral* reading, fixates a word at a time; so does the *good silent* reader of the third grade; so does the *poor silent* reader of the seventh grade.

A fourth characteristic reveals itself in a study of the records of the two poor readers (Figs. 8 and 9). Here we note the unusual number of pauses to the line and the extreme length of some of the pauses. What is more important for our consideration, however, is the fact that the eyes of the poor readers do not always move straight ahead, but that there is a considerable amount of regressive movement of the eyes along with the usual forward movement.

Explanation of characteristics to appear in later discussions. The discussion of the four characteristics of the eye movements of children raise a number of questions in our minds. How are all these interesting facts which relate to the eye movement of children and of adults as well to be explained? Following chapters are concerned with providing answers to this question. Chapter V, "The Nature of Recognition," offers an explanation of the fact that a whole line of print can be taken into the con-

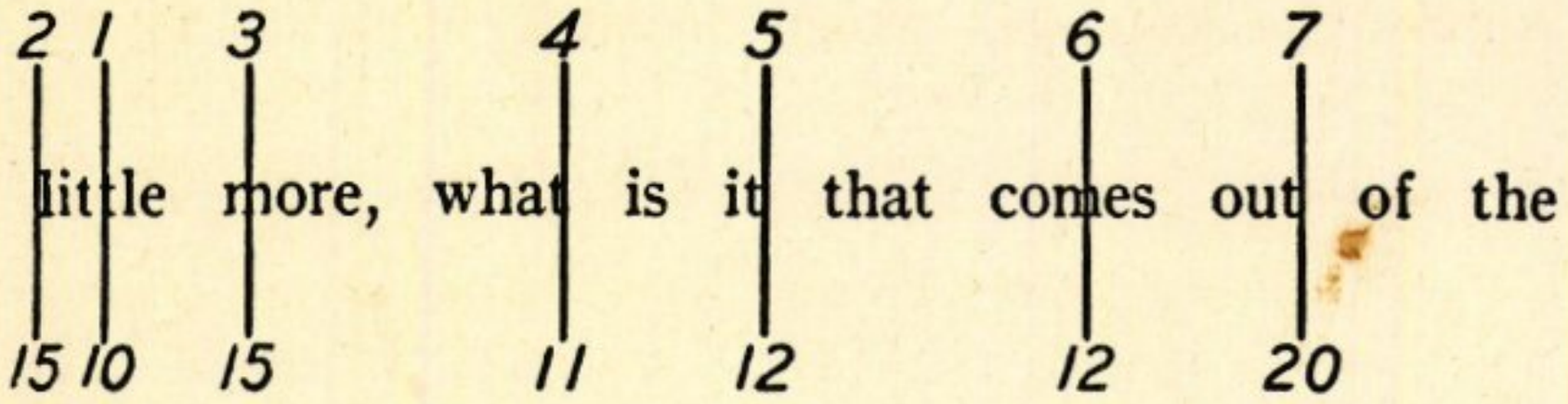

FIG. 4. Silent reading by a good reader in the third grade[1]

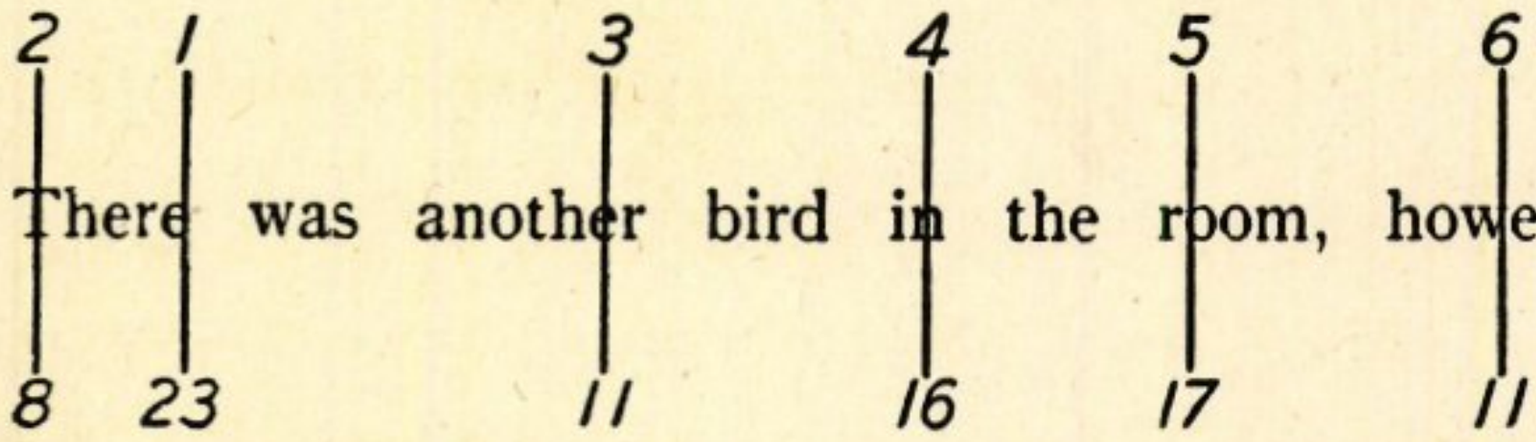

FIG. 5. Silent reading by a good reader in the fourth grade[1]

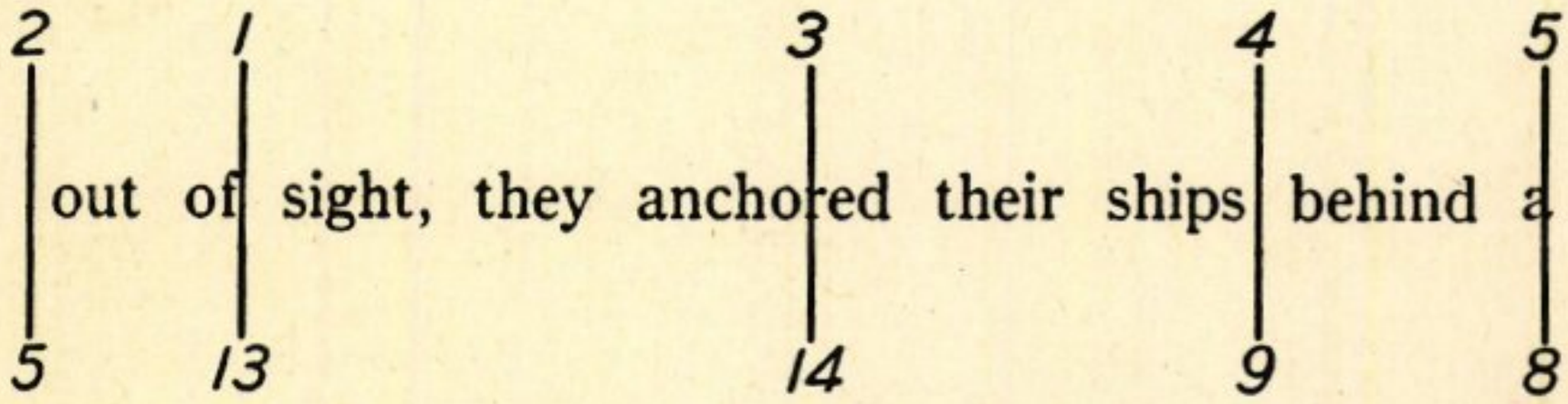

FIG. 6. Silent reading by a good reader in the sixth grade[1]

[1] From "Reading: its Nature and Development," by C. H. Judd.

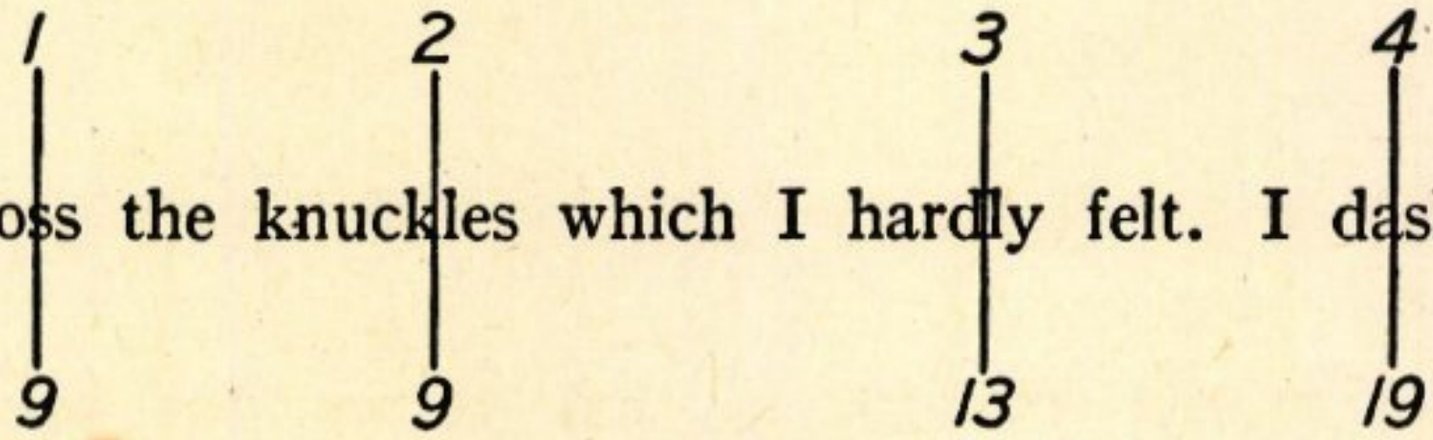

FIG. 7. Silent reading by a good reader in the seventh grade[1]

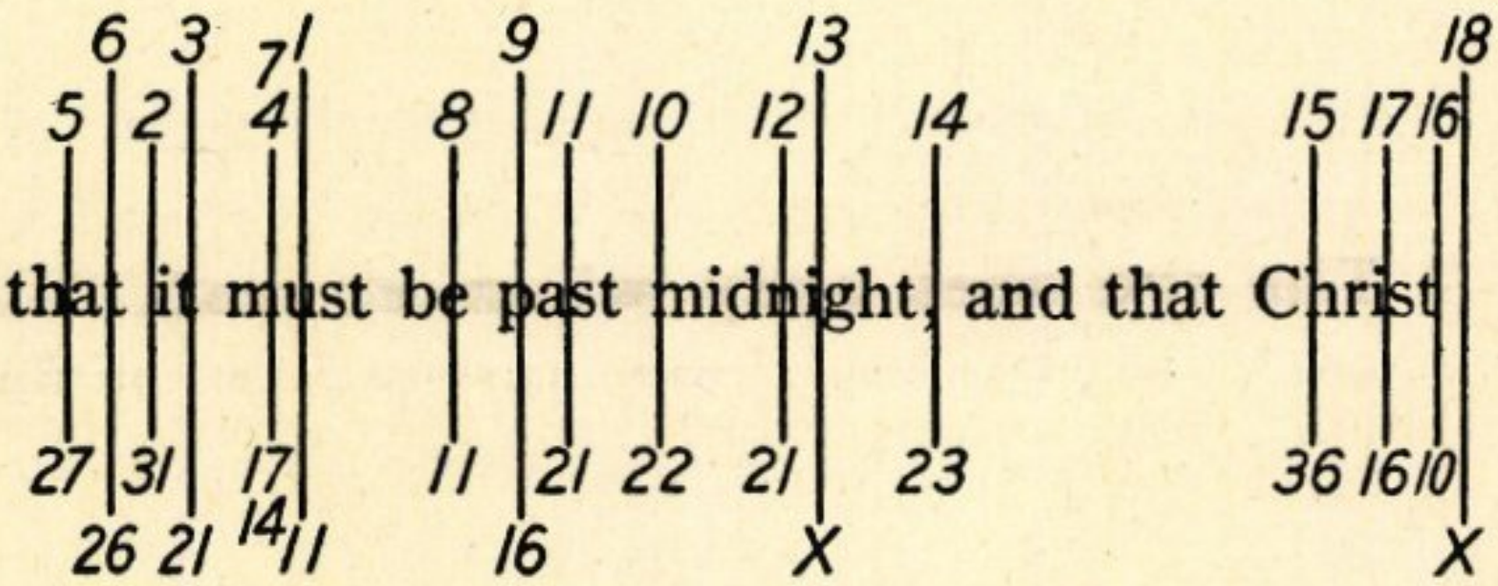

FIG. 8. Silent reading by a poor reader in the fourth grade[1] (the X indicates that it was impossible to determine with precision the length of the pause)

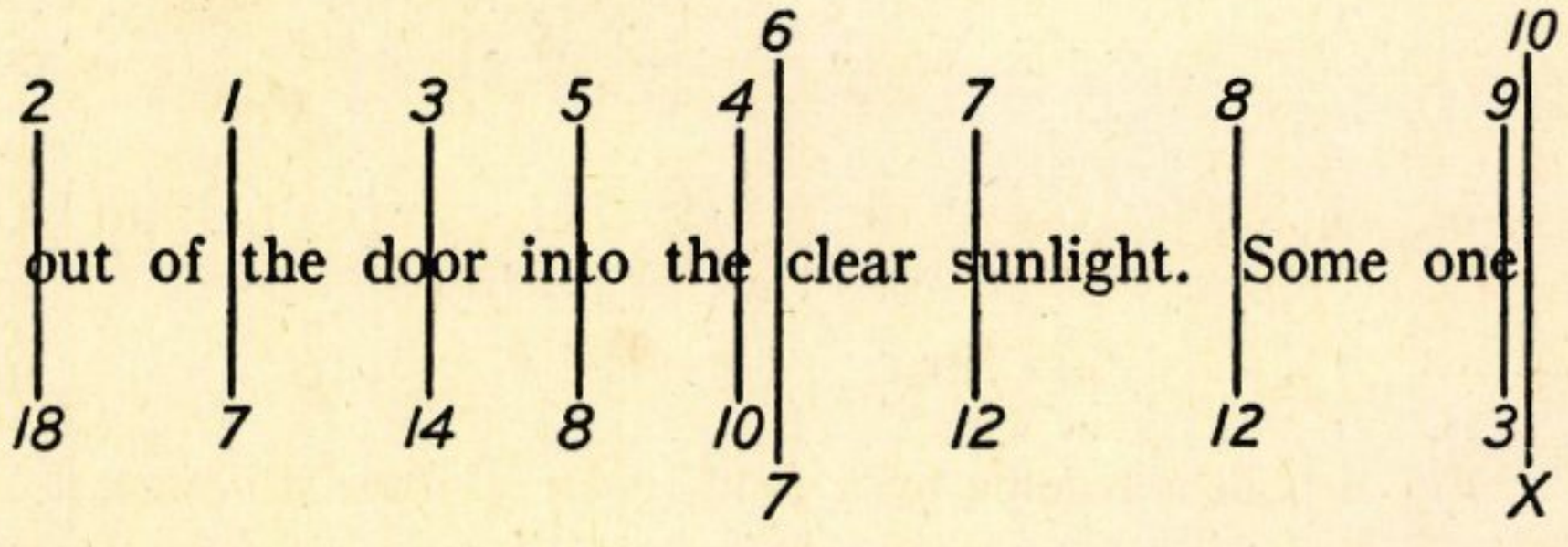

FIG. 9. Silent reading by a poor reader in the seventh grade[1] (the X indicates that it was impossible to determine with precision the length of the pause)

[1] From "Reading: its Nature and Development," by C. H. Judd.

sciousness of the reader in a few peeps at the line; Chapters VI and VII, "The Balance between Mechanics and Meaning," discuss the significance of regressive movements on the part of poor readers; Chapter VIII, "The Balance between Speed and Comprehension," continues the discussion of Chapters VI and VII; and in Chapter IX, "Oral and Silent Reading," we find a discussion of the characteristic differences between the eye-movement habits that are developed in oral reading and those that are developed in silent reading.

As an introduction to the chapter which immediately follows, we need now to consider briefly two very important facts of vision; namely, (1) that the eye sees only when it is at rest, or fixated, and (2) that the limit of distinct vision is very small.

The eye sees only when at rest. That the eye does not see when it is moving from one point of fixation to another may be demonstrated by a very simple experiment. Let the reader look at one corner of his room, then shift the eyes to another corner, taking particular pains not to allow the eyes to fixate any intervening object while the shift is being made. One becomes aware at least that very little can be seen between one point of fixation and another. Again, one may look at the image of his eyes in a mirror, the while making slight shifts by looking first at the image of one eye, then at the image of the other, in the effort to detect any movement. No movement of the eyes can be noticed. Or, again, one may try to see the individual spokes of a slowly moving wheel. Only a blur can be seen, unless for an instant the eye fixates a single spoke by following it for a short space in its revolution.

The evidence which has just been presented is, of course, not entirely conclusive. Of how little importance, however, is eye movement so far as vision is concerned, as compared with fixation, one can very readily satisfy himself by comparing the amount of time consumed by each process in reading. Eye movement is practically instantaneous; about one fiftieth of a second is consumed in traveling from one point of fixation to

another.[1] Turning back to Fig. 2 we find the adult reader consuming about fourteen times this length of time on the average at each of his fixation pauses. The question whether perception takes place during eye movement has been very fully discussed by a number of experimenters. The preponderance of evidence leads to the conclusion that there is no perception during movement.

The limit of distinct vision is small. The second important fact of vision, that the limit of distinct vision is very small, can be understood if we note the physical structure of the retina — that part of the eye upon which impressions of visual stimuli are made. There is in the back part of the retina a little depression called the *fovea,* in which is closely packed a large number of *cones.* Beyond this area are found both *rods* and *cones,* the percentage in the number of rods increasing and that of the cones decreasing as the distance toward the outer areas, or *periphery,* of the retina becomes greater. These rods and cones are highly developed nerve cells which are specialized for the reception of light stimulations. They have different functions: both are sensitive to light impressions; the cones alone are useful for distinct vision.

It is evident that the area of distinct vision is defined by the area of the depression in the retina which is made up exclusively of cones. Its area is about one fifth of a millimeter in diameter, and includes about three fourths of a degree of the retinal image, which corresponds (for ordinary type at the usual distance from the eye for reading) to no more than three or four letters. The eye, of course, sees more than this amount; three or four letters are all that can be seen *distinctly.* Beyond this limit of *distinct vision* the retinal image becomes less and less distinct, and only the outstanding characteristics of letters, words, and objects can be seen, and they more and more faintly as the distance from the point of fixation increases. Huey describes such a retinal image in the following paragraph:

[1] E. B. Huey, The Psychology and Pedagogy of Reading, p. 34. The Macmillan Company, New York, 1915.

As we leave the fovea there is a marked decrease in the distinctness of the image, a gradual blurring and losing of details, due to the fast-diminishing number of sensitive retinal elements. Only the larger and larger figures of the picture appear as we go farther, and finally only the most general outlines of even the forms that are of considerable size are evident in the extreme outer parts. It is somewhat as though our camera plate were comparatively perfect within a very small circle at the center, but were perforated from this outward to form a sensitive netting having larger and larger meshes toward the edges of the plate. A print from such a negative would give some suggestion of the character of the retinal picture, and would be called exceedingly defective as a photograph.[1]

The limit of distinct vision appears to be large. The limit of distinct vision, thus defined, is somewhat at variance with what, as a result of our experience, we would be willing to concede as a limit. When we fixate a given point on a page of print, we are quite sure that we can see distinctly considerably more than three or four letters. This is to be explained in part by the fact that the rods which are located *without* the fovea are just as sensitive to different degrees of brightness as the cones which are included *within* the fovea. Thus, when we fixate the middle of a line of print, the differences between the white of the page and the black of the print appear about equally as distinct on the outer limits of the line as at the point of fixation, and we experience the illusion of all parts of the line appearing about equally distinct. In addition, our inability to keep the eye fixated at a given point longer than a moment serves as a partial explanation. If the reader will attempt to fixate his eyes for a few seconds on a given letter on the page, he will discover that it is an extremely difficult task to keep his eyes from turning to letters close by, then back to the letter he is fixating. The eyes are constantly in motion. Even when we are earnest in the attempt to hold them fixated at a given point, they are making slight movements back and forth to all points in the immediate

[1] From Huey's "Psychology and Pedagogy of Reading," pp. 66–67. Used by permission of The Macmillan Company, publisher.

neighborhood without our being at all conscious of any movement's taking place. Consequently, what we think we see distinctly at one fixation is really the amount we see distinctly at several fixations.

Summary. The present chapter introduces us to the problems which are to be discussed in later chapters. In it we have secured an introduction (1) to the characteristic movement of the eyes in reading, (2) to the contrasting features of the eye-movement habits that are developed in silent reading with those that are developed in oral reading, and (3) to the important characteristics of the eye-movement habits of good and poor silent readers in the various grades of the school. The chapter closes with a discussion of two important facts of vision; namely, (1) that the eye sees only when it is at rest, or fixated, and (2) that the limit of distinct vision is very small.

A number of photographic plates containing the eye-movement records of various readers are reproduced throughout the chapter, to which constant reference is made in the chapters which immediately follow. The reader should thoroughly familiarize himself with these records, and turn to them quite frequently as a source of light on later discussions.

READINGS

BUSWELL, G. T. Fundamental Reading Habits: A Study of their Development, chap. i, on "Fundamentals in Reading." The University of Chicago Press, Chicago, 1922.

FREEMAN, F. N. Experimental Education, pp. 95–109, on "Observations of Eye Movements in Reading." Houghton Mifflin Company, Boston, 1916.

HUEY, E. B. The Psychology and Pedagogy of Reading, chap. ii, on "The Work of the Eye in Reading." The Macmillan Company, New York, 1915.

JUDD, C. H. Reading: its Nature and Development, chap. iii, on "Eye Movements of Adult Readers," and chap. iv, on "Analysis of Children's Reading." The University of Chicago Press, Chicago, 1918.

CHAPTER V

THE NATURE OF RECOGNITION

I. THE PROCESS

The former conception emphasized the importance of letters. It was formerly believed, as it is quite commonly believed today, that recognition in reading proceeds letter by letter. The eyes, one might be told, move across the line of print in a continuous, steady movement, noting each letter separately, but doing it so rapidly that the letters fuse themselves into words in our minds without our being at all conscious of the process. A word is determined by its constituent letters; therefore it is necessary for the eye to take in and the mind to relate each letter as it appears in the word, before recognition of the word is complete. Words are spelled letter by letter; they are written letter by letter; naturally, the argument might run, they are recognized and read letter by letter. The argument is very plausible. There is not a doubt that behind some such an argument the old alphabet method of teaching children to read defended itself for so long a time in educational practice.

"From simple to complex" was the dominant principle. The alphabet method of teaching children to read was logically the first and only method of earlier pedagogical practice. A later chapter, "The Development of Modern Methods in Reading," will treat of it in some detail. For our present purpose it is enough to examine briefly the underlying principle of the method. The writings of Pestalozzi provide for us the most evident clue to an understanding of the reason why the alphabet method continued for so long a time to be the only one devised by the minds of teachers of children.

Pestalozzi, fired by the "Émile" of the visionary, Rousseau, decided, as he said, "to psychologize teaching" and to arrange the order of topics in each subject and present them in the way by which pupils can learn them best. In order to carry out his designs he adopted and followed to the letter that principle of method which had always been dominant in the teaching of reading. All teaching was to "proceed from the simple to the complex." The manner in which such an apparently harmless principle led Pestalozzi astray in the teaching of reading, as well as in the teaching of other subjects, is illustrated in the following quotations from his writings:

> I once more began crying my A B C's from morning to night. . . . I was indefatigable in putting syllables together and arranging them in a graduated series. I did the same for numbers; I filled whole notebooks with them; I sought by every means to simplify the elements of reading and arithmetic, and by grouping them psychologically [to] enable the child to pass easily and surely from the first step to the second, from the second to the third, and so on. The pupils no longer drew letters on their slates, but lines, curves, angles, and squares.
>
> In every branch of popular knowledge or talent, I set to work to organize a graduated series of exercises, the starting point of which was within everybody's comprehension, and the unbroken action of which, always exercising the child's powers without exhausting them, resulted in a continuous, easy, and attractive progress.
>
> The spelling book must contain the entire range of sounds of which the language consists, and portions of it should be repeated daily in every family. . . . No one imagines to what a degree the attention of infants is aroused by the repetition of such simple sounds as *ba, ba, ba, da, da, da, ma, ma, ma, la, la, la.*[1]

Thus we see that to Pestalozzi and to the pedagogues of a former day "from simple to complex" meant to start with the letter and proceed to the syllable, word, phrase, and sentence. To them the letter and the syllable were the simple elements; the word, the phrase, and the sentence the complex.

[1]S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 144–145. Ginn and Company, Boston, 1919.

The present conception emphasizes the importance of words and phrases. Students of education are coming to believe that the old and still somewhat common idea of recognition is entirely wrong. The careful reader of the preceding chapter cannot but be convinced that recognition in reading can and does proceed in a way that is more rapid and comprehensive than letter by letter. The present conception of recognition is that it proceeds not letter by letter but in word-wholes, in phrase-wholes, and sometimes even in sentence-wholes. In support of this conception let us review, first, the records of eye movement in reading which were presented in the preceding chapter; secondly, the findings of certain experimenters who have carried on investigations in the subject of recognition.

Records of eye movement. The records of eye movement which were presented in the preceding chapter reveal facts of recognition which stand out in most striking contradiction to the former letter-by-letter conception of the process. Let us turn back to a typical record, Fig. 2, for example. Here we find an adult silent reader taking into consciousness from one to four words at a single peep at the line. Since there is no perception in eye movement from pause to pause, as it was pointed out in a preceding discussion, we are obliged to conclude that the whole of perception, or recognition, takes place during the time consumed in the reading pauses. A mathematical division of a given line into as many parts as there are pauses in the line is conclusive that the reader's span of recognition is of an extent sufficient to cover the space of several letters. In line 2, for example, we note that the span of recognition is able to compass words and groups of words which are made up of six to thirteen letters. In lines 2 to 6, inclusive, forty-six words are read in twenty-two fixation pauses. That is to say, recognition is proceeding at the average rate of slightly more than two words at a time. It is not difficult for us to draw a conclusion from such a record.

TABLE I. THE DEVELOPMENT OF THE RECOGNITION SPAN—THE AVERAGE NUMBER OF WORDS AND LETTERS RECOGNIZED PER PAUSE —FROM GRADES III TO VII

FIGURE	GRADE OF READER	NUMBER OF LETTERS IN LINE	NUMBER OF WORDS IN LINE	NUMBER OF PAUSES PER LINE	NUMBER OF LETTERS PER PAUSE	NUMBER OF WORDS PER PAUSE
4	3rd	35	10	7	5	1.4
5	4th	35	8	6	5.8	1.3
6	6th	39	9	5	7.8	1.8
7	7th	40	9	4	10	2.2

In like manner the records of the eye movements of children, shown in Figs. 4–7, point to very definite conclusions. The important facts of the four records are summarized in Table I. The most significant data are to be found in the fifth, sixth, and seventh columns of the table. An examination of these data leads one to the conclusion that the former letter-by-letter conception of recognition is very erroneous. The development of the span of recognition, which is indicated in the increase in the average number of letters and words recognized per reading pause, is brought to our attention in a very striking way. We are led to the additional conclusion that as the child reader approaches maturity he becomes capable of recognizing in larger and larger units.

Records of short exposure of words. The process of recognition may be studied by the so-called short-exposure method. The method, in brief, is as follows: The subject is caused to fixate a given point in a rectangular blank space. Within this blank space, by means of a specially designed apparatus, letters, words, phrases, etc. are momentarily exposed. The subject endeavors to recognize as much as he can at each exposure. Part of the findings of two experimenters, Erdmann and Dodge, is summarized by Huey in the following paragraph:

Erdmann and Dodge argue strongly for the theory of perception in word-wholes, on the basis of numerous and varied experiments. . . . They base their argument mainly upon the following facts: First, words are recognized when lying too far from the fixation point to permit recognition of their component letters. Second, words are recognized when formed of letters so small that the letters could not be singly identified. Third, in about half the cases tried, words were recognized at distances at which the letters, when singly exposed, could not be recognized. Fourth, in the latter experiment the words were more readily recognized when they were long, or of optically characteristic form. Fifth, when twenty-six selected words were learned thoroughly in a fixed order, as the alphabet is known, and then exposed beyond the distances at which the letters could be recognized, the words could be distinguished and recognized in almost every instance. Sixth, words of four letters are named somewhat more quickly than single letters, and words of eight, twelve, and sixteen letters need comparatively little more time, the longest words needing only about one fifth more time than the shortest.[1]

Erdmann and Dodge point out that it is not the constituent parts of any given form that make it recognizable, but it is the familiar total arrangement.

The facts which are now before us are quite conclusive that recognition in reading proceeds in word-wholes and phrase-wholes. They appear so conclusive even as to contradict one of the important facts of vision, which was discussed in the preceding chapter, that the limit of *distinct* vision is so small as to include no more than three or four letters. The careful reader of the preceding chapter no doubt has already encountered in his own mind the problem of bringing this fact of vision into agreement with the facts of recognition which have been discussed. The apparent disagreement between these two seemingly contradictory sets of facts introduces us now to one of the most important discussions of the present chapter; namely, that the mind supplies what the eye fails to behold.

[1] From Huey's "Psychology and Pedagogy of Reading," pp. 73–74. Used by permission of The Macmillan Company, publisher.

II. CHARACTERISTICS

The eye notes the general outline; the mind supplies the details. As the eye in reading moves from fixation pause to fixation pause, the successive impressions which leave their records on the retina to be reported by the optic nerve to the visual centers of the brain are very defective as photographs. About three letters in the center of each retinal image stand out with any degree of clearness; the rest on either side of the center are less and less distinct as the distance to the limits of the recognition span becomes greater. If we put together the facts of eye movement, as revealed in the records of duration and number per line of the reading pauses, with the facts of vision, we shall become aware that only very indistinct retinal pictures of the words in a line are needed by the mature reader in order to set going the process of recognition. The eye is able to behold only the *outstanding characteristics*, the *striking forms*, the *dominant features*, of letters, words, and phrases. We shall see that these are all that the mind requires of the eye; indeed, all the raw material of sensation that the mind *needs* in order to perform its proper function as an agent of recognition. Whatever of detail is necessary in order to complete the very inadequate retinal photographs the mind is able to supply, and does.

Examples. If we glance at a familiar landscape, we are able to recognize it immediately. The one glance seems sufficient to produce a mental picture of the landscape in all its detail—the general contour of the land, the position of every tree and shrub, paths and roadways, rocks and grassy knolls. A closer examination of the landscape will reveal a number of details which we were quite sure we had seen at the first glance. Yet if we are questioned regarding the landscape immediately after the first glance, we can be absolutely sure of having seen only a few of its details. Regarding many of the more familiar details, we are not able to tell exactly whether we have just seen them

or are having them pictured for us in our "mind's eye." Indeed, a second glance will often reveal a number of details which we were quite sure we had seen at the first glance, greatly altered and some entirely disappeared.

Again, the mind does not require any great amount of sensory experience in order to enable us to recognize a friend. A mere glimpse of him in passing, the sound of his footsteps, an insignificant mannerism—any of these is sufficient sensory material to enable us to recognize him and to be just as sure of our judgment as we should be had we met him face to face and had we scrutinized his appearance in greatest detail. Some one thing about his general appearance, some especial peculiarity or mannerism, is sufficient to set going the process of recognition. In like manner we may see a building in the distance and recognize it as being a house because of one distinguishing feature—smoke rising from a particular corner, for example. This is sufficient sensory material to result in recognition. It is not necessary for us to be able to see a single window or door.

The reading of the blind as an illustration. The reading of the blind is a frequently quoted illustration of the general character of recognition. In the Braille system of printing the letters of the alphabet are represented by tangible points and dots raised above the page. A practiced reader of these raised-letter pages goes ahead with the fingers of his right hand to examine the total form, or general outline, of the word. The fingers of the left hand follow, moving successively over the letters in order to sense the details of each word. However, only a part of the letters are examined, while the fingers move over the others without touching the points. Thus only a part of the letters are read; the rest are conjectured. Thus the blind need to sense only a part of the details of a word in order to recognize it.

A mistake in reading as an illustration. Professor Parker reports the following incident from his own personal experience to illustrate the influence of a person's frame of mind in determining his response to a situation:

I was riding in a train and happened to look over the shoulder of the man in front of me at the newspaper he was reading. I could just see the top of the paper and read there the following large headline, extending clear across the page:

GOOD HATS A QUARTER

Inasmuch as I always take advantage of end-of-the-season reduction sales of men's furnishings, this statement interested me (although good hats for a quarter seemed impossible) and I decided to look into the matter further when I got a chance. Soon the man left his seat to go into the smoking car. I picked up the paper and, turning to the desired page, found that instead of reading

GOOD HATS A QUARTER

the headline read

GOD HATES A QUITTER

It was Monday morning and the paper in question contained reports of Sunday sermons printed with large-type headlines running clear across the page. If I had been in the religious frame of mind, instead of the bargain-hunting frame of mind, I might have read the headline correctly at the first glance.[1]

The results of an experiment to illustrate the characteristics of recognition. In his "Experimental Education" Professor Freeman[2] describes and reports the results of a study of the perceptual process in reading by the short-exposure method. The method was, to quote from the report, "used to study the difference in fusion in the recognition of different kinds of material, on the assumption that the greater the fusion between the elements of the perception the greater will be the amount which can be recognized in a given exposure, or the fewer will be the number of exposures necessary to recognize the whole." In accordance with this assumption the results were made com-

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 191–192.

[2] F. N. Freeman, Experimental Education, pp. 110–115. Houghton Mifflin Company, Boston, 1916.

parable "by dividing in each case the number of objects (letters or digits) exposed by the number of exposures necessary to recognize them, to give what we may for convenience call the average number of objects recognized per exposure. The larger this number the greater we may assume the fusion among the objects to have been." Each kind of reading material was momentarily exposed a sufficient number of times to enable the subject to be sure he had recognized it. The study is made up of four parts.

Part I compares the "amount of fusion which exists in the recognition of groups of digits and groups of the same number of letters in short words." The number 824397 is an example of the groups of digits; "travel," "factor," are examples of the words.

Part II is a comparison "between groups of nonsense syllables and groups of short words arranged in a sentence and containing approximately the same number of letters." "Gup faj rud fon sil" illustrates the groups of nonsense syllables. "There are two left" illustrates the short sentences.

Part III is a comparison "between the recognition of unfamiliar and familiar words." Unfamiliar words, such as "tachistoscopic" and "eudæmonistic," were exposed; words like "governmental" and "transcontinental" represent the familiar words.

Part IV is a study of the "proofreader's fallacy"; that is, the neglect of errors in words. "The existence of this neglect is an evidence of fusion or recognition of the group as a whole, rather than of each unit for itself." In the performance of the experiment the subjects did not know what words contained errors, nor were they required to detect them or to make any special effort to recognize details. Words like the following were exposed: "education," "improtant," "measuded," "orthodox," "carruage," "argument."

Freeman reports the results which were obtained in each part of the study by eighteen individuals. Only the average

results are reported below, each result being the average number of objects; that is, letters or digits recognized per exposure. Each result is based on the total number of letters or digits in the reading material exposed divided by the number of exposures necessary to recognize them.

TABLE II. THE AVERAGE NUMBER OF LETTERS OR DIGITS RECOGNIZED PER EXPOSURE

PART	KIND OF MATERIAL EXPOSED	NUMBER RECOGNIZED
I	Digits	1.7
I	Short words	5.3
II	Nonsense syllables	2.6
II	Short sentences	8.0
III	Unfamiliar words	3.9
III	Familiar words	12.1
IV	Words, including misspellings	6.3

The reader will note the striking contrasts in the results for the different kinds of material exposed in Parts I–III. The similarity in the results of the exposure of words, including misspellings, in Part IV and of the words of nearly equal length in Part I attracts the attention with equal force. We are now in a position which warrants the statement of certain general conclusions relative to the characteristics of recognition. These conclusions have their basis in the illustrations which are quoted above and in the discussions which precede them. They are as follows:

1. Recognition is a mental act.

2. Recognition is capable of being improved through training.

3. The mind does not require sensory stimulations to be complete.

4. The mind supplies what the eye fails to behold.

Let us consider each conclusion briefly in turn.

Recognition is a mental act. Recognition is an act, a thing that we do, a mental process; literally, a second cognition. When recognition takes places we *actively* identify a thing that we sense as being something, or as belonging to something, with which we are already acquainted. Accordingly not all sensations result in recognition. Only as we turn our attention, or as our attention is attracted, to given sensations does recognition take place. Not all sounds are identified, for example, when our attention is occupied with the reading of an interesting story; likewise, when we are busily engaged in conversation many things that we see pass without being recognized. There must be an active movement of the mind in order to produce recognition.

Recognition is capable of being improved through training. Since recognition is an act, it is, like all other things that we do, performed more easily with each repetition of the act. In order to recognize an unfamiliar word considerable energy has to be expended (see results of the experiment in recognition of familiar and unfamiliar words in Table II, Part III). The first few times we see the word "tachistoscope," for example, we encounter considerable difficulty in recognizing it. However, when we come to know "tachistoscope" as being the name of a piece of laboratory apparatus constructed for the momentary exposure of reading material; when we have met "tachistoscope" time after time in the articles we read; in short, when we have performed the act of recognizing "tachistoscope" a number of times we find that we experience very little if any difficulty in recognizing the word. In like manner "transcontinental" is a very easy word for us and a very difficult one for the sixth-grade pupil. The reason is that we have performed the process of recognizing the word dozens of times, whereas the sixth-grade pupil may not have met the word in his reading more than once or twice.

In order to acquire any degree of skill in the performance of a physical act, like riding a bicycle, skating, playing tennis,

learning to typewrite, etc., one must have considerable practice. Practice is just as important for the acquirement of skill in the performance of a mental act. Efficiency in the recognition of words in one's reading is the result only of repetition and drill. The principle thus laid down will be the basis of the practical discussions of later chapters.

The mind does not require sensory stimulations to be complete. As recognition develops by practice into a more and more complex act, it becomes capable of being set off by relatively insignificant sensory cues. Our friend's manner of walk enabling recognition, the general contour of the ground indicating a familiar landscape, and smoke rising from a distant object identifying a building as a house are examples of single consciousness cues. Just as the sight of the game for the hunter is a sufficient cue to set going the very complex act of bringing the gun to position, aiming, allowing for the distance and speed of the game, and pulling the trigger, so certain minor details of word-form and phrase-form are sufficient cues to set going the recognition of these words and phrases, with a minimum of consciousness concerning details.

It is true that the recognition of an unfamiliar object has to proceed by a close examination of details. For example, the more unfamiliar a word is the more the recognition of it has to proceed letter by letter. It is just as true that as the familiarity of a word increases, as a result of practice, fewer and fewer sensory cues suffice to touch off the process of recognition, the tendency being toward reading in word-wholes.

The sensory cues that result in the recognition of words by the mature reader are the familiar total forms of the words and the presence of certain dominant, or distinguishing, letters. A reference to the results of the experiment in the recognition of words, including misspellings, in Table II, Part IV, is a reminder that the letters of a word may be interchanged or altered without causing any interference with the process of recognition, so long as the familiar total form of the word is

preserved. Likewise, considerable influence as sensory cues has very frequently been ascribed to the presence of characteristic, determining, or dominant letters. The letters *c-nt-r* suffice for *center*; *m-k-do* for *mikado*; *ch---ty* for *charity*; etc. Considerable discussion has been carried on as to the relative importance of the two kinds of cues in word recognition. Since the controversy does not add anything to our discussion on the practical side, we may leave it with the conclusion that the two sets of cues are interdependent. The presence and arrangement of characteristic, dominant letters determine the familiar total form, and the sensing of the familiar total form leads to recognition.

The mind supplies what the eye fails to behold. Recognition involves a filling in by the mind of the necessary details to complete the very inadequate sensory photographs produced upon the retina. It is a projection outward of a mental picture as a result of a sensory stimulation. Just as it is possible for us to reconstruct in our mind's eye a mental picture of the appearance of any of our large stock of familiar words, as we may choose to think of them one at a time, so do we actually reconstruct in our mind's eye the appearance of familiar words as a result of the very inadequate retinal images that are reported to the visual centers of the brain during the process of reading. Words with letters interchanged or altered or omitted are reconstructed in complete and correct detail. Often, as in the reading of

GOOD HATS A QUARTER

instead of

GOD HATES A QUITTER

the reader is led into considerable error by the pronounced activity of the mind in reconstructing *what is in the mind* in preference to what provides the retinal picture. In any case recognition is just as much a product of the things already in the mind as it is of the excitations and stimuli received from the outside, physical world.

Again, perception is always a projection or localization outward of a consciousness which is aroused or suggested by the stimulations that have come inward, but which is conditioned strongly, also, from within. We have seen how, when some dominant parts of a word or sentence were exposed without the other parts, the reader would project the absent letters upon the page and would "see" them as distinctly as when they were actually before him. We have seen, too, how in every moment of our reading we project letters and parts of letters to fill up the gaps that are always left in the peripheral parts of our retinal image. We know how we project a consciousness content to serve for what should be imaged on the "blind spot." Such projection is as certain and as common as is any mental phenomenon. The simple fact is that the words and all the other objects that we ever see are thus thrown outward, projected upon a page in the case of reading, somewhat as a lantern might throw them outward upon a screen. In the case of perception it might be said that the mind furnishes the screen as well. It must be remembered that consciousness does not dwell in the retina or in retinal images. Objects may be pictured very well without any retina or optic nerve. For our purposes here consciousness may best be thought of as in the brain, totally in the dark as to physical environment, constructing even its light as well as its forms and meanings according to the excitations that come in to it and their relations with those that have previously come in.[1]

III. PRACTICAL CONCLUSIONS

The foregoing discussion has culminated in a general statement of the characteristics of recognition. It is important for us to consider now for a time the practical application to reading of the more or less theoretical discussion of the pages just preceding. Our purpose shall be to determine and to state such important general principles which underlie the teaching of reading as we may find a basis for in the first and second divisions of this chapter, reserving for another part of this book the working out of the specific devices and details of instruction.

[1] From Huey's "Psychology and Pedagogy of Reading," pp. 105–106. Used by permission of The Macmillan Company, publisher.

Words, not letters, provide the logical starting point in teaching to read. The foregoing discussion has made clear that the alphabet method of teaching to read falls far short of reaching the aim of Pestalozzi when he started out to "psychologize teaching." Pestalozzi's mistake, we can quite readily see, was that he focused his attention wholly upon the working out of a logical organization of the subject, forgetting the while to consider the way children learn the subject and the use they make of it when learned. Thinking wholly in terms of the subject, the organization of reading from letter to syllable, from syllable to word, and from word to phrase, is the logical, "from simple to complex" scheme of organization; thinking in terms of children who are learning to read, and of children and adults who make use of reading, it falls far short of being logical. We have seen that recognition in reading does not proceed letter by letter—indeed, that individual letters are scarcely of more importance in word recognition than the individual buds on a rosebush in enabling us to recognize it as a rosebush; that recognition depends upon the familiar total form of the word or object. Such being the case, we are entirely justified in arriving at the general conclusion that familiarity with words in their total form is the first aim of the teacher who would teach children to read.

Analysis of words into letter-elements and sound-elements must not be ready-made for the learner. In adopting for our guidance the general conclusion that familiarity with words as wholes is the starting point of children in learning to read we must not lose sight of the importance of word analysis into its constituent elements—letters and sounds. The need for carrying on such work in the early years of the school is emphasized in the chapter immediately following. It is stated further in the chapter which follows that analysis has a purpose not for its own sake, but for the sake of leading the pupil to an independent recognition of new and difficult words. Reserving for the next chapter a reasonably full statement of the whole matter,

we are at liberty here, on the basis of the discussion of the present chapter, only to state that children do not learn to read by being fed in regular order the elements of word and phrase situations—letters and sounds—by someone else who has dug them out, but by meeting the word and phrase situations first as complex wholes and afterwards carrying on by themselves under the guidance of the teacher what analysis is necessary for further progress.

In the writing of words and in learning to spell, it is necessary for the pupil to scrutinize the make-up of each word very carefully and to be familiar with it in complete detail. In the recognition of words in reading, however, minute analysis is wholly unnecessary. The following quotation points out that subject matter, now psychologically organized, begins with wholes:

> . . . great modern psychologists, such as William James, describe learning *not* in terms of proceeding from the simple to the complex, *but* in terms of the learner's meeting more or less complex objects or situations and analyzing these as far as may be necessary for practical behavior. This account of the learning process is having large influence in changing the organization of subject matter. For example, since children can easily recognize as wholes such *statements* as "We have two pets" or "They are white mice," such short sentences may be used in beginning reading, instead of beginning with letters or syllables.

This process is described in one of the current manuals of a commercialized reading system in the following terms, which clearly reflect James's influence:

> *Wholes to Parts, to Wholes.*—The vague whole [namely, the story of Little Bo Peep or of Jack Horner] is acquired by the children through listening to the story told by the teacher, and through the exercise of their own self-activity in dramatization. The story is first analyzed into thought groups. The thought groups are then built up synthetically by the teacher, sentence by sentence, at the blackboard. Word groups and sight words are taken from the sentences. Selected words are separated into phonograms. Phonograms are blended to form words. The final step is the reading of the whole story from the book.[1]

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 150–151.

Considerable practice is necessary in order to make recognition rapid and easy. It is necessary here to do no more than to state this general principle. Enough of discussion for our present purpose was included in the discussion of the second characteristic of recognition. Skill in reading is not unlike any other skill in the respect that it requires practice in proportion to the degree of proficiency one expects to attain.

Reading material must be easy and its content not difficult to understand. This general principle has its basis in the second characteristic of recognition discussed above and in the principles governing effective drill. We may secure an idea of the necessity for such a principle operating in the teaching of reading by considering briefly the effects of difficult reading material and hard content upon the development of reading habits.

When a pupil in the lower grades undertakes the task of reading a selection which is hard to understand and which is made up of relatively unfamiliar words and phrases, his experience is the same as that of every other person who would undertake a similar task. The reading proceeds very slowly and laboriously, and recognition tends to proceed letter by letter instead of a word or a familiar phrase at a time. The reading habits thus developed are decidedly bad, and continued progress toward the goal of effective rapid silent reading is very materially hindered. For the sake, then, of developing good reading habits the reading material and its content must be of such nature as to cause little interruption in the reading process.

Of course pupils should develop the ability to read more and more difficult selections; numerous occasions in school demand the close study of difficult assignments. The answer to the first concession is that pupils have little chance of attaining the required ability by carrying on reading work which leads to the development of inferior reading habits. To the second concession the answer may be given that the purpose of reading lessons and exercises is to develop a particular skill which may

be used later in mastering difficult content; that the mastering of difficult content is the purpose of geography lessons, history lessons, nature-study lessons, etc., not of reading lessons.

The content of reading material must appeal to the instinctive interests of pupils. Recognition has been defined as a mental act requiring the active turning or the passive attracting of one's attention to the identification of certain sensory stimulations. We are aware, as a result of our own experience, that the staring at a page of print the while we are thinking of something else does not result in the recognition of the words on the page. Only as we set ourselves to the task of reading—that is, actively turn our attention to, or have our attention attracted by, the contents of the page—do we succeed in performing the process of recognition which is necessary for reading. We should be increasingly aware of the futility of expecting a pupil to receive training in recognition by carrying on the process of calling the words on a page under the promptings of the teacher or of another pupil. We should recognize the magnitude of the wasted effort of the pupil who finds the content of his reading of no greater interest than to permit him to travel the whole length of the schoolroom with his finger on a word in order to have the teacher pronounce it for him. Teachers who are inclined to tolerate such practices in their schoolrooms need to be quite frequently reminded that the mind of the pupil must act before he can succeed in the recognition of the words before him.

A person's mind acts under the promptings of two kinds of attention; namely, forced attention and spontaneous attention. It is necessary at times for the teacher to appeal to the first kind of attention in order to get any work at all done by certain members of a class. Usually, however, when attention is forced, there obtains to a corresponding degree a more or less unprofitable expenditure of energy on the part of both teacher and pupil. Then, too, the forced attention is operative only during the period when the teacher and pupil are in direct con-

tact one with the other. There is a need for an operative attention which will impel the pupil to a continuous practice in word recognition—in reading—during the time the pupil is the master of his own devices. Spontaneous attention can be relied on always to operate with a maximum of results because such attention is not divided.

A person turns his attention, or his attention is attracted, to a given object, process, or piece of work because of its appeal to some immediate or remote, some instinctive or acquired, interest. When attention is forced in the reading lesson, or elsewhere, it is necessarily quite unproductive for the reason that it is divided between the pupil's instinctive fear of punishment, such as threats, scoldings, demerits, etc., and the work he is called upon to do. Spontaneous attention is not a divided attention. The reason is that it is called forth by an instinctive interest in adventure, excitement, hero tales, romance, animal stories, activities, etc. which forms the basis of the work at hand. Contrast the effectiveness for the reading work of second-grade and third-grade pupils of the two selections from school readers of an earlier day given in the following quotation:

MR. LONGFELLOW

This is a picture of Mr. Longfellow.
He was the boy who lived near the sea.
He is an old gentleman in this picture. . . .
He was a poet.
A poet has beautiful thoughts.
He writes them for others to read. . . .
When he was a boy he went to school.
Then he went to Bowdoin College. . . .
He then went across the ocean. . . .
When he came back he was a teacher in Bowdoin College.

. . . The picture of Longfellow [excites] some momentary interest, but what of the sentences that follow? Our study of apperception revealed no more ill-adapted material than discussions of Bowdoin College for seven-year-olds. Most children would certainly not be

attentive to such material unless they were forced to be. Contrast now the following "thriller" from a third reader published in the same year as the story of Mr. Longfellow:

KING TAWNY MANE

There was once a lion whose name was Tawny Mane. He was so strong that all the other animals were afraid of him, so he was called the king of the forest. He liked to kill every animal that came in his way, and there was no living thing in all the land that was safe from him.

At last, one day, all the animals met to talk about their troubles, and see if they could not find some plan to save themselves from King Tawny Mane. They talked a long time, and then agreed what to do.

In the evening they went together to the lion's den. King Tawny Mane had just had a full meal, so he did not try to harm any of them. "What do you want here?" he roared.

This frightened them very much. Some of them ran back into the thick woods. But the bravest stood still. "Speak and tell me what you want," said the king.

Then Sharp Ears, the fox, stood up and spoke.

Can you imagine an ordinary child who would not be anxious to read on and find out what Sharp Ears said about the plan to send one animal each day to appease the king's hunger? Perhaps even you would like to know the adventure of little Cotton Tail which comes in the story after the following paragraphs:

At last the lot fell upon a little rabbit named Cotton Tail, and he was sent to make a call upon the king. He was in no hurry to go. He played along the road until after dinner time. Then, with big eyes and gentle steps, he went and stood at the lion's door.

King Tawny Mane was very hungry, and when he saw the rabbit he roared, "Why are you so late? Even the elephant knows better than to keep me waiting."

The rabbit bowed low and said, "I know I am late. But if you could only see what I have seen, you would not blame me."

"What have you seen?" said the lion.

Interest in adventure prominent in social life; its use is effective in teaching reading.—The interest which would carry a child or an adult through the above story is the same interest that made Homer's stories of the wanderings of Ulysses so popular with the Greeks and that now gives a popular journal a circulation of millions of copies each week.

It is one of the strongest interests born in human beings; namely, the interest in adventure, in excitement, in romance. When coupled with the courageous and fighting instincts it carries thousands of red-blooded persons to all ends of the earth in search of new and thrilling experiences. At the same time it impels many of the most timid and peace-loving to sit in their comfortable homes or at the movies, and thrill over the deeds of detectives and crooks, cowboys and hunters, soldiers and sailors, knights and their ladies. Obviously, we save much time and energy in teaching children to read if we can use this interest to keep them attentive during the reading period and to get them to read voluntarily out of school hours. Consequently many adventure stories are now read in the elementary school, from "The Three Billy Goats Gruff" in the first grade to "Treasure Island" in the upper grades.[1]

There is yet another, though somewhat closely related, reason why the content of children's reading material should appeal to their instinctive interests. We are aware of the marked tendency of people to read into a selection what is in their minds instead of what appears on the page of print (note again the fourth characteristic of recognition discussed above). Pupils in their reading lessons very frequently recognize a familiar word as some other word which is entirely different in meaning and quite different in form, largely because their attention is divided and their minds are occupied with thoughts unrelated to the work at hand. Practice in reading involving word recognition of the kind just referred to is by no means effective practice having lasting results. This paragraph is only another way of stating that the full, undivided attention of pupils needs to be given to the work at hand.

Summary. Preceding chapters have pointed out that the demands of modern life make necessary the attainment of a high degree of skill in the reading process. The present chapter traces one phase of the development of skill in this process, and indicates the necessity of considerable practice in order that

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 202–204.

the desired goal may be reached. Such practice must, of course, be effective. It is necessary, therefore, that the reading material be such as to cause little interruption to the reading process, but, because of its interesting content, to attract the keen attention of pupils. The main points of the chapter are as follows:

1. Recognition in reading does not proceed letter by letter, but in word-wholes, phrase-wholes, and sometimes in sentence-wholes.

2. As the reader approaches maturity he becomes capable of recognizing in larger and larger units.

3. The development of the ability to recognize in larger and larger units corresponds to the amount of increase in one's familiarity with words and phrases.

4. Recognition is a mental act.

5. Recognition is capable of being improved through training.

6. The mind does not require sensory stimulations to be complete.

7. The mind supplies what the eye fails to behold.

8. Words, not letters, provide the logical starting point in teaching to read.

9. Analysis of words into letter-elements and sound-elements must not be ready-made for the learner.

10. Considerable practice is necessary in order to make recognition rapid and easy.

11. Reading material must be easy and its content not difficult to understand.

12. The content of reading material must appeal to the instinctive interests of pupils.

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CHAPTER VI

THE BALANCE BETWEEN MECHANICS AND MEANING

In the two chapters just preceding, the discussions of reading have dealt largely with what may be called the mechanical phases of the process. Such topics as fixation pauses, what the eye sees in reading, units of fixation, recognition span, and characteristics of recognition have been placed in the forefront of the discussions. The reading process has been considered as a mechanical process, and only by implication as a process of extracting thought from the printed page. The purpose of the present chapter is to continue the discussion of the mechanical phase of reading in order that it may be possible in the chapter which follows to consider the reading process explicitly as a process of getting meaning and to point out the intimate relationship which exists between mechanics and interpretation.

Mechanics and meaning as conflicting conceptions. In the actual practice of the schools a sharp conflict of opinion has been allowed to develop as to the relative importance of emphasis on the mechanics of reading and emphasis on meaning. The two conceptions have been set over one against the other as conflicting principles in the teaching of reading. The one would strive to make reading wholly a mechanical, or formal, process; the other would neglect mechanics and form and place entire emphasis upon content and interpretation.

No real conflict exists. Despite the sharpness of the contrast exhibited, one has no difficulty in seeing that neither conception of the reading process is complete in itself, and that training in reading involves training in both mechanics and interpretation. Arguments which seem to support either conception may very

readily be arrayed in opposition to arguments which seem to support the other. However, the very incompleteness of the list of arguments which may be grouped exclusively under the one or the other conception always points to the fact that, though the conflict between the two conceptions may *apparently* be very strong, it *really* is of little importance. The point of view of the present discussion toward mechanics and meaning is implied very strongly in the concluding sentences of the following paragraph by McMurry:

> The history of schools and of courses of study during the last three hundred years demonstrates a constant and powerful tendency toward one-sided formalism, especially toward linguistic forms, grammar, etc. The reformers have fought against this narrow routine, and in recent years with increasing success. There has been, thus, an age-long quarrel between those who favor studies of a formal type and those demanding a rich thought content in school subjects. Whole systems of education have been strongly tagged with one or the other of these features. In all sound education one would naturally think that these two essential elements, form and thought, should be closely combined, and we may well be disappointed at this universal tendency in schools to run to extremes and to separate them as if they were hostile to each other. In all studies a close combination of these two elements should be earnestly sought. In superior literature and in fine art the two elements are well balanced and combined. The perfection which is the supreme quality in literature and art is the masterly union of form and thought. In human behavior at its best we likewise find this intimate blending of idea and form, whose proper combination gives us good manners. The ideal result to be aimed at in all conduct is, as far as practicable, a proper blending of form and thought.[1]

Main points of the discussion. With the point of view toward mechanics and meaning which has just been advanced as a determining factor, the remaining discussion of this and of the following chapter will bear upon three important topics, as

[1] C. A. McMurry, Conflicting Principles in Teaching, pp. 185–186. Houghton Mifflin Company, Boston, 1914.

follows: (1) the importance of emphasis upon mechanics; (2) the interpretation of what is read; and (3) the relation of mechanics to the process of reading for meaning.

I. THE IMPORTANCE OF EMPHASIS UPON MECHANICS

Poor reading in the lower grades. A study of the eye-movement record of a poor reader in the lower grades will provide a starting point for our discussion of the importance of emphasis upon mechanics. Let us reëxamine Fig. 8, Chapter IV, which contains the record of the eye movements of a poor reader in the fourth grade.

Characteristic of this record are the unusually large number of fixation pauses to the line and the extreme length of some of the pauses. A third striking feature of this record impresses the observer. It is that the movement of the eyes of the poor reader instead of being progressive—that is, steadily forward from left to right across the line—is *regressive* in character, and that the usual forward movement of the eyes is very frequently interrupted by backward movements.

Regressive movements indicate periods of confusion. What is the significance of the regressive eye movements which are presented in the record? The backward movement of the eyes at the beginning of a line (see Figs. 4 and 5) is very easily explained. In the fixation at the beginning of a new line in reading the process is complicated by the result of the long, sweeping movement of the eyes from right to left from the preceding line. The eye stops to fixate at a point in a word near the beginning which does not produce the necessary amount of visual stimulation to result in recognition. The eye accordingly moves back to a point nearer the beginning of the line for a second fixation before eye movement and recognition can proceed as usual. Again, in beginning the process of reading the first line of a passage often results in a certain amount of regressive movement. Here the backward movement is to be

explained by the unusual expenditure of energy (which is the case in all activities) in the process of getting started.

It is evident that the explanations which have just been offered do not apply to the situation which is presented in the regressive movements of Fig. 8. Unlike the ordinary backward movement, explained above, the regressive movements of Fig. 8 are representative of a complete breakdown in the reading process of the pupil. These movements are not at all characteristic of the ordinary reading process or of progress toward maturity. They are wholly different in character from the movements made by good readers. One would imagine that a majority of them are made in the effort of the reader to secure a larger and a necessary amount of visual stimulation, if it were not for the fact that in more than half of the fixations the visual stimulation is no different from that of preceding ones. The reader will observe that in Fig. 8 there is a constant backward and forward movement of the eyes over the same ground that was gone over in previous movements. The explanation does not hold, because it is quite clear that the continued repetition of the same visual stimulations is wholly unnecessary for the ordinary process of word recognition.

Again, as it is pointed out by Judd,[1] the explanation if left to an ardent devotee of the A B C method might take the following form: "This child is exploring the letters in the words and will in due time develop the power of recognizing the word as a whole." The answer to this explanation is that if the pupil were spelling the words letter by letter, there would be no need for any but the steadily forward, progressive movement of the eyes from one letter to the next.

The only explanation that remains of the wandering, regressive movements of Fig. 8 is that they are not representative of the kind of recognition which results in fluent reading;

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, p. 60. The University of Chicago Press, Chicago, 1918.

that the reading process has broken down because recognition is not following its usual course; that the movements are typical of a period of "confusion," such as always follows the interruption of the normal procedure in any activity. The term "confusion" will be used to describe such wandering, regressive movements as are to be found in Fig. 8.

The problem of the school with reference to periods of confusion. The problem of the school with reference to periods of confusion may be considered from two points of view; namely, providing remedies for confusion periods after they have arisen and organizing the work of the school so as to prevent periods of confusion. Although considerable attention will always have to be given to problems of the former type, it is to problems of the latter type that teachers ought to devote the larger amounts of time and effort. It is always better to make use of educational methods which prevent periods of confusion than to attempt to cure such difficulties after they have arisen.

Training in word analysis is important in the earlier grades. As a means of both prevention and cure of periods of confusion, such as are represented in the wandering, regressive movements to be seen in Fig. 8, training in the analysis of words is very important. The reasons for this type of training can be enumerated in part by repeating the discussions of the preceding chapter. The reader is aware that the complex process of recognition in word-wholes and phrase-wholes which the adult reader is able to perform under the stimulation of very slight visual cues represents a type of maturity that can be reached only by considerable training and practice. The more unfamiliar a word is, the more the recognition of it proceeds syllable by syllable and letter by letter. Conversely, with the increase in familiarity of reading material proceeds the development of recognition into larger and larger units. It would seem to be the particular business of the school to make use of and give direction to the natural tendency of the eye to break up into its parts, to analyze, and to examine in detail, anything

that is not already familiar. If the school allows this tendency of the eye to function without direction and guidance, the school can expect very inadequate development of the process of recognition, which is in part the cause of and in part the result of such periods of confusion as are recorded in Fig. 8. On the other hand, if the school overemphasizes the use of detailed analysis, there will result the tendency toward little or no development of the process of recognition into larger and larger units.

Method in teaching to read as an illustration. Reference to the method employed by successful primary teachers of reading will serve to illustrate the general statements of the preceding paragraphs. Use is made from the very beginning of the familiar words of the child's vocabulary. The meaningful sound unit, the word, which is everywhere the unit of pronunciation, is employed as a starting point in the development of the process of reading. The child is led to attach the same meaning reaction to the printed sign of the word as he is accustomed to attach to the spoken word. In the beginning no attention is paid to the complex of letters or phonic elements which go to make up the word.

The method is very successful. In a few weeks the child is able to read the stories in the early part of his primer from beginning to end. He has acquired the command of the printed signs of a small stock of easy, familiar words. As a result of taking part in word drills and of practice in oral reading he can recognize instantaneously any one of his stock of words. No serious difficulties are encountered during the first few weeks of the training period.

Unless there has been also a development of the phonic approach to new words, however, the word method soon begins to be in difficulty. Words of some length which are not a part of the child's ordinary speech are presently encountered in the reading lessons. At this point the strictly word method breaks down. Meeting the longer and more or less unfamiliar word,

the child becomes aware of a mass of visual stimulation which he cannot make use of nor in any wise relate. He responds to this apparently complex mass of letters in one of three ways: (1) With a complete lack of independence on his part he turns to the teacher for help in surmounting the difficulty encountered in the new word. It is the all too common practice to permit pupils to interrupt themselves in the reading of a sentence in order to receive help from the teacher in recognizing a word. (2) The pupil turns away from new and difficult words without making any effort to determine what they might be. (3) He attempts an analysis of the unfamiliar and difficult words, which, in the majority of cases, leaves him floundering in a period of confusion.

The number of pupils who fail to make progress in the recognition of new and difficult and more or less unfamiliar words, because they either turn away from them or flounder in periods of confusion, is by no means small. One becomes impressed with the seriousness of the situation only as he becomes acquainted with the large number of pupils in every grade of elementary and high school who are failing in all their work because of the sheer inability to cope with the difficulties involved in the mere mechanics of reading.

In order to train the pupil to overcome the difficulties which he encounters when he first begins to meet new and difficult words,—words which are of some length or not a part of the child's ordinary speech,—the school makes use of an organized system of instruction in the analysis of words into their phonic elements. Training in phonics and word analysis begins in the first year. It extends throughout the whole of the primary-school period. Such training is a legitimate phase of instruction in reading. It represents a taking advantage of the opportunity for instruction offered by the natural bent of the pupils to view in detail the new and difficult words which appear in their reading lessons. The following quotations are especially pertinent to this and the foregoing discussions:

If a child is going to be distracted by his efforts to recognize words we may as well anticipate the difficulty and distract him to some purpose while we teach him how to master distractions.[1]

Analysis of words cannot be omitted from any complete training of pupils. The experience of schools in this matter is unequivocal. A child can read without analysis so long as his vocabulary is small and the words are short, but sooner or later he must make analyses, and then he will be greatly helped if he has been trained in systematic methods. As to the time when this analysis should be introduced, it seems to be suggested by the dominance of oral language at the beginning of school life that the word unit be accepted at first and analysis be introduced later when it is needed to keep the word units clear.[2]

The discussions of the preceding paragraphs justify us in adopting the practice of substituting habits of careful analysis in the place of wasteful periods of confusion. The sharp distinction between the two types of activity now demands our attention as well as the limited purpose of analytical methods in teaching to read. Thus far our discussion has offered but one purpose for the use of analysis; namely, to prevent and to cure periods of confusion. It remains to be seen that beyond such a purpose analysis has no justification.[3]

Analysis is productive; confusion unproductive. The distinction between a period of analysis and a period of confusion is made quite clear by the records of eye movement shown in Fig. 8. It is evident that the result in recognition of fixations 8 to 14 is quite different from that of fixations 1 to 7. With but one exception the fixations are of the straightforward, progressive type, and are representative of a period of minute analysis.

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, p. 62. The University of Chicago Press, 1918.

[2] Ibid. p. 141.

[3] We are discussing reading. It is true that training in phonics functions also in spelling.

The distinction can be pointed out in another way. A period of confusion is represented by wandering movements of the eyes, apparently without a definite purpose and evidently without result. A period of analysis, on the other hand, represents a definite, purposeful attack on a word or group of words, and it is productive of very definite results from the standpoint of recognition. The two types of activity are similar in the important respect that each involves a detailed inspection of the reading material. We shall see in the discussion of the following topic that both types of activity are away from the instantaneous synthetic recognition of words and phrases.

Fluent synthetic recognition is the goal of instruction. The eye-movement records of the adult, Fig. 2, and of the sixth-grade and seventh-grade readers, Figs. 6 and 7, are representative of the goal which instruction in reading should endeavor to train pupils to reach. Figs. 4–7 represent progressive stages of development in the direction of that goal. Whether defined in terms of a description of these records or in terms of the discussions of the preceding chapter, the definition of the goal of instruction in reading is the same. It is that pupils should be trained to recognize the material they read in larger and larger units; that training should be away from an analytical inspection of words toward a fluent synthetic grasp of meaningful phrases.

The foregoing discussions make clear that a neglect of mechanical training does not result in any development toward the goal which was just defined. It is evident that the resulting periods of confusion are distinctly opposed to development of any kind whatsoever. The purpose of mechanical training is to avoid periods of confusion. On the other hand, it is almost, if not quite, as bad to overemphasize training in mechanics as to neglect it altogether. There is not a doubt but that the slow and laborious readers of the upper grades and high school owe the very inadequate results of their training in reading quite as much to an undue amount of instruction in phonics and word

analysis as to the lack of such instruction. The whole discussion can be summed up in the following summary of the results of training in phonics and word analysis: (1) the training does result in recognition; (2) it results in recognition of an inferior sort; (3) if overemphasized, it results in the development of habits of inspecting analytically all words and phrases met in reading. These habits become stronger and harder to break as the pupil progresses through school. They explain the tendency of slow and laborious readers to carry on all their reading in the smallest possible visual units. The tendency is noticeable in a very marked degree in the eye-movement record of a poor reader in the seventh grade.

Overemphasis on mechanics leads to poor reading. Let us reëxamine Fig. 9. Judd's description of this record is especially important in its bearing on our present discussion:

> The characteristic fact here is that the reader is painfully slow and that the scope of each perception is very narrow. There are occasional regressive movements. In a way the danger in this situation is even greater than in the situations discovered in the lower grades. Here the pupil gets through the task of reading by slow and painful methods. His habits are evidently becoming fixed while his methods are wrong.
>
> Where the pupil got such bad methods is difficult to say. Possibly he acquired them through his own unguided efforts. It is not at all impossible that he got the first suggestion of short units of recognition from phonic work or spelling taught in the school. Whatever the source, these short units of recognition represent a pernicious limitation of the child's efforts. His habits are the more pernicious because they are reinforced by the natural tendencies toward visual analysis and run counter to the demand for broad units of recognition comprehending meaningful phrases.
>
> In an earlier paragraph we had occasion to point out that phonic analysis is a possible means of helping a pupil out of confusions. We encounter in the short units of recognition one of the possible dangers of phonic or other analytical methods.[1]

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, p. 69. The University of Chicago Press, 1918.

Conclusion: Phonic analysis is a mechanical device for, not a method of, teaching to read. The foregoing discussions may be summed up in the statement that phonic analysis is an important *factor* in the teaching of reading but that it is not in itself a *method* of teaching. It has been made clear that its use is necessary in leading pupils to recognize new and difficult words, but that if overemphasized or poorly taught it may become a hindrance to the attainment of a fluent synthetic grasp of words and phrases.

The matter can be stated in another way. The beginning pupil needs no phonetic introduction to the recognition of the familiar words of his daily speech which are taught as sight words. He therefore is directed to proceed immediately to the recognition of these words as wholes. To the recognition of the less familiar words and the longer words encountered in the intermediate grades, the pupil does need a phonetic introduction. When the introduction has been made the pupil has no more use for phonic analysis of the words in question. He proceeds now as before to the recognition of these words as wholes. Only as he meets new and difficult words does the pupil need to make use of his abilities in phonics. Phonic analysis leads to an acquaintanceship with these words. Just as soon as the acquaintance is made the pupil forsakes his phonics and proceeds by proper methods to the recognition of these words in larger and larger units.

The foregoing discussion has dealt with the importance of emphasis on mechanics from the standpoint of the advantage of avoiding periods of confusion in the early grades of the school. It is desirable at this point in our discussion to view the subject from a somewhat different angle; namely, that which relates to the similarity of progress in the mechanics and the formation of habit.

The ability to read is a type of skill. The development of the ability to carry on the reading process as a means of extracting thought from the printed page can be described as a phase of

the general psychology of skill. The name "process" itself implies that reading is something to be done,—a physical or a mental act, or an act which is both physical and mental,—in the doing of which one becomes more proficient with each repetition of the act. Reference to Fig. 2 is sufficient to impress the fact that in the reading of a passage the eyes of a trained reader tend to fall into a series of movements which may be described as characteristic and which show all the evidence of being *habitual.* A comparison of Figs. 4–7 emphasizes the fact that progress in reading is typified by movements of the eyes which mark the attainment of higher and higher degrees of *skill.* The same comparison shows, quite as well as our own schoolroom observation, that children become more and more *skillful* in word recognition—that the instantaneous recognition of words becomes more and more an *habitual* performance—as they advance through the grades of the school. The designation of the reading process as a "mechanical" process in itself is an admission that it is capable eventually of being carried on mechanically; that is, automatically, without thought as to what is being done and with the expenditure of but very little effort.

The relation of reading as a mechanical process to our general notions of habit and skill is implied in our definitions of the aims and important outcomes of reading instruction. We state that the aim of reading instruction is the development of good reading *habits,*—to develop *skillful* readers we adopt as the purpose of our teaching. The aim set up in Chapter I—to develop effective rapid silent readers—implies that our effort shall be to develop *skill* in securing meaning from the printed page and to encourage the development of the *habit* of reading rapidly.

We use the terms "habit" and "skill" indiscriminately in speaking of the aims and outcomes of reading instruction. Usually we give but little thought to their significance as bearing on the methods we ought to adopt in our teaching. The neces-

sity of giving careful consideration to the import of these terms impresses us as we go further and further into the description of the reading process. A careful review of the reading process up to this point justifies the conclusion that the psychology of reading is only a chapter in the psychology of skill; that the stages in the development of skill in general and the laws of habit formation constitute a very fruitful field as a basis for the study of the development of skill in the mechanics of reading. A summary of the characteristic stages in the development of skill and of the important laws of habit formation follow.

Characteristics of skill in general. 1. Beginning the process of acquiring skill in any particular activity is accompanied by the employment of a large number of useless movements and the expenditure of a great amount of effort. This is the primary stage in the development of skill.

2. After skill has been acquired the activity in question can be performed with a minimum of muscular and mental action and with the expenditure of but a modicum of effort. This, the final, stage in the development of skill is characterized by the fact that one is able to perform the activity mechanically, automatically, practically without thought. The method of development from the primary to the final stage is defined by the laws of habit formation.

Laws of habit formation. 1. In the beginning the attention of the learner shall be centered upon the habit to be acquired. In terms of schoolroom practice this means that the pupil shall understand exactly what responses are expected of him. In oral reading, for example, the teacher may very well begin the reading herself and in this manner set before the pupils a model of correct pronunciation, proper articulation, and good expression. The law requires the teaching of new words to be *thorough* and the application of phonic analysis to difficult words to be *understood*.

2. The second law is that attentive repetitions are necessary in order to make permanent the results which were outlined in

the first law. This means that it is not enough for pupils to learn what good reading is like, for example, or to learn to recognize the words which occur in their lessons, or to learn to work out for themselves the pronunciation and recognition of new words. Considerable drill must follow, and the drill must be attentive.

3. The third law is that no exception shall be permitted until the habit is firmly established. This means that there must be continued attentive practice in oral reading, in silent reading, in word analysis, in word recognition, until these operations have become habits; that is, have become automatic.

It will not be necessary for us at this point to enter into a more complete discussion of the laws of habit formation as they apply to the teaching of reading. In our study of the characteristics of recognition in the preceding chapter we have become impressed with the necessity for a large amount of drill in order to make automatic the mechanical phase of reading. In a following part of this book we shall have occasion to return to the present discussion in outlining certain specific devices and methods of instruction and drill. It is important for us at this time to return to a consideration of the characteristic stages in the development of skill in order to obtain further evidence bearing upon our point, that emphasis upon the mechanics of reading is an important phase of instruction.

Reading is a difficult process for beginners. Anyone who has ever observed the difficulties encountered by primary teachers of reading cannot but be impressed by the fact that reading is a very complex mechanical process and, as such, presents to beginners many important features of difficulty. The fact that strikes the observer of primary instruction with greatest force is that a large number of children in the lower grades are more or less bewildered by the demands made upon them in the reading lessons. The high degree of uncertainty with which a number of children approach the tasks set before them attracts one's attention at the outset. One is impressed by the apparently

wasted effort of the pupils rather than by the slow progress they may be making from day to day. The sharpness of the contrast between the ease with which adults read and the difficulties of beginning pupils is the highly impressive feature of one's observation.

Reference to Fig. 8 helps to confirm the statement that the first stage in the development of a skill is characterized by a large number of useless movements. Fig. 8 establishes the fact that the pupil in question is expending an enormous amount of energy without any apparent result. How utterly bewildered the pupil is appears in the excessive number of fixations made and the unusual amount of time consumed. The pupil appears to be striving in every conceivable way to accomplish the result desired without knowing really what the result would be should he be fortunate enough to secure it.

Further evidence bearing upon the fact that reading is a very difficult process for beginners is obtainable in every grade of elementary and high school. One is able to find a large number of pupils who are compelled to apply themselves to any one of their studies two, three, and four times as long as some of their more progressive classmates in order to accomplish the same amount of work. It is not unusual to find in any grade of the school large numbers of children who are failing in all their work because of the sheer inability to cope with the difficulties they experience in the mechanics of reading. What is the significance of the fact that one can ascribe to poor reading, quite as much as to any other factor, the cause of failures in school? The significance is that reading is such a difficult process as to require practically all the time and energy one can devote to it until its mechanical features have been mastered. One is able to understand how difficult the reading process must be for beginners when he observes what difficulties more mature pupils experience who have been so unfortunate as to fail to master the mechanics of reading in the early grades of the school.

Energy is saved by making the process automatic. The characteristic features of the final stage in the development of a skill are made evident by contrast with those of the first stage. The contrast between the methods of study of poor readers and of good readers; the contrast between the slow and uncertain reading of the beginner and the ease and fluency of the more mature reader; the tremendous task of the one in contrast with the almost effortless task of the other,—these contrasts we have referred to time and again in this chapter. They are easily observable in every schoolroom and need no additional discussion here. It is well, however, for us to consider briefly the definition of the term very frequently used to describe the final stage of development; namely, an *automatic* process.

An automatic process is one we are able to perform with a minimum of thought and effort. All that is necessary in order to perform the process is to begin the performance; the performance then proceeds, as it were, of its own accord. One does not have to stop the performance at any point and decide what to do next; indeed, the major part of one's attention can be devoted the while to a different kind of activity. In word recognition our attention is directed to or attracted by a very slight and apparently insignificant sensory cue, and immediately the process of recognition is complete. In handwriting we are able to make all sorts of complex and highly coördinated movements of fingers, hand, and arm in shaping the various letters and at the same time devote practically all our thought to the ideas we desire to express. Because the various coördinated movements are made with a minimum of attention to the process, they consume a minimum of energy. The fact is apparent to most of us when we attempt to imitate the writing movements of a left-handed person. In performing a process that is not automatic—for example, using the unaccustomed hand in writing—one has to expend his energy not only in the performance itself but also in determining from time to time *how* each part of the process is performed and *what* to do next.

As a process becomes automatic it requires in its performance the consumption of smaller and smaller amounts of energy. Energy is thus set free for use elsewhere.

Conclusion: Emphasis on mechanics is an important phase of instruction. The conclusion of the whole matter is easily determined. In the first part of the present chapter we saw how the child's own unguided efforts lead him into periods of confusion and thus throw into his way very formidable obstacles to his future progress. The necessity for careful, systematic instruction in a well-known mechanical device—phonic analysis—was emphasized. In the latter half of the chapter we have discussed the relation of reading as a mechanical process to the general laws of habit formation and to the characteristic phases in the development of skill. The discussion calls attention to the sharp contrast between the difficulty of carrying on the mechanical phase of reading before it has been mastered and the ease of performing the same process after it has been mastered. The economy of an early mastery of mechanics is very clear. Reduced to its simplest terms, our conclusion would be: The mechanical phase of the reading process should be made as easy as possible by making it as automatic as possible.

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CHAPTER VII

THE BALANCE BETWEEN MECHANICS AND MEANING
(CONTINUED)

The preceding chapter opened the discussion of the balance between mechanics and meaning by pointing out the importance of emphasis on mechanics. The way was thus paved for the discussion of the present chapter, which considers the reading process explicitly as a process of getting meaning from the printed page and endeavors to point out the intimate relationship between mechanics and interpretation.

II. INTERPRETATION

The former view emphasized the importance of mental pictures. The psychology of an earlier day based its explanation of the method of getting meaning from the printed page on the assumption that words get their meanings by their relationship with the pictures which the sight of them calls up in the mind of the reader. To every word of one's acquaintance there is stored away in the mind a corresponding and related mental picture or image. The calling to mind of the proper image is the true explanation of how words convey meaning. One recognizes a word in reading, the argument runs, and the sight of the word calls to mind a train of pictures. The pictures are the important mental facts; they alone determine meaning.

The interpretation of literature as an illustration. The ease with which one can call up all sorts of mental imagery is usually considered one of the most potent factors in determining

one's ability to interpret a passage of literature. Professor Betts[1] makes use of several quotations from Halleck[2] in order to show the value of a large stock of imagery to the student of literature:

Milton has Eve say of her dream of the fatal apple:

> . . . The pleasant sav'ry smell
> So quickened appetite, that I, methought,
> Could not but taste.

How utterly impossible for one who has not a delicate sense of smell and a large stock of images from this sense to interpret these lines! They will be to him but a jumble of words, and he is likely to decide that poetry is nothing but foolishness.

Likewise with the sense of touch:

> . . . I take thy hand, this hand
> As soft as dove's down, and as white as it.

Or from Comus:

> Thus I set my printless feet
> O'er the cowslip's velvet head
> That bends not as I tread.

Imagine a person devoid of delicate tactile imagery, with senseless finger tips and leaden footsteps, undertaking to interpret these exquisite lines! . . .

Who that has not stood under the open sky and watched the stars come out, and retained a vivid impression of the experience, can understand when Longfellow says:

> Silently, one by one, in the infinite meadows of heaven,
> Blossomed the lovely stars; the forget-me-nots of the angels!

All literature is so full of visual imagery that one can hardly find a couplet that is not filled with it.

The conclusion one is apt to draw from the preceding quotations is that the action of the mind in reading is comparable to

[1]G. H. Betts, The Mind and its Education, pp. 100–101. D. Appleton and Company, New York, 1906.

[2]R. P. Halleck, Education of the Central Nervous System. The Macmillan Company, New York, 1901.

a stereopticon exhibition in which one picture, or mental image, displaces another in rapid succession.

The former view prevails in educational theory and practice. The foregoing explanation of how meaning is secured in reading is the one quite commonly accepted. It is perhaps the first to occur to anyone who ever takes the trouble to look for an explanation. It is very plausible and easy to accept; indeed, it is the obvious explanation. It abounds in educational theory, and educational practice takes its form to a large extent in accordance with its terms. The following paragraphs are quoted to illustrate the prevalence of the view. Judd quotes the first two to illustrate the so-called psychological method in teaching a foreign language of associating a word with the object or image to which it refers. The first is a statement of the Committee of Twelve of the Modern Language Association of America, 1898; the second is an example from the notes of Charles Schweitzer taken at the conference at Sorbonne.

> On presenting each new word to the beginner, the instructor exhorts him to close his eyes and form a distinct mental picture of the thing or act represented. This image (it is affirmed) will remain indissolubly connected with the word, and the evocation of the one will always recall the other. Sometimes real objects or drawings are used, and pantomime is frequently resorted to; but in most cases reliance is placed on the child's active imagination.[1]

> Take, for example, the word "apple." In learning his native tongue the French child sees the fruit placed before him on the table or suspended from the tree. At the same time someone pronounces to him the word "apple" and accompanies the pronunciation with a gesture. After the experience has been repeated several times an indissoluble association is formed between the two percepts, one a visual percept and the other an auditory percept. An equation is set up in the mind of the child between the word "apple" and the image of an apple. The two members of the equation form so intimate an association that the

[1] C. H. Judd, Psychology of High-School Subjects, p. 227. Ginn and Company, Boston, 1915.

image of the object will invariably call up the word and that which the word was intended to introduce, namely, the image of the object.[1]

The writer recently heard a teachers' institute instructor discuss what he called the psychological method of teaching word recognition to primary-grade children. The discussion is condensed into the following paragraph:

> A wealth of sensory experience should accompany every word that is taught to primary-grade children. The greater the amount of sensory experience provided the more thorough the teaching. In learning to recognize the word "apple," for example, the child should see the apple and be led to connect the sight of it with the word. He should handle the apple, and connect the sense of touch with the word. Rolling the apple on the table or letting it drop to the floor, and connecting the characteristic sound produced with the word "apple" also helps. The child should smell the apple and connect the odor with the word. Finally, the apple should be eaten and the proper connection made between the word and the taste of the object it represents.

The instructor qualified his suggestions by stating that the word "apple" should be taught in the season of the year when plenty of apples can be provided.

The Manual and Course of Study for the Elementary Schools of Kentucky,[2] June, 1913, makes the following suggestions to teachers of reading:

> While the children are cutting from objects such as birds, animals, vegetables, fruits, etc., the printed and written names of these objects should be taught to the children and written by them. . . .
>
> "Reading must begin and at every point proceed on the basis of genuine vigorous thinking on the part of the child; and the life of such thinking is constant, clear, vivid imaging." Another author says: "Reading is imaging." Such imaging grows out of the real, significant enjoyable experiences of the child. The teacher should ever test such imaging by questioning, by requiring drawings or constructions, by

[1] C. H. Judd, Psychology of High-School Subjects, p. 229. Ginn and Company, Boston, 1915.

[2] *Bulletin of Kentucky Department of Education*, Vol. VI, No. 5, pp. 49, 51, 52.

dramatization and other forms of expression. From the beginning to the end of the reading course the teacher's care should be that the child has the thought.

From the first the teacher's aim should be to have the children weld firmly together the thought and the word or sentence by which the thought is expressed. It is of the greatest importance that the children *image* clearly as they read.

Criticism of the "mental picture" explanation. It cannot be denied that the mind reconstructs mental pictures, though quite vague and very indefinite as to details, to correspond with the meanings which we derive from our reading. Likewise, the appearance of certain words on the page tends to call up in the mind of the reader images which are more or less vivid. Especially is this true when the reader halts in his process of reading and makes the conscious effort to connect the given words with what appear to be the appropriate images. These facts are not the points at issue, however. The point is that the images which make their appearance in the mind during the reading of a passage, or the reading of certain words, are not the important mental facts in the apprehension of meaning. Let us examine the reasons.

In the first place, one's mental pictures are very indistinct and almost completely lacking in detail. It is the exception and not the rule that we examine in detail the things about us. Let the ordinary reader close his eyes and attempt to call to mind the details of the most familiar object in the room. His failure to succeed may be explained by the fact that he has heretofore received a satisfactory amount of meaning from the object in question without having to resort to any detailed examination. The inadequacy of mental pictures as an explanation of how meaning is obtained is further illustrated in the drawings of children. Children's drawings may be described by the term "symbolical." They do not illustrate; they are the symbols of the objects the child intends to represent. For example, four or five straight lines in a given arrangement are all that are neces-

sary for a child to picture a man. The lines in a slightly different arrangement will picture a dog or a horse equally as well. Such drawings are very satisfactory to the child. He receives the same kind, if not the same degree, of pleasurable reaction from them as from the objects they were intended to represent. The tendency is to be noticed in the child's inaccuracy in applying names to the objects about him. A broomstick answers all the purposes of a horse; it can be changed instantly, as if by magic, into a rifle.

A second indication that images are not the important mental facts in the apprehension of meaning is the existence of a large number of words to which no appropriate mental pictures can be attached. Words like "appalling," "exalted," "however," "accordingly," "autocratic," "bolshevism," each contain for us a wealth of meaning which in no sense of the word can be explained by any mental pictures they may tend to call up. Indeed, any attempt to attach appropriate images to these words can be looked upon as a very artificial endeavor. "When the word 'appalling' strikes the ear, one feels his muscular system respond with a cringing, expectant shock. When one hears the word 'magnificent' he feels a muscular expansion long before he is able by any exercise of imagination to place before his mind a picture of a magnificent object."[1] The word "Hark!" arouses in us an attitude of expectancy. "Look out!" impels us to jump. When one sees the word "cat" there is experienced the same feeling of recoil or of friendliness as that felt in the presence of the animal itself. The words "large" and "small," "up" and "down," "rough" and "smooth," arouse in one contrasting experiences.

Meanings arise out of reactions: "the stream of consciousness." We are thus led to see that the psychology of the present day has a much more fruitful explanation of how meaning is apprehended from the printed page than the one which emphasizes the importance of mental pictures. The explanation is

[1] C. H. Judd, Psychology of High-School Subjects, p. 156.

that images are but isolated instances which appear as one reads; that meaning is derived from our reactions, feelings, and attitudes which are successively aroused in us at the appearance of successive words on a page; that meaning is indeed our reactions, feelings, and attitudes themselves. "The mind is not a mere storehouse of mental images," says Judd; "It is an active organized personality responding with reactions to the excitations from the outer world."[1]

For a fuller explanation we may liken consciousness to an ever-moving boat. The words we encounter during the process of reading become both the propelling and guiding influences which act on the movement of the boat. The boat is moved hither and yon according to its reactions to the motive forces of the words which act upon it. The scenery along the way is made up of our mental pictures. The scenery is not the important fact with reference to the motion of the boat; it is rather the result of the boat's having been moved in a given direction and along a given course.[2]

The context is influential in determining meaning. To proceed with the figure, an isolated stroke of the oar does not determine the course of the boat; only as each stroke acts with every other stroke does the boat move from one point to another. Likewise, an isolated word is not the determining factor in the trend of our thought when we read. The total propelling and directing forces of all the words of a complete sentence or paragraph determine the direction and course of our consciousness. In other words, the meaning of a paragraph, for example, is not the sum of the mind's reactions to isolated words so much as it is the total reaction of the mind to all the words acting together. Our reaction to a given word in a paragraph is influ-

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, p. 178. The University of Chicago Press, 1918.

[2] William James, Talks to Teachers on Psychology, pp. 15–21. Henry Holt and Company, New York, 1915.

enced by our reactions to all the words which have gone before as well as to those which are to follow. Every word has a motive force within itself which influences the trend of our thought in accordance with its intensity and the direction in which it acts; the final result in interpretation is due just as much to the particular bent of our minds when the force of the word acts upon it. Context, therefore, exercises a very potent influence upon the meaning of a word.

Practical bearing upon methods of training. The importance of context in influencing the meaning of words has an important practical bearing upon methods of training in reading. It will be necessary for the present only to mention the point of application, inasmuch as it will be the especial concern of later discussions to deal with the subject in detail. The point is that the pupil in training needs to read as large amounts as possible of suitable reading material about all sorts of subjects. If the meanings of words result in any important degree from the context in which the words appear, it is necessary to provide for students large amounts of contextual material.

How the school should deal with interpretation in the various grades. In the first chapter of this text the development of effective rapid silent readers was proposed as the most fitting aim of reading instruction in the public schools. The ability to get meaning from the printed page is the ability to be emphasized in the training of pupils in reading. How this ability is to develop from grade to grade is the theme of the discussion which immediately follows. In general the development of this ability may be described by the following statements: in the primary grades pupils learn to attach meaning to printed words; in succeeding grades they receive training in deriving meaning from the printed page.

The place of interpretation in primary grades; "early reading attaches meanings to words." We have seen that the words we encounter in our reading or elsewhere derive their meanings from the reactions, the feelings, and the attitudes of

mind they stir up within us. We have seen that these reactions, feelings, and attitudes correspond in kind, if not in degree, with those which are directly influenced by the objects, activities, etc. for which the words are the substitute. It becomes, therefore, the first duty of the school to train its pupils to attach the appropriate reaction, feeling, or attitude to the printed word. The familiar pedagogical principle—"from the known to the related unknown"—should apply. In the primary reading lesson the printed word is the unknown quantity. It follows then that the appropriate reaction, feeling, or attitude, being the known quantity, should be perfectly familiar to the children and already a part of their experience. It should be kept in mind that to the unfamiliar word the child possesses no fund of reaction or attitude to apply, and as a consequence he is apt to be satisfied with the reaction of pronunciation and to think that is the most appropriate and desirable one.

Provision for a wealth of reaction: objects, pictures, and the spoken word. If it is the business of pupils in the primary grades to learn to attach meanings to words, it is evident that their work will be simplified and become all the more effective in direct proportion to the amount of appropriate reaction, attitude, and feeling that is a part of their experience. Accordingly the content of primary reading is an important factor for our consideration. Later discussions will deal specifically with this topic. It is sufficient for our purpose here only to state that familiar folk stories, Mother Goose cumulative tales, stories of the "woman and her pig" and "the hen found a bag of flour," should supply the content of the reading material that is used as a basis of the work in the beginning. The more interesting the content is the greater will be the results in interpretation. Interpretation is in proportion to the amount of personal attitude and reaction the pupil is able to carry over and attach to the printed word.

Objects, pictures, and the spoken word are instruments to be used for the purpose of arousing in the pupils the desired reac-

tion, feeling, or attitude which is to be attached to the printed symbol. It should always be borne in mind by the primary teacher that the printed word is to be connected directly with the appropriate reaction and only indirectly with the object, the picture, or the spoken word. The purpose of introducing the object "ball," or of showing the pupils the picture of a ball, is to arouse the appropriate reaction which is to be connected with the printed word "ball." Quite often the object or the picture does not fulfill the purpose of the teacher, for the reason that the attention of the child is apt to become entirely occupied with it to the exclusion of attempting to make any connection with the printed symbol. The activity of handling or seeing the ball is within itself quite satisfying to the child; it is quite impossible for him to look at the picture of a ball and at the same time to take any notice of the printed word "ball." We thus see that the object and the picture may operate as a means of distraction to the child.

The spoken word is usually found by primary teachers to answer the required purpose in introducing the printed word. If the object, the picture, and the spoken word are familiar to the child, he will react with the same kind of personal attitude to the spoken word as to the object or picture. The spoken word "ball" is sufficient to arouse the same kind of pleasurable reaction the child is accustomed to experience when he sees and handles the object. It only remains to attach the pleasurable reaction to the printed symbol. This part of the performance can be accomplished without the experience of any detracting influence which might arise if the ball itself, or a picture of it, were at hand. The spoken word, of course, must refer to a familiar object; otherwise the only reaction it produces is the one of pronunciation, and this reaction, in turn, is attached to the printed word. In a similar connection the importance of context in shaping the meaning of a word should not be forgotten. It is better, as indicated above, to teach words in connection with interesting content than as isolated units.

The place of interpretation in succeeding grades: "in higher grades reading extracts meanings." We have seen that the purpose of reading instruction in the primary grades is to provide training in attaching meanings to printed words. In succeeding grades reading instruction has an entirely different purpose. The training is of a different type; in these grades the reading process is largely reversed.

After one has learned the art of interpreting printed words through the association of these words with earlier experiences the process can be largely reversed. The older pupil who has a stock of interpretations can understand the book which combines and recombines ideas and builds up wholly new complexes. The process of interpretation is now one of extracting ideas from the printed page. Thus one reads in the geography of a land which is always covered with ice. The word "ice" is familiar and the word "always" has also acquired definite meaning. Put the two ideas together and the pupil is carried into a world which is unknown but capable of being understood through the ideas acquired in everyday life and in the earlier grades.[1]

It follows then that the content of the pupil's reading in grades succeeding the primary can assume a different character and take on a different purpose from the ones which are appropriate to his earlier reading. In the primary grades the reading material must express familiar ideas; in these grades the reading material can combine familiar ideas in order to express ones which are unfamiliar. Early reading of necessity must be within the fields of the pupil's knowledge and experience; later reading can, and ought to, lead the pupil out into wider and wider fields of experience which heretofore have been unfamiliar. In the primary grades the pupil reads in order to acquire the mastery of a valuable instrument (reading ability); in succeeding grades the pupil reads in order to make use of this instrument in acquiring useful and interesting information.

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, p. 182.

The important process of earlier grades continues. It should not be understood that the process of attaching meanings to words is to stop at the end of the primary grades, or that new ideas are to be borne to the pupils on the vehicles of words which are always entirely familiar. The process of attaching meaning still continues; only the method of attaching meaning is changed. Now the pupil finds meanings to attach to unfamiliar printed symbols not in his reactions to the corresponding spoken words, but in the context in which the symbols are found, the context supplying the appropriate personal attitude and providing the connecting link with the heretofore unfamiliar words. While we need to bear in mind that new ideas are now to be acquired in reading by the combination of old and familiar ones, we must continue to remember that day after day the pupil should be given the opportunity of adding new words to his vocabulary. To this end it is necessary that the pupil be provided with an abundance of contextual material which, though very easy in the beginning, should become gradually more difficult as the pupil develops in ability. The requirement that the reading material of these grades is to lead the pupil out into wider and wider fields of experience will in itself provide the necessary amount of progression in difficulty.

Summary. Our discussion of interpretation has dwelt upon the following main points:

1. Mental pictures, or images, are not the important facts in getting meaning from the printed page. "The mind is not a mere storehouse of images."

2. The mind is "an active organized personality responding with reactions to the excitations from the outer world." The reactions, feelings, and attitudes which are aroused when one reads are the important mental facts in the apprehension of meaning.

3. The context is influential in determining meaning. Meaning is determined not alone by the word itself but by the setting in which it is found.

4. The primary grades are concerned with the task of training pupils to attach meanings to words.

5. The content of primary reading should be interesting and should deal with experiences familiar to the child.

6. The spoken word, if familiar, answers all necessary purposes in introducing the printed word. Objects and pictures may serve as a means of distraction.

7. Later grades are concerned with the task of giving training in extracting meanings from words. The process of enlarging the pupil's vocabulary should continue.

8. Later reading should lead the pupil out into wider and wider fields of experience.

9. In all stages of the child's training in reading it is important that he be provided with an abundance of contextual material. The pupil becomes an efficient reader through much reading.

III. THE RELATION OF MECHANICS TO INTERPRETATION

Summary of mechanics and meaning. The ability to get meaning from the printed page is the goal of instruction in reading. Only as training in the mechanics of reading bears upon the important process of interpretation can such training be justified. In our discussion of the importance of mechanics we have seen to what extent mechanical training is necessary in order to assist pupils in avoiding periods of confusion which operate as means of distraction to the process of thought-getting. The difficulty of the mechanical phase of reading was pointed out and the necessity of a complete mastery of mechanics was emphasized. Throughout our whole discussion of the present and of the preceding chapter the inference has been very plain that the mechanical phase of the reading process needs to be mastered by the pupil *as early as possible* and *as thoroughly as possible* in order that he may be free *to devote his whole attention* to the one important process of reading—

getting the thought—without delay and without distraction. Professor Judd's chapter on "Reading for Meaning" is very clear upon this point. We quote at length from his discussion:

Shift of attention from mechanics to interpretation. The change in the character of the reading matter which has been sketched in the foregoing paragraphs is intimately related to a shift in emphasis from the mechanical side of reading to the interpretative side. In the early grades the mind of the pupil is largely absorbed in seeing words and in attaching meanings to them. In the later grades the process of seeing words is so perfected that attention is freed to concentrate on interpretation.

The probability is very great that the mechanical requirements are mastered by many pupils very much faster than is ordinarily assumed. It is probably not necessary to do more than set a pupil on the right track and then supply him with material appropriate to his interest. He will acquire the higher technique of reading through much reading. The present practice of continuing drill in the mechanics of reading throughout the elementary school undoubtedly retards pupils rather than helps them.

Overemphasis in schools on the mechanics of reading. Many a pupil leaves school equipped with the mechanical ability to read words but utterly unacquainted with the possibility of interpretation. School reading has been a formal ceremony for the pupil. He has formed the habit of thinking that words have been adequately dealt with when they have been sounded. The fault is with the school's selection of reading matter and with the school's emphasis on mere mechanical perfection in oral reading.

Formalism due to overemphasis on adult interests. The time will come when the reading matter will not be of the formal type now common in schools. The reading matter in the lower grades will be so selected as to induct the pupil gradually into the intricacies of the interpretative process. Emphasis on interpretation will be so graded as to use the pupil's power as fast as it is cultivated. Put in terms of particular grades, this means that for the first three years the pupil will read stories and familiar matter made up of phonetically simple words. Concrete material dealing with new but definite experiences will be presented in the fourth, fifth, and sixth grades. Reading matter should appeal to concrete interests and should stimulate the more intelligent approach to new ideas in books. Reading selections should be drawn

from science as well as from literary classics. At the present time there is overemphasis on mature adult literary interests, and consequently reading becomes formal and lacks contact with real life.

This plea will be regarded by some people as a crass attack on the classical literature of our language. It is not. If one would have pupils read literature the worst possible mistake is to force them at too early a period to read anything that is abstract. Reading must be developed by the expenditure of much time and effort. Subject matter must be vivid and concrete in the middle grades if words are to have meaning and if reading is to be more than a formal process.

Later grades have to do with individual interests. The pupil who has had much reading up to the sixth grade and has all along been kept in contact with meanings, first by the selection of familiar matter and afterward by the selection of vivid concrete material, will arrive at the beginning of the adolescent period with a mastery of the technique of reading and with an interest in interpretation which may safely be relied on to guide him through the more intricate problems of reading in the upper grades and high school. . . .

Mechanics should be mastered early. . . . Under ideal conditions the mechanics of reading are disposed of very early and the pupil is encouraged to improve in speed and accuracy by the natural incentives growing out of his desire to get meanings more readily from the books with which he comes in contact. There ought to be no serious problem of mechanics in the upper grades and at the same time there ought to be continuous improvement. The unit of recognition should continually be enlarged.

Unfortunately these ideal conditions do not always exist. As has been shown in earlier chapters, many readers are so clumsy in their reading methods that they are continually distracting themselves and losing the meaning of passages in the sheer effort to get the words. The middle grades are full of readers who cannot devote their attention to interpretation because they are tangled up in the process of seeing the words.

Like every other failure the failure to dispose of mechanics when they should be disposed of is expensive. How expensive the failure is can hardly be estimated until one begins to think of the pupils who leave school unaware of the value of the art of reading and of the pupils who fall behind in their studies because they cannot read.[1]

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, pp. 183–186.

Summary. 1. *Mechanics.* Emphasis on mechanics is an important phase of reading instruction. Mechanics should be made as easy as possible by being made as automatic as possible.

2. *Interpretation.* Interpretation is the end of all instruction in reading. For the sake of acquiring skill in interpretation the pupil should be provided at first with an abundance of easy familiar reading material and later with an abundance of interesting concrete material.

3. *Relation of mechanics to interpretation.* Reading instruction should provide for an early mastery of mechanics.

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CHAPTER VIII

THE BALANCE BETWEEN SPEED AND COMPREHENSION

A continuation of the preceding discussion. In this chapter the discussion of the two chapters just preceding will be continued. The theme of the present chapter is in effect only a slight variation of the one we have been discussing. The relationship between the topics "speed and comprehension" and "mechanics and meaning" is evident. We are accustomed to think of "speed" and "comprehension" as expressions of somewhat indefinite degrees of ability which have been attained in "mechanics" and "getting the meaning," respectively. To say that a student reads with speed and comprehension is a recognition of the fact that the student has been able to reach a certain mastery of the mechanics of reading and has attained a certain degree of proficiency in interpretation. In preceding chapters the terms "mechanics" and "meaning" have been used to refer to characteristics of the reading process; in the present chapter the terms "speed" and "comprehension" will be used in referring to corresponding characteristics of reading ability.

The similarity between the themes of this and of the two chapters immediately preceding will be preserved in the organization of the main lines of the discussion of the present chapter. The former discussion centered around three topics: (1) the importance of emphasis on mechanics, (2) interpretation, and (3) the relation between mechanics and meaning. Likewise, the present discussion will bear upon three topics of somewhat similar organization; namely, (1) the importance of speed, (2) comprehension, and (3) the relation between speed and comprehension. The first topic will discuss speed from the

standpoints of the need of rapid reading in modern life, of the very wide individual differences among pupils in the rate of reading, and of the development in rate from grade to grade. The second topic will relate itself to the question of progress through the grades in ability to interpret what is read. The third topic will seek to show that speed and comprehension are not antagonistic qualities, but that they are capable of coördinate development.

I. THE IMPORTANCE OF SPEED

Speed is an important characteristic of reading ability. In preceding chapters we have had called to our attention the fact that speed is an important characteristic of reading ability. It has been pointed out repeatedly, both directly and by implication, that the social needs of the present day in our complex democratic society require an ever-increasing amount of reading on the part of the citizens of this government. Reading material is abundant. A considerable amount of reading is necessary in all walks of life. No longer is the art of reading the peculiar possession of the scholar. No longer is training in reading the opportunity and social requirement of the favored few. Such a condition existed in a day when there was no daily newspaper or weekly periodical or favorite monthly magazine to be read; when the Bible, Wigglesworth's "Day of Doom," and the almanac constituted the full extent of one's reading. Now the common man is able to read, and he does read to an extent which it is hardly possible to estimate. Because of the requirements of modern life and of the opportunities which it affords for a large amount of reading, speed of reading is an important characteristic for consideration. The consideration of speed, therefore, holds an important place in our statement of the aim of reading instruction. The kind of reading to be emphasized in our schools is defined by the phrase "effective *rapid* silent reading."

Notwithstanding the importance which by right belongs to considerations of speed, we find that hardly any effort has ever been devoted to training pupils in rapid reading. About the only time speed is held up to the attention of pupils is when the teacher cautions not to read too fast. Only then is the idea ever conveyed to pupils that speed is a factor worthy of consideration. Teachers as a rule are entirely unconscious of any importance that may be attached to reading rate. The fact that the pupils of a given grade read with any considerable variation in speed is viewed by a great number of teachers with startling perplexity when the matter is called to their attention. Indeed, the variation in rate by pupils of supposedly equal attainments and ability is quite commonly of such an extent as to give pause to even the most thorough student of reading and of reading methods. Let us consider a few such variations.

Individual differences in rate of reading. Twenty-four pupils in a third-grade class were tested as to their rates of reading silently an easy passage selected from their readers. The total time required for each pupil to read the passage was carefully taken, and the number of words read per second was computed. The slowest pupil read at the rate of .9 of a word per second; the most rapid at the rate of 5.1 words per second. The average rate for the class was 2.2 words. The range in rate of the middle 50 per cent of the class—which, of course, does not include the 25 per cent who were very slow readers or the 25 per cent who were very rapid—was from 1.4 words per second to 3.2 words per second.

A similar test was given to twenty-five members of a sixth-grade class in the silent reading of a passage suitable to their age and attainments. The rate of the slowest reader was 1.4 words per second; that of the most rapid, 4.4 words. The average rate was 2.9 words, and the range in rate of the middle 50 per cent was from 2.4 to 3.3 words per second.

Twenty members of the writer's class in "special methods" were tested as to the rate of reading a selection from Klapper's

"Teaching Children to Read." The class is more or less a selected group, being made up of seniors in a normal school, and the members are presumed to equal each other in ability and attainments. The results of the test follow: lowest rate, 2 words; highest rate, 4.8 words; average rate, 3.4 words; range of the middle 50 per cent, 2.9 words to 4 words per second.

The most striking feature of the results which are quoted above is the very wide variation in rate of reading by pupils of supposedly equal attainments and ability. Individual differences in ability to carry on the prescribed work of the school are, of course, always to be expected. On the other hand, such differences in speed of reading between the slowest and the most rapid as 460 per cent for third-grade pupils, more than 200 per cent for sixth-grade pupils, and 140 per cent for a selected group of normal-school students can hardly be credited with belonging within the bounds of normal expectation. Conditions other than ordinary differences in individual capacity must be sought to explain such wide variation. Professor Gray attributes the cause to the more or less unsystematic methods of teaching silent reading which prevail in the schools:

> This [the fact that rate of silent reading is found to vary more widely than oral reading achievement] may be explained in part by the fact that the technique of teaching oral reading has received intensive study for generations. As a result, elaborate systems of teaching beginners in reading have been developed. The details of these systems have been worked out so carefully that the work of each year, month, and week has been definitely outlined. When large numbers of teachers follow these suggestions consistently, it is not very surprising that the pupils approximate the same levels of achievement. In the case of silent reading, however, very little attention has been given to the problem. Few methods for securing effective results have been worked out and generally adopted. As a consequence, teachers devote very little time to specific instruction in habits of silent reading. The wide variation in results, particularly in the lower grades, suggests the neces-

sity of giving special attention to methods of teaching silent reading until a series of exercises has been worked out for securing effective results.[1]

The need of systematizing instruction in silent reading is very plain. The importance of speed as a consideration for teachers of reading is brought out in the wide variations in rate which have been enumerated.

Speed is a measure of ability in the mechanics. Speed of reading is an important characteristic for the consideration of teachers because it is a very reliable measure of a pupil's proficiency in the mechanics. The pupil who reads slowly and laboriously does so because the mere mechanics of reading present to him very important features of difficulty, whereas the pupil who reads rapidly is able to do so because he has acquired a mastery of mechanics. The exceptions to this general rule are the slow readers who neglect speed in favor of comprehension and the very rapid readers who are inclined to skip the mechanical features which give them difficulty. The exceptions are few in number, however, and the general rule prevails that the reader's ability in the mechanics is indicated by his reading rate.

Speed increases rapidly in the lower grades; in the upper grades it approaches a maximum. Progress through the grades in rate of silent reading has been studied in great detail by Professor Gray through the use of his standardized reading tests. The progress of 2654 pupils in rate of silent reading, representing thirteen city-school systems, is shown in Fig. 10.

Since these selections were used in order to adapt the subject matter to the maturity of pupils of different grades, a readjustment was necessary in the diagram. The points of this readjustment are between the third and fourth grades and between the sixth and seventh grades. A dotted line is drawn in the diagram dividing the curves of progress at

[1] W. S. Gray, "The Relation of Silent Reading to Economy in Education." Sixteenth Yearbook of the National Society for the Study of Education, Part I, pp. 27–28.

these points. The figures at the left of the diagram indicate the number of words read per second when the easy selection was read; the figures on the line between the third and fourth grades indicate the equivalent number of words read per second when the second selection was used; and the figures on the line between the sixth and seventh grades indicate the equivalent rate for the most difficult selection.[1]

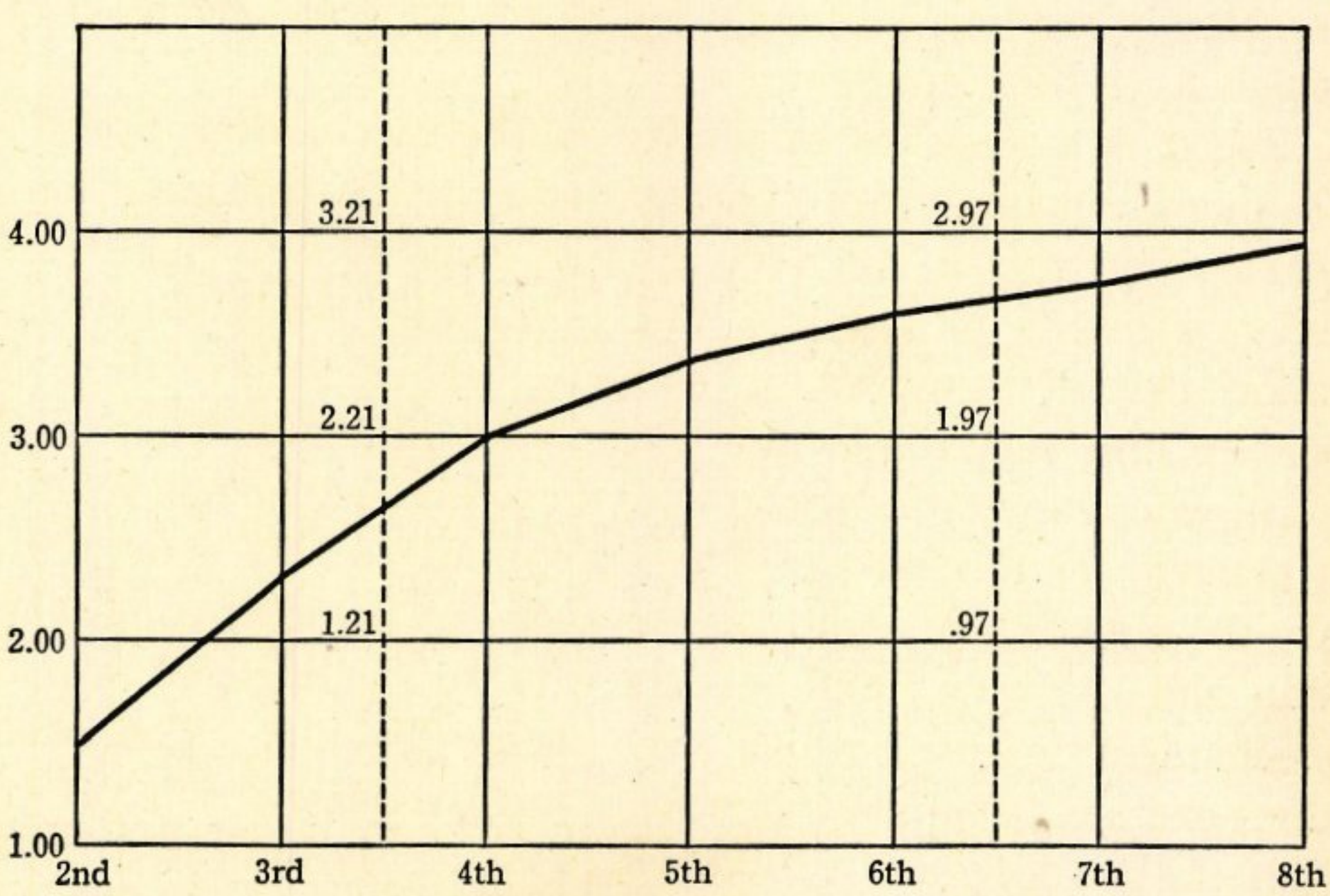

FIG. 10. Progress of 2654 pupils in rate of silent reading. (From "Studies of Elementary-School Reading through Standardized Tests," by William Scott Gray)

The oblique line across the middle of the figure represents the average rate from grade to grade of the thirteen cities.

Fig. 10 shows that speed of silent reading increases very rapidly in the lower grades and at a much lower rate in the middle and upper grades. For example, the progress in rate in the third and fourth grades is the equivalent of three times the progress made in the two grades which succeed the fourth, and

[1] W. S. Gray, "Studies of Elementary-School Reading through Standardized Tests," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. I, No. 1, p. 53. The University of Chicago Press, Chicago, 1916.

is one and one-half times the progress made in the last four grades of the school. The matter can be stated in another way. Four years of work following the fourth grade are required to effect the same progress in rate as that which is made in one and one-half years which immediately precede. Progress in the second, third, and fourth grades is very rapid; in the fifth and sixth grades progress is considerable, although not rapid; beyond the sixth grade progress is not marked, but appears to be approaching a limit.

The very rapid progress which takes place in the early grades is to be explained by the fact that there is a very rapid mastery of the mechanical difficulties of reading and a corresponding increase in the ability to fixate in larger and larger units. By the time the fourth or fifth grade is reached the mechanics of reading may be said to be mastered; little additional ability in mechanics is attained beyond these grades. Consequently one would be led to expect little if any progress in speed to be carried over into the later grades of the school. What progress does result in the grades following the fourth is due almost entirely to the ability of pupils to read in larger and more meaningful fixation units. When this ability ceases to develop, progress in speed reaches a standstill. The importance of special training for intermediate-grade pupils in the ability to read in larger and larger units of fixation is clearly evident.

Speed may be emphasized to advantage in the early grades. The average attainments in rate of silent reading of pupils in the various grades of a large number of cities have been compared. In the grades preceding the sixth very wide variations in average rate have been found to be quite common, but in the grades following the sixth the variations become smaller and smaller. Of the comparison and variations Gray writes as follows:

> . . . Progress continues in the upper grades of the elementary school, although this progress is not marked beyond the 6th grade. These facts harmonize with the conclusions reached by Courtis and others that a

pupil's habits in regard to rate of careful silent reading are established for the most part by the end of the 6th grade. It is evident, therefore, that the 3d, 4th, and 5th grades represent a period in which rate of silent reading may be emphasized to advantage. Furthermore, it should be noted that the pupils of different schools approximate in the upper grades the same average ability in rate of silent reading, although they may differ widely in this regard in the lower grades. Since silent reading is the chief means by which a pupil secures ideas for himself during the intermediate grades, it stands to reason that the school which attains a relatively rapid rate in the lower intermediate grades will have a distinct advantage, other things being equal, over the schools which do not attain an equal rate until the 6th or 7th grades. Economy in education demands, therefore, that effective habits of silent reading be acquired as early in the school life of the child as possible.[1]

The point to be kept in mind for use in later discussions, as well as for application in schoolroom practice, is that the pupil who has mastered the mechanics of reading in the lower grades sufficiently to read with a marked degree of speed possesses an immense advantage over the pupil who is retarded in his mastery of mechanics to the extent of not being able to read with a reasonable degree of speed before the later grades of the school. The need of an early mastery of mechanics is therefore an important point to be emphasized in the more practical discussions of the third part of this book.

II. COMPREHENSION

Ability to interpret progresses uniformly from grade to grade. The normal progress in ability to interpret what is read appears to be fairly uniform through the grades. The average comprehension scores in silent reading of 2654 pupils, representing thirteen city-school systems, are shown in Fig. 11. The scores shown are average per-cent grades made in answer to questions and in oral or written discussion on the thoughts

[1] W. S. Gray, "The Relation of Silent Reading to Economy in Education," Sixteenth Yearbook, p. 27.

expressed in the test paragraphs. Fig. 11 contains readjustments similar to those described in connection with Fig. 10 and should be similarly interpreted.

Fig. 11 shows uniform progress in ability to interpret up to and including the fifth grade. In the sixth grade progress is considerably increased, and in the seventh and eighth grades the degree of progress returns to that which prevailed before the sixth grade. The sudden increase in the sixth grade is of interest.

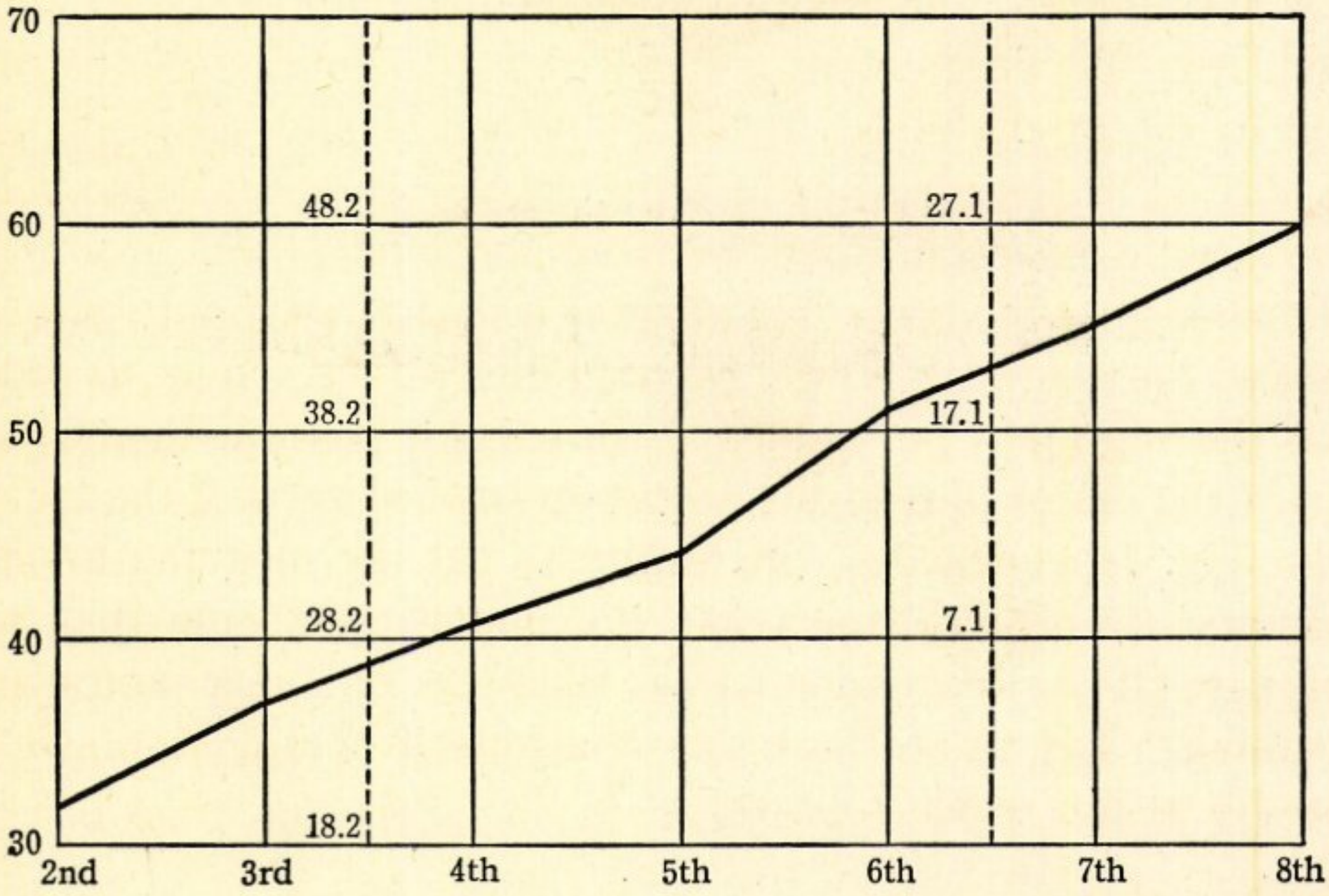

FIG. 11. Progress of 2654 pupils in quality of silent reading. (From "Studies of Elementary-School Reading through Standardized Tests," by William Scott Gray)

Rapid improvement in quality of silent reading at the outset is due to the fact that pupils rapidly acquire skill in using reading as a tool for securing ideas. Habits of attention are developed rapidly and methods of study are constantly refined. During the intermediate and grammar grades a pupil reads widely and with a purpose. The result is that his world of meanings is greatly enlarged. Furthermore, habits of study are constantly improved so that the pupil reads with increasing effectiveness.[1]

[1] W. S. Gray, "The Relation of Silent Reading to Economy in Education," Sixteenth Yearbook, p. 28.

There are no facts at hand which may be used to explain the quite sudden increase in progress which occurs in the sixth grade. The increase may be due to the beginning in this grade of special emphasis upon the interpretative phase of reading. That the increase did not arise in an earlier intermediate grade may be explained by the fact that it is the common practice among teachers to stress the mechanical phase of reading instruction even into the upper grades of the school.

A prominent discussion of the preceding chapter is here reintroduced: To what extent is it necessary to emphasize instruction in the mechanics of reading? When should the emphasis be shifted to the phase of interpretation? In short, what relation should be established between mechanics and meaning? The answer of the preceding chapter was that mechanics should receive the emphasis in the early grades of the school in order that the pupil may be enabled at the earliest possible moment to direct the major part of his attention toward getting the meaning. The dependence of the ability to get the meaning upon a mastery of the mechanics was the important theme that ran through all the discussion of the chapters on "mechanics and meaning." Let us see how this relationship manifests itself in the discussion which follows.

III. THE RELATION BETWEEN SPEED AND COMPREHENSION

The supposed antagonism between speed and comprehension. The common conception which prevails among teachers with respect to the relation between speed and comprehension is that the two characteristics are mutually antagonistic. The person who reads rapidly necessarily neglects the meaning; likewise, in order to secure the greatest amount of meaning one is obliged to read slowly. Such a belief originates, no doubt, in the failure of most teachers to make any distinction between the close application which should prevail when one *studies* and

the ordinary reading of stories, magazine articles, newspapers, etc. When one studies a difficult selection from a textbook the common belief is that it is necessary to read very slowly and carefully in order to secure the fullest amount of meaning; hence the inference that slow rate and ability to comprehend are intimately related. In addition, the failure of a great many schools and teachers to emphasize the importance of a large amount of reading on the part of the pupils is a considerable factor in shaping the common prevailing belief. Because the large majority of our pupils are not required, and have never been given the training, to read widely in the concrete materials of history, geography, nature study, hygiene, etc., the discussions of the textbooks in these subjects are necessarily very abstract and difficult of understanding. As a consequence slow reading of these textbooks is necessary for the pupils to secure even a modicum of understanding of the statements which are contained in them. There is little wonder then that the prevailing belief is that slow reading and ability to comprehend are intimately related, and that rapid reading and ability to comprehend are mutually antagonistic. The problem which now confronts us is to determine to what extent this prevailing belief among teachers is justified. The discussion which follows attacks that problem.

The general relation between speed and comprehension. The following paragraphs by Quantz discuss the general relationship between speed and comprehension:

> Rapid readers remember more of the original thought, and the character of their reproductions is much higher, both generally and with reference to expression and logical content.
>
> It might be supposed that greater rapidity was gained at the sacrifice of exactness or of intelligence. This supposition is negatived by an examination of the amount and quantity of the material reproduced. A comparison between the ten most rapid readers and the ten slowest shows that the rapid readers remember more of the original thoughts, and that the character of their reproduction is much higher, both gen-

erally and with reference to expression and logical content. In the auditory tests the ratio of slow to rapid readers is 14.8 per cent to 20.7 per cent in the *number* of thoughts. In *quality* the percentages are 47.8 for slow readers, 60.3 for fast. The same comparison in the visual tests results as follows: percentage of thoughts reproduced by slow readers, 14.9; by rapid, 24.4. Quality: slow, 48 per cent; rapid, 73.3 per cent.[1]

In a survey of the Cleveland schools the speed and comprehension records of 1831 Cleveland pupils were divided into three groups each: for speed, the 25 per cent of the records which were most rapid were classed as "rapid"; the 25 per cent which were slowest were classed as "slow"; the remaining middle 50 per cent were classed as "medium." In like manner the comprehension records were classified: 25 per cent were classed as "good," 50 per cent as "medium," and 25 per cent as "poor." Any individual record then was obliged to fall into one of the following nine classes:

Rapid speed and good quality	Medium speed and good quality	Slow speed and good quality
Rapid speed and medium quality	Medium speed and medium quality	Slow speed and medium quality
Rapid speed and poor quality	Medium speed and poor quality	Slow speed and poor quality

To quote the *Survey* report[2]:

It becomes a very simple matter to assign all records in each grade to the appropriate class and determine the percentage of the grade which falls into this class.* [Fig. 12][3] gives the results, the percentages being in each case the nearest whole number to the calculated figures, and the size of the circle being proportionate to the size of the class indicated.

*In making up the tables whole numbers only were used and pupils of like standing were not separated. This throws the percentages somewhat out of exact conformity to the scheme. The error, however, is very slight.

[1] J. O. Quantz, "Problems in the Psychology of Reading," Psychological Monographs, Vol. II, No. 1 (December, 1897), pp. 28, 38.

[2] C. H. Judd, Measuring the Work of the Public Schools, pp. 154–155. The Survey Committee of the Cleveland Foundation, Cleveland, 1916.

[3] The figure numbers have been changed to agree with those of this text.

These figures serve to emphasize the fact that good readers are usually not slow and poor readers are usually not fast.[1] It is evidently not safe to attempt to lay down any absolute rule. There are good readers who are slow. In some cases such readers may be temperamentally slow. But even making allowances for such individual peculiarities, the figures show that good reading and slow reading are not incompatible.

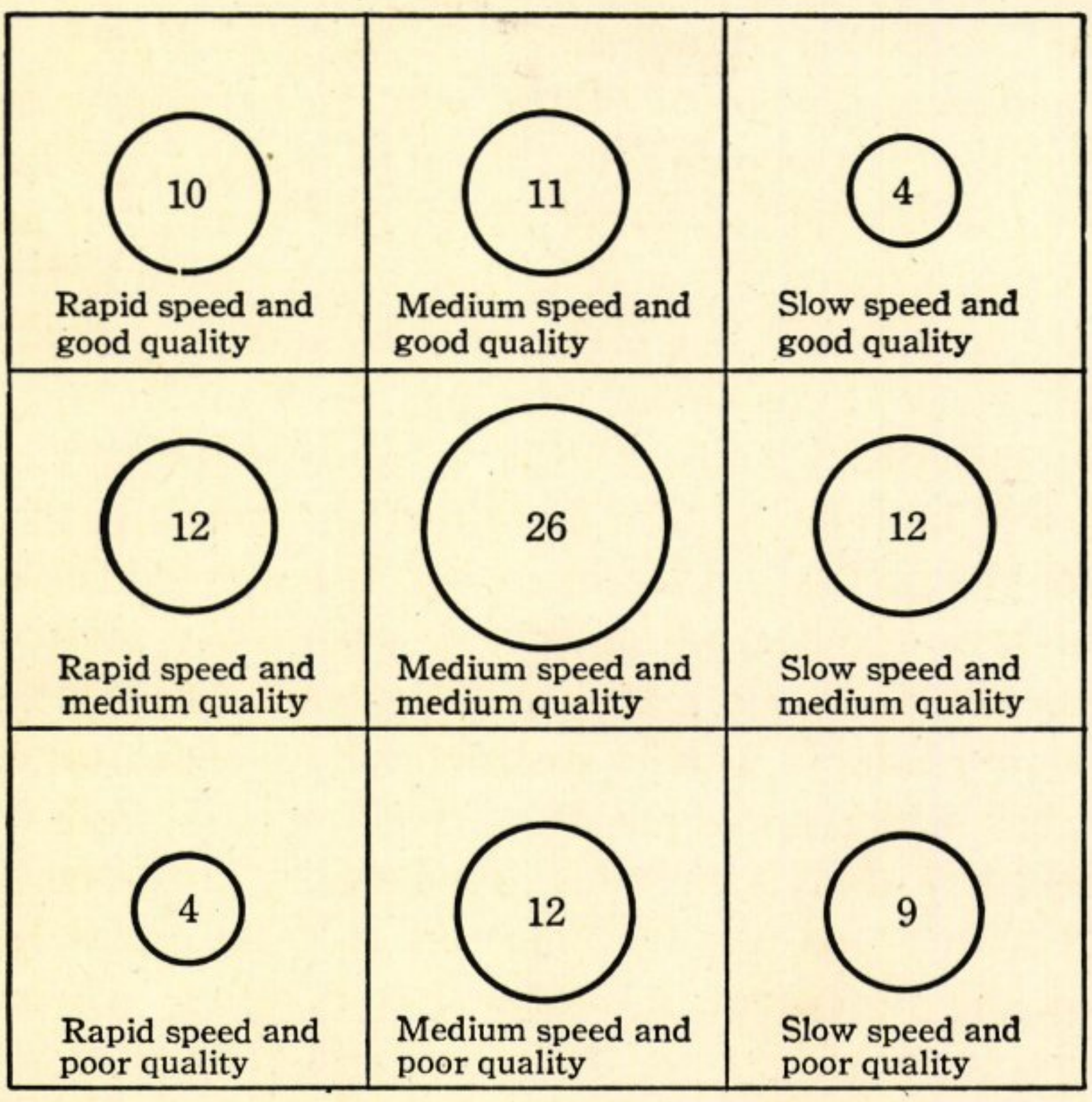

FIG. 12. Per cent of 1831 Cleveland pupils found in each of nine speed and quality groups in silent reading. (From "Measuring the Work of the Public Schools," by C. H. Judd)

In like manner there are a certain number of children who read rapidly but retain little of what they read. With the figures in hand a teacher can profitably study her class and determine . . . what are the special explanations of each individual type of ability.

For the purpose of this survey *the general fact that high rate and good quality are commonly related, and that low rate and poor quality are commonly related, is of great importance.*[1]

[1] The italics are the present writer's.

The foregoing quotations from reports of investigations into the relationship between speed of reading and comprehension impress one with the fact that an intimate relationship exists between the two characteristics. "Good readers are usually not slow and poor readers are usually not fast" is the rule that impresses itself upon the student of such investigations and upon the close observer of reading in the schoolroom. On the other hand, any statement of the relation between speed and comprehension is compelled to take into account the fact that there are pupils who fail to get the proper amount of meaning from the printed page because they read too rapidly, while others are very able in comprehension because they read slowly and with great attention to meaning. Such exceptions to the relation one *usually* finds to exist between speed and comprehension will be referred to a little further along in the discussion. For the present let us direct our attention to the reasons why "high rate and good quality are commonly related" and why "low rate and poor quality are commonly related."

The slow reader is usually distracted by mechanical difficulties. It has been pointed out in a preceding paragraph that the rate of one's reading is an index of his ability in the mechanics. To read with speed usually indicates that the pupil has surmounted the important mechanical difficulties, whereas the pupil who reads slowly and laboriously is compelled to do so because the mechanical difficulties which are encountered are constantly interrupting the reading process. Thus we have an important explanation of the general relation between speed and comprehension. The attention of the slow reader is so taken with what is to him the difficult and laborious process of reading that he has very little to give to interpretation. On the other hand, practically the whole attention of the rapid reader can be given to interpretation, because he can read so well that little effort is needed in carrying on the mechanical process.

The rapid reader usually secures meanings in wholes rather than in parts. Not only is the rapid reader the better able to

devote the whole of his attention and energy to the task of interpretation; he also has a greater opportunity than the slow reader of welding together into one composite whole the separate and constituent meanings of the various sentences and paragraphs which go to make it up. The meaning of a paragraph, for example, cannot be had by a separate consideration of the meanings of its various sentences. The meanings of the various sentences need to be considered as component parts of a larger unity. Only as the meaning of each particular sentence is colored and defined by its relation to the meanings of all the other sentences does it have any value that is peculiarly its own. In order to have established this proper relation between the component meanings of a paragraph, it is necessary that the various meanings have at about the same time the right of way in the forefront of the reader's atention. This the rapid reader has the better opportunity of providing, because of the natural limitations of one's immediate memory, spoken of by Huey as the primary memory of the inner speech. Says Huey:

> It is of the greatest service to the reader or listener that at each moment a considerable amount of what is being read should hang suspended in the primary memory of the inner speech. It is doubtless true that without something of this there could be no comprehension of speech at all. When a considerable amount is thus suspended, the attention may wander backward and forward to get a fuller meaning where this is needed, with no fear of losing the minor parts, which are taken care of physiologically and may be taken into the focus of consciousness at will.[1]

A much more lucid explanation is to be found in "How to Read," by J. B. Kerfoot. He asks the following questions:

(1) Why is it impracticable to "examine the meanings we are giving to words as we read them"?

[1] From Huey's "Psychology and Pedagogy of Reading," p. 148. Used by permission of The Macmillan Company, publisher.

(2) Why is it impossible to "read" if we do stop to examine the meanings we are giving to individual words?

(3) What is the actual way in which we do control our word interpretations?

His answer, which follows, likens the reading process to a motion-picture exhibition:

Let us glance back for a moment at the cinematograph.

You know, of course, that a motion-picture film is made up of a great number of individual photographs. That these were originally taken separately, but in rapid succession. That they are thrown on the screen, also separately, and in the original order, and at the original rapid rate—as a matter of fact, at the rate of about twenty per second. And you quite understand (although you cannot detect the fact for yourselves by observation) that it is precisely because each of these separate pictures is actually there, stationary, on the screen, long enough for us to perceive it, yet is always succeeded by another picture (ever so slightly different) too quickly for us to differentiate the impressions we receive from them, that the series merges, to our minds, into a "moving picture."

Now the significant fact that I wish to point out to you—the fact that is going to enable us to "hitch up" our previous discoveries to the facts of actual reading practice—is this: that the separate words on a page of print correspond *exactly* to the separate pictures of a movie film.

It is not merely true in a sort of metaphorical sense that "reading" results in "mental movies."

It is literally true that the mental mechanics of the two processes are identical.

Let us examine them.

The cinematograph is operated at the rate of about twenty pictures per second. In other words, in one minute of the movies something like twelve hundred pictures, one after the other, twenty to the second, are thrown on the screen before our eyes.

On the other hand, an ordinary reader takes about a minute to read an average page of the usual novel. Such a page contains in the neighborhood of three hundred words. Which is to say that in one minute of "reading" something like three hundred words, one after the other, five to the second, are flashed onto the sensitized screen of the mind.

And, in this case as in the other, it is precisely because each of these words is there, stationary, before our moving eyes, just long enough for us to *feel the flavor of its significance*, but is always—before we have time to differentiate the impressions made on us—abandoned for another word, different, yet either qualifying or qualified by the first one, that the series merges in our minds into the living flux of "representation" or "understanding" that we call "reading," and that we have elected to describe as a "mental movie."

Here, then, are our first two points already clear to us:

(1) At *five* words to the *second* it is obviously impossible to "examine the meanings we are giving to the words as we read them."

(2) Yet if, in order to make such an examination possible, we slow down to, say, ten words to the minute, we instantly destroy the cinematographic effect of the merged series. Instead of a "mental movie" we get a "jumble of unrelated meanings, memories, associations and ideas."

In exactly the same way, if we slow a movie film down until each picture remains on the screen for two whole seconds, and is then, after an interval of darkness, succeeded, for two whole seconds more, by the next picture, we instantly turn a "moving picture" into a procession of meaningless monotony.

In both cases we have a watched pot that never boils.[1]

In other words, the slow reader has difficulty in getting the proper "motion-picture" effect.

The discussion may be disposed of with the following summary: The rapid reader is engaged with the meaning of the latter part of a paragraph while the meaning of the first part is still fresh in his mind, whereas the slow reader may forget the meaning of the first part of a paragraph before he has completed the reading of the latter part. The rapid reader has the opportunity to weld together in his mind all phases of meaning which are expressed in a paragraph; the slow reader does not have an equal chance.

Thus far in our discussion we have considered the general relation between speed and comprehension, and, finding it to be

[1] J. B. Kerfoot, How to Read, pp. 61–64. Houghton Mifflin Company, Boston, 1916.

quite intimate, we have turned our attention briefly to the explanations. We turn now to a consideration of the exceptions to the general relation between the two important characteristics of silent reading. Our purpose is to seek an explanation of the conditions under which speed and comprehension develop as seemingly antagonistic rather than mutually related qualities.

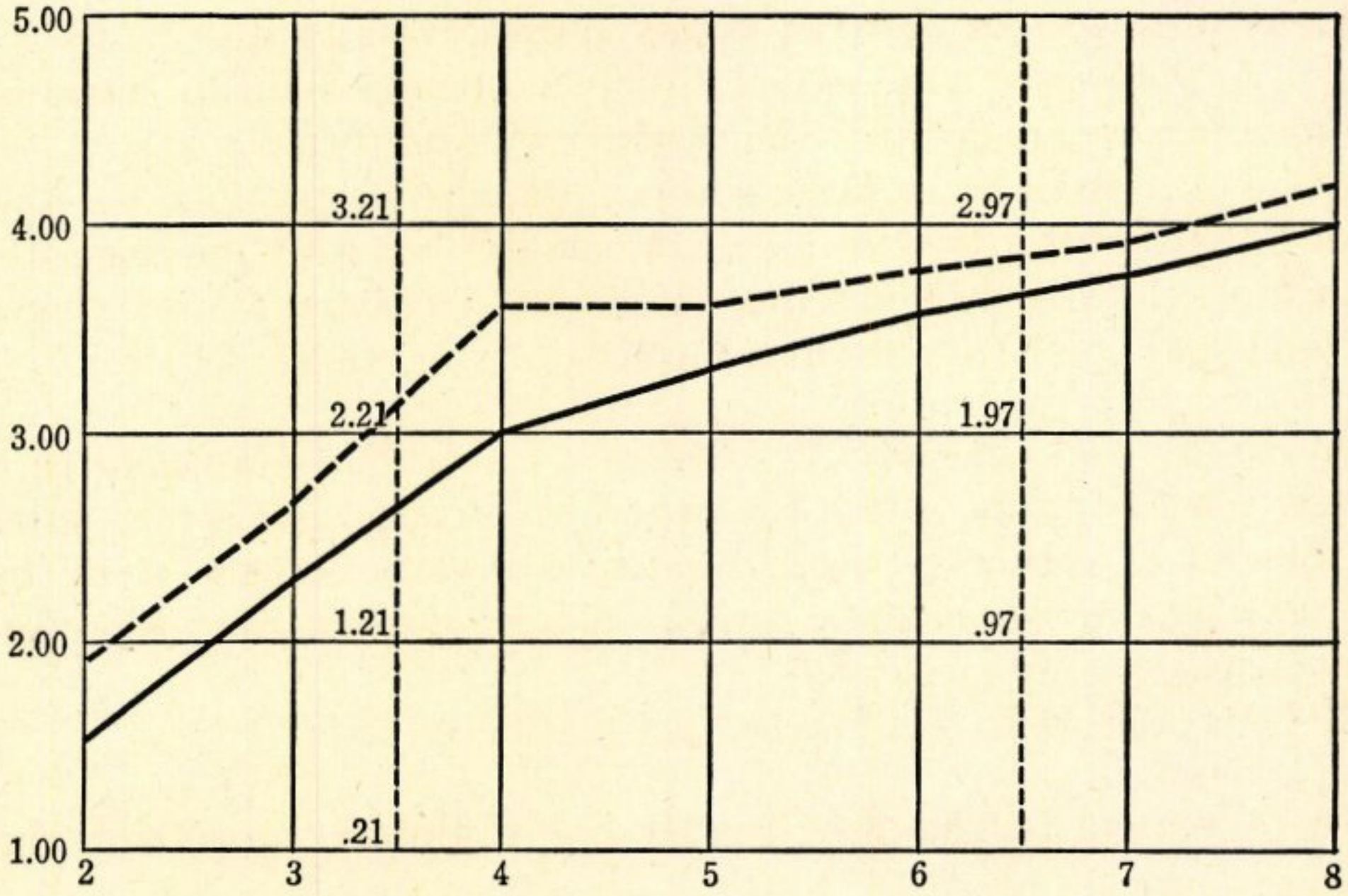

FIG. 13. Average scores in the rate of silent reading of 1831 Cleveland pupils and of 2654 pupils in 13 other cities. Data are for grades from second through eighth. Dotted line shows Cleveland scores, and solid line those of other cities.
(From "Measuring the Work of the Public Schools," by C. H. Judd)

Examples of high speed and poor comprehension. In Fig. 13 there is presented a comparison of the average scores in rate of silent reading of 1831 Cleveland pupils with those of 2654 pupils in thirteen other cities. The comparison is very favorable to the pupils of Cleveland. A marked superiority in rate of silent reading of Cleveland pupils in all grades is shown. Fig. 14 presents a similar comparison with reference to average scores in comprehension. Here it is shown that the pupils of Cleveland in all grades are markedly inferior in quality of silent

reading to the pupils of the other cities. The results of a comparison of the facts presented in the two figures appear to stand out in sharp contrast with our previous conclusions regarding the general relation between speed and comprehension. Here we find that as the speed of Cleveland pupils tends to rise above the average of other cities there is a corresponding tendency of the comprehension scores to fall below the average. Cleveland pupils rank high in speed and low in comprehension.

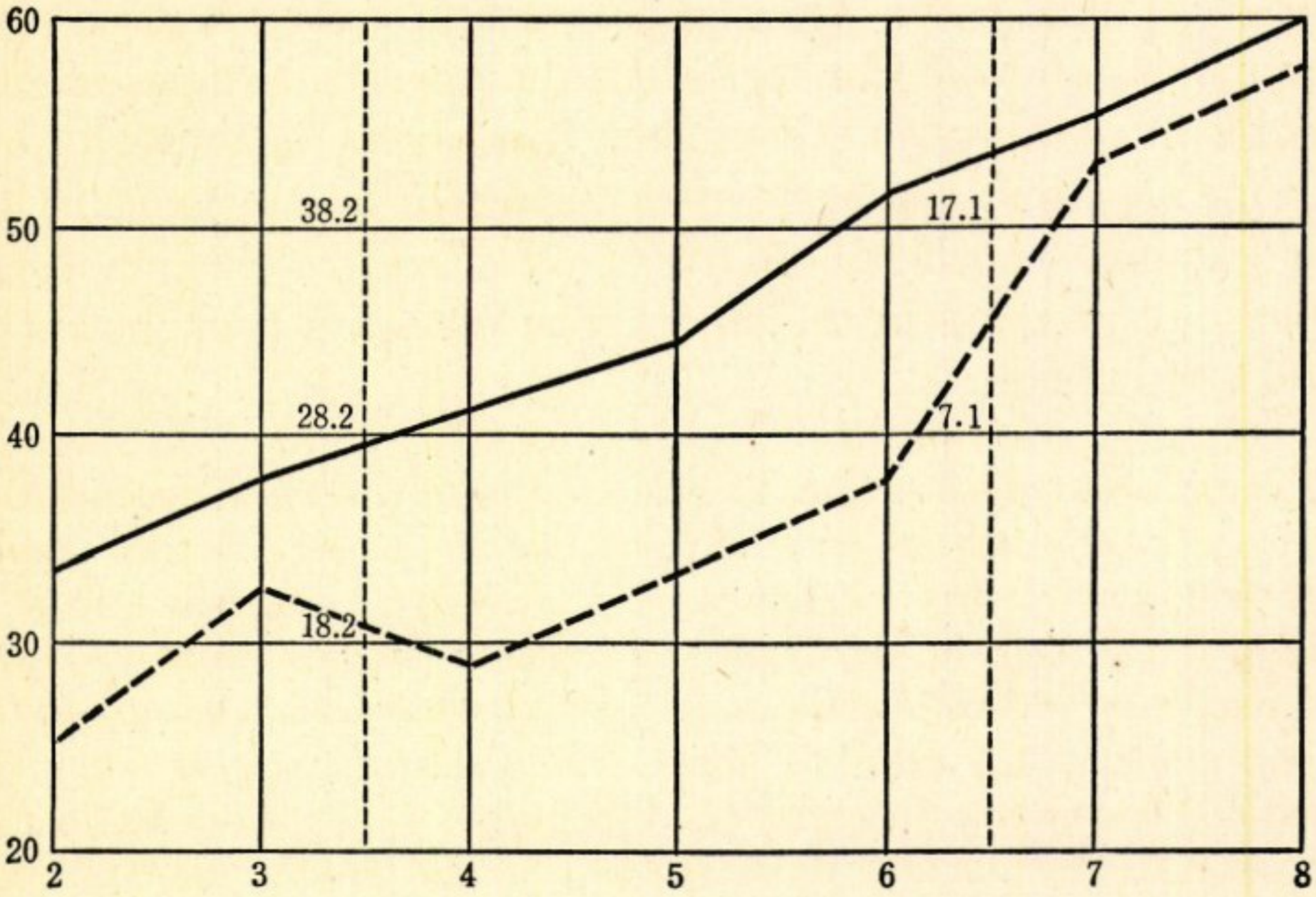

FIG. 14. Average scores in the quality of silent reading of 1831 Cleveland pupils and of 2654 pupils in 13 other cities. Data are for grades from second through eighth. Dotted line shows Cleveland scores, and solid line those of other cities. (From "Measuring the Work of the Public Schools," by C. H. Judd)

These comparative facts raise a most important question. Does quality of reading always fall when the rate rises? Is the result which we find for Cleveland as contrasted with other cities merely an expression of the general opposition between quality and quantity such as was found in the case of handwriting?[1]

[1] C. H. Judd, Measuring the Work of the Public Schools, pp. 151–153. The Survey Committee of the Cleveland Foundation, Cleveland, 1916.

In addition to the task of seeking an answer to the questions just quoted, we are confronted with the problem of explaining how Cleveland pupils, who are rapid, are less able in interpretation than the pupils of other schools whose scores in rate of reading are not quite so good.

Explanation of the Cleveland record. The solution of the problem is stated by Professor Judd in terms of the relative emphasis on speed and comprehension in the different grades. Notwithstanding the close relationship between speed and comprehension and the fact that the two characteristics are capable of coördinate development, it is necessary for us always to remember that emphasis upon the two characteristics in unequal amounts results in an overdevelopment of the one at the expense of progress in the other. The matter is brought out in Judd's discussion:

> The problem which is here encountered is solved by a consideration of the relative emphasis on speed and quality in the different grades. Rate and quality may be represented in a single diagram. Thus in [Fig. 15] the rate of reading is represented by horizontal distances and quality by vertical distances. . . . Here we see that the rate of the second grade in Cleveland is about two words per second while the speed of the corresponding grade in other cities is about one and a half per second. The quality of Cleveland's second grades, on the other hand, is 25, while that of the grades in other cities is over 30.
>
> Following the progress of the Cleveland curve, it is noticed that there is a rapid gain in speed up to the fourth grade, shown by the fact that the curve turns sharply toward the right but is irregular in the vertical. Quality is thus shown to be irregular. There is a relapse to a lower level in passing from the third to the fourth grade. Indeed, even after improvement in quality begins in the fifth and sixth grades, it is relatively slow and irregular.
>
> The curve for the other cities has a wholly different character. During the early years rate improves relatively more than does quality, but there is steady progress in both. In the middle of the elementary course there is a definite change in relation, the upper grades showing greater improvement in quality. This would seem to mean that the mechanical phases of reading have to be mastered first, and their mas-

tery is shown by the attainment of satisfactory speed; thereafter the greater emphasis should fall on quality.

The solution of our problem regarding the high speed and deficient quality of Cleveland is now clear. There is not sufficient attention to interpretation in the grades up to the fourth. There is, indeed, a high degree of success in perfecting the mechanical operations, but the ultimate achievement of the schools is below what it should be in quality because the quality is not adequately stressed in the lower grades.[1]

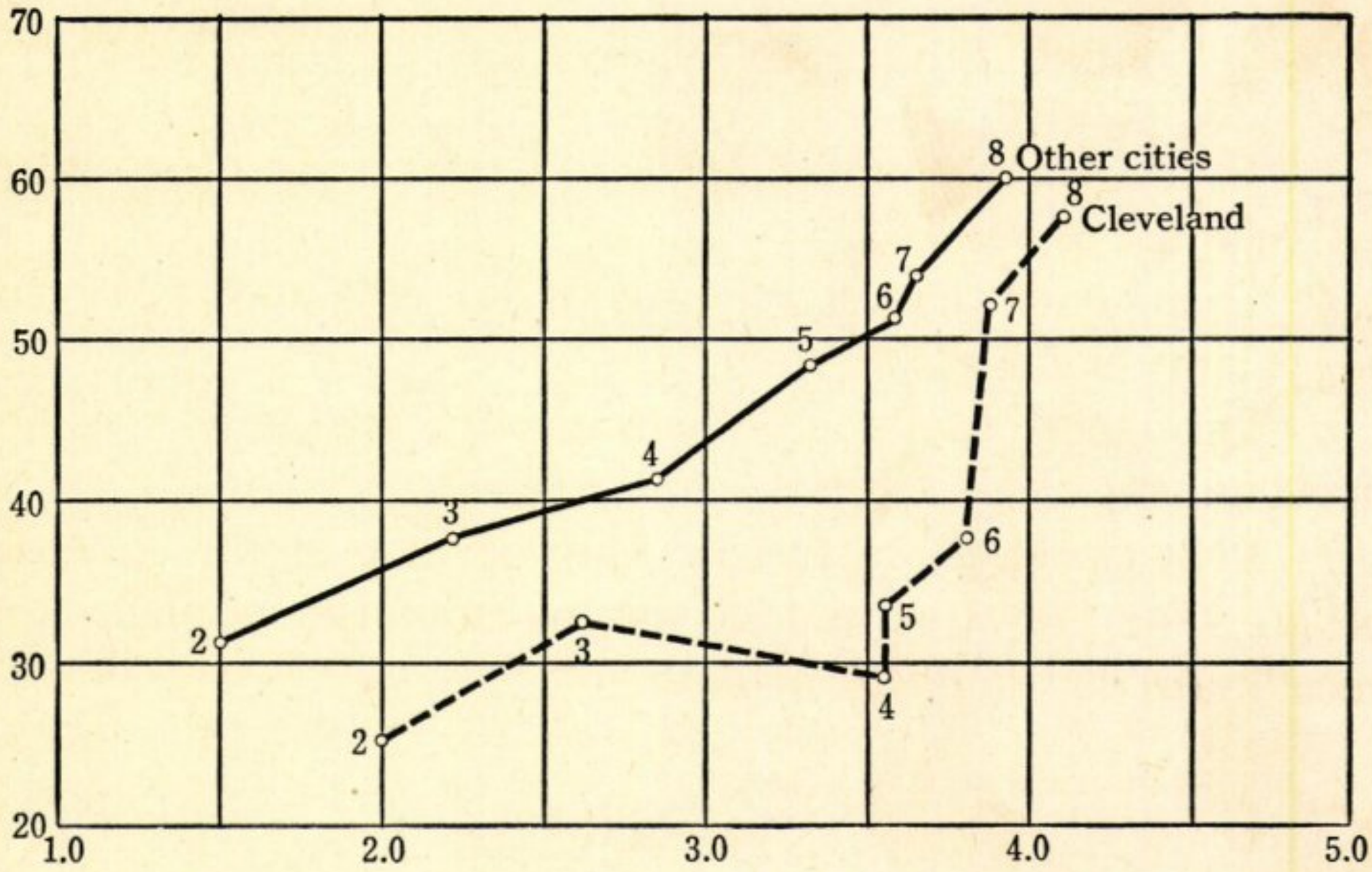

FIG. 15. Average scores in speed and quality of silent reading in each grade in Cleveland and in thirteen other cities. (From "Measuring the Work of the Public Schools," by C. H. Judd)

The quotation emphasizes the importance of devoting special attention to the side of content and interpretation as well as the necessity of an early mastery of the mechanical phases of reading.

Summary and conclusions. This will conclude our discussion of the balance between speed and comprehension. In the chapter we have arrived at the following conclusions:

1. That rapid reading is very necessary in our complex democratic society.

[1] C. H. Judd, Measuring the Work of the Public Schools, pp. 156–158. The Survey Committee of the Cleveland Foundation, Cleveland, 1916.

2. That there exists among pupils very wide individual differences in rate of silent reading.

3. That ability to surmount the mechanical difficulties of reading, indicated by a reasonable degree of speed, is necessary before pupils are able to make any considerable progress in interpretation.

4. That special attention to specific devices of instruction in silent reading is needed; that it is important for teachers to give their attention to the problem of systematizing instruction in silent reading.

5. That special attention needs to be devoted to the interpretative phase of reading.

6. That "good readers are usually not slow and poor readers are usually not fast."

7. That speed and comprehension are capable of coördinate development.

8. That either characteristic may develop at the expense of progress in the other unless special emphasis is placed on a coördinate development of both.

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CHAPTER IX

ORAL AND SILENT READING

The discussion of the reading process concluded. The present chapter will conclude our discussion of the reading process by pointing out the relation of instruction in oral reading to instruction in silent reading. Thus far our discussion of the reading process has related itself almost exclusively to silent reading; the relation to oral reading has been purposely neglected in order not to distract our attention from the aim of reading instruction which was set up in Chapter I. We turn our attention now to a discussion of the reading process as it is related to oral reading. Because of the high favor which educational practice has always accorded to oral reading, it is well now for a time to make that phase of the reading process the subject of explicit discussion. We shall not lose sight, however, of the ultimate aim of reading instruction—to develop *effective rapid silent* readers—to the extent of pursuing our discussion of oral reading beyond the bounds of its relationship to instruction in silent reading. It is an important purpose of the present chapter, therefore, to determine to what extent instruction in oral reading may help and to what extent it may hinder instruction in silent reading.

Oral and silent reading are characteristically different processes. Any discussion of the relation of instruction in oral reading to instruction in silent reading must take into account as a primary consideration the fact that the two processes are characteristically different. A proper recognition of this difference has an important bearing, as we shall see, upon the relative emphasis which ought to be given to the two types of

reading instruction through the grades. A review of the characteristic eye-movement habits of an adult in oral and silent reading is pertinent at this point in our discussion. For the purpose of a review let us return to an examination of Figs. 2 and 3, which are presented in Chapter IV.

The differences between the two processes, oral and silent reading, as revealed in the record of eye movement in silent reading in Fig. 2 and in the record for oral reading in Fig. 3, are quite clear. The characteristic habits of the two processes stand out in sharp contrast whether we view them from the standpoint of the number of pauses to the line, of the duration of the pauses, or from the standpoint of the size of the units of recognition. In oral reading (Fig. 3) the number of the pauses is greater than in silent reading (Fig. 2), and the average length of the pauses is greater. Not taking into account in either case the opening and closing lines of the paragraph read, we find that the number of the pauses in oral reading exceeds by more than 70 per cent the number in silent reading, and that 13 per cent more time is consumed on the average in an oral-reading pause than in a silent-reading pause. The unit of recognition in silent reading is broader than the unit of recognition and articulation in oral reading. In silent reading the unit of fixation is often the meaningful phrase, while in oral reading it is usually the word.

The purpose of the process determines its character. The explanation of the difference in the characteristics of oral and silent reading is to be had in an examination of the purposes of each type of reading process. The purpose of silent reading is to secure meaning; the purpose of oral reading is articulation—pronunciation of words with proper expression. We have seen in previous discussions, in Chapter V especially, how close is the relation between familiarity with a word or phrase and the act of recognition. Now familiarity, so far at least as our discussion is concerned, is synonymous with ability to recognize meaning, while the act of recognition is the conditioning factor

of the duration of the fixation pause. We are at liberty to state, therefore, as a result of our previous discussions that the process of silent reading is able to proceed as rapidly as one is able to recognize meanings. The characteristic difference from the process of oral reading is easy to be seen. The oral-reading process can proceed no more rapidly than clear enunciation of words and good expression will permit. The demands of utterance condition oral reading.

The difference can be stated in another way. The eye-movement habits of the silent reader are conditioned by the ability of the reader to recognize words and phrases. That is to say, when recognition is slow and difficult, fixation pauses are many to the line and each is of comparatively long duration; when recognition is rapid and easy, fixation pauses are few and of short duration. Eye movement in oral reading presents an interesting contrast. Here it is that one finds that the eye pauses are many to the line and each of considerable duration. One finds that the eyes move across the page slightly in advance of the voice, often pausing and even moving back until the voice catches up. One is led to the conclusion that whereas in silent reading eye-movement habits are conditioned by the demands of recognition, in oral reading they are conditioned by the demands of speech.

The explanation of this difference is to be sought in the fact that oral reading is controlled by speech units rather than divided into units of visual perception. The unit of speech is the word. In oral reading the eye moves from word to word, directing in this way the vocal apparatus as it utters each unit. In silent reading, on the other hand, the unit for the trained adult is wholly different; it is not a unit determined by the requirements of speech. It is rather a unit of recognition. If the mind can grasp a phrase, that becomes the unit governing fixation.

The difference in units in the two cases is related also to the difference in rate. The vocal apparatus requires more time to make its adjustments than does the eye. The slower pace in oral reading is not determined, therefore, by the inability of the reader to see and recognize words rapidly. The silent-reading records show that he can recog-

nize whole phrases rapidly. In oral reading the eye lingers on each word, waiting for the vocal apparatus.

The differences between oral reading and silent reading are impressively illustrated by contrasting lines 4 and 5 in the two . . . plates [figures]. These lines are made up of short words and phrases; when read silently [Fig. 2] they require few fixations. When the same lines are read aloud [Fig. 3] the vocal apparatus must sound each word separately even though it is a short word; the eyes change their movements completely, accommodating themselves to the demands of speech.

The complications and long pauses at the beginning of lines are more conspicuous in oral reading than in silent reading, indicating a leisurely adjustment throughout. In oral reading the ends of the lines have short fixations in fewer cases than in silent reading [Fig. 3, lines 4 and 5]. This is undoubtedly due to the fact that in most of the lines read orally the eyes linger on the end until articulation catches up with them. There is no motive, as in silent reading, for the eyes to move on as soon as possible.

Conspicuous cases, in which long pauses are not dictated by the demands of perception but are due to delay until the vocal apparatus can overtake perception, are seen in [Fig. 3] line 1, pause 3; line 2, pauses 2–4; line 3, pauses 3 and 6.[1]

Shall oral reading be entirely neglected? The foregoing discussions serve to impress us with the conclusion that the habits developed in oral reading are a positive hindrance to the development of the habits necessary for effective rapid silent reading. As a consequence we are led to a consideration of the question: Shall silent reading take the place of oral reading in both lower and upper grades? Shall we follow the example of certain teachers and schools in emphasizing silent reading at the expense of oral reading in the lower grades? The following facts help to provide an answer:

1. The process of oral reading is more closely related to the habits of speech of lower-grade pupils than is the process of

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, pp. 21–24. The University of Chicago Press, Chicago, 1918.

silent reading. Both types are artificial, manufactured to comply with the demands of modern society. Oral reading is the more natural, because it is the more closely related to the oral speech of the child.

2. Until the fourth grade is reached, generally speaking, the pupil's rate of pronouncing words can exceed his rate of recognizing words. From the fourth grade on, the pupil's rate of recognizing words not only can exceed his rate of pronouncing words but is capable of more rapid development.

3. The period from nine or ten years of age to adolescence is quite different from the one which immediately precedes it. The child becomes more individual and independent in his tastes and desires and habits of study. He becomes more capable to strike out for himself in the more or less independent task of silent reading.

Detailed consideration of these facts is now in order. Let us direct our attention to a discussion of the first in the list; namely, the dependence of reading on oral speech.

Oral speech is the natural form of communication. In our discussion of the kind of reading instruction best adapted to pupils in the lower grades we cannot escape consideration of the primary facts that spoken language is the natural vehicle for the expression of ideas and the one first developed in the history of the race, and that written language is the artificial one devised to meet the needs of a developing civilization. The problem of the school then is one of devising ways and means by which the pupil's acquaintance with the natural vehicle of expression may be translated into an acquaintance with the artificial one. The pupil's knowledge and use of spoken language become the means of introduction to a knowledge and use of written language; that is, reading.

The fact that spoken language is the natural form of expression can be understood the more clearly if we examine the mental equipment of pupils at the time they enter the first grade.[1]

[1] Review Chapter III for a similar discussion.

By the time a child has reached the age of six he has acquired a limited command of oral speech. He is able to understand the speech of others to a limited degree, and he is able to express his own thoughts to the extent of being able to take his place as a part of the social group of the school. Before this age he does not have a command of language sufficient to enable him to understand the simple commands and directions that the teacher must give. The whole period of the child's training previous to his entry into the first grade, both informal in the home and formal in the kindergarten, is devoted primarily to the task of teaching him to use and to understand oral speech. As long as his training is so limited as to fail to include a command of the elements of language, the child remains within the family; as soon as his training provides a mastery of the rudiments of oral speech, the child is permitted to go without the family into the confines of the school.

There are schools which are much embarrassed in their work because the pupils do not speak English, and there are individual pupils in the first grade who have only a limited command of language because they are backward in general mental development. These cases are conspicuous as departures from the general rule that pupils of six years of age commonly know enough language to conduct themselves in the social group with independence.

It is at this point that pupils come to school. The school has the duty of extending their knowledge of oral language and of introducing them to the large body of experiences which will make language the vehicle of ideas. It is also the duty of the school to introduce pupils to a new type of language; namely, written or printed language.[1]

Thus we see that for the purpose of our present discussion, at least, the statement at the head of this topic is correct. It is to be admitted, of course, that children do not acquire a mastery of oral speech instinctively; the desire for and interest in expression may be instinctive, but the command of language is

[1] C. H. Judd, Reading: its Nature and Development, pp. 135–136.

the result of a process of training. The point of interest to us, however, is that every normal child who enters the first grade does have to a greater or less degree a command of oral speech. Consequently the kind of training in the first grade which has its basis in oral speech may be considered as *natural* as distinguished from the kind which has its basis apart from oral speech.

"Oral reading is the natural form of primary reading."[1] The argument that leads to a consideration of oral speech as the natural form of communication leads also to the consideration that oral reading is the natural form of primary reading. Oral language is familiar to the pupil when he begins to read. He is acquainted with a few well-established forms of oral expression. He talks and he can understand. His thinking takes form in oral expression. The process of thinking without an immediate oral expression of his thoughts is foreign to his experience. The ability to think silently, to consider the thoughts of others silently, to read silently, is the result of training. The training begins in the ability of pupils to take part in the activity of oral expression.

Professor Judd states the matter from a slightly different point of view:

> Furthermore, spoken language, by its historical and structural relations to written language, naturally dominates reading. Printed words are not related directly to things, but to the sounds which make up the names of things. In other words, letters are symbols of sounds, not pictures of objects. We may put pictures into reading books to illustrate the story, but the child cannot make a direct jump from the picture to the printed word; he must go by way of sounds. Going by way of sounds is more natural because when he comes to the reading class the child brings a fully developed mastery of many sound words and their meanings.

It may be concluded, therefore, as the first dominant principle in the teaching of reading in the primary grades that all printed and written words are naturally associated with sounds; that is, with oral language.[2]

[1] Ibid. p. 138. [2] Ibid. p. 138.

Oral reading provides a means of testing. The importance of devoting considerable emphasis to oral reading in the primary grades may be considered from the standpoint of the absolute necessity for the teacher to have a constant check on the strong points and weaknesses of each pupil's ability. Oral reading on the part of primary pupils provides a means for such a check.

We now arrive at the second point in our list bearing on the importance of oral reading in the lower grades; namely, the general relation between the ability of pupils to pronounce words and their ability to recognize words.

Recognition is rapid in development; pronunciation is slow. The general relation between the ability of pupils to pronounce words and their ability to recognize words is presented in Fig. 16.

> The full-drawn line in [Fig. 16] represents the facts with regard to the rate of articulation in the grades. In the same figure the broken line represents the development in the power of recognizing words. This line must of necessity begin below the line for articulation. In many cases recognition is at absolute zero at the time the pupils come to the first grade. In the seventh grade the power of recognizing words is higher than the power of articulation. . . . The evidence on this matter is most directly secured by studying the rate of silent reading where only recognition is involved. Oberholtzer gives the rate of silent reading in the seventh grades of Tulsa, Oklahoma, as from 210 to 275 words per minute and sets down as a standard for that grade 250 words per minute. How far above the line for articulation the line for recognition might go is difficult to decide because there is an artificial influence which distorts the situation. This artificial influence is the insistence of the schools on oral reading as the chief type of reading in the upper grades. This insistence tends to keep all children down in their silent reading to the rate set by the oral reading emphasized in the schools.
>
> A study of [Fig. 16] makes it clear that the relation between articulation and recognition is not the same in the upper grades as it is in the lower grades. When the pupil reads aloud in the lower grades, he uses a form of expression which is far more fully developed than his power of recognition of words. In the upper grades exactly the reverse is

true. When the teacher calls on an upper-grade pupil to read orally that pupil must go more slowly than he would if he were reading to himself.[1]

A careful study of Fig. 16 points the way to one general conclusion, even though the evidence is by no means complete:

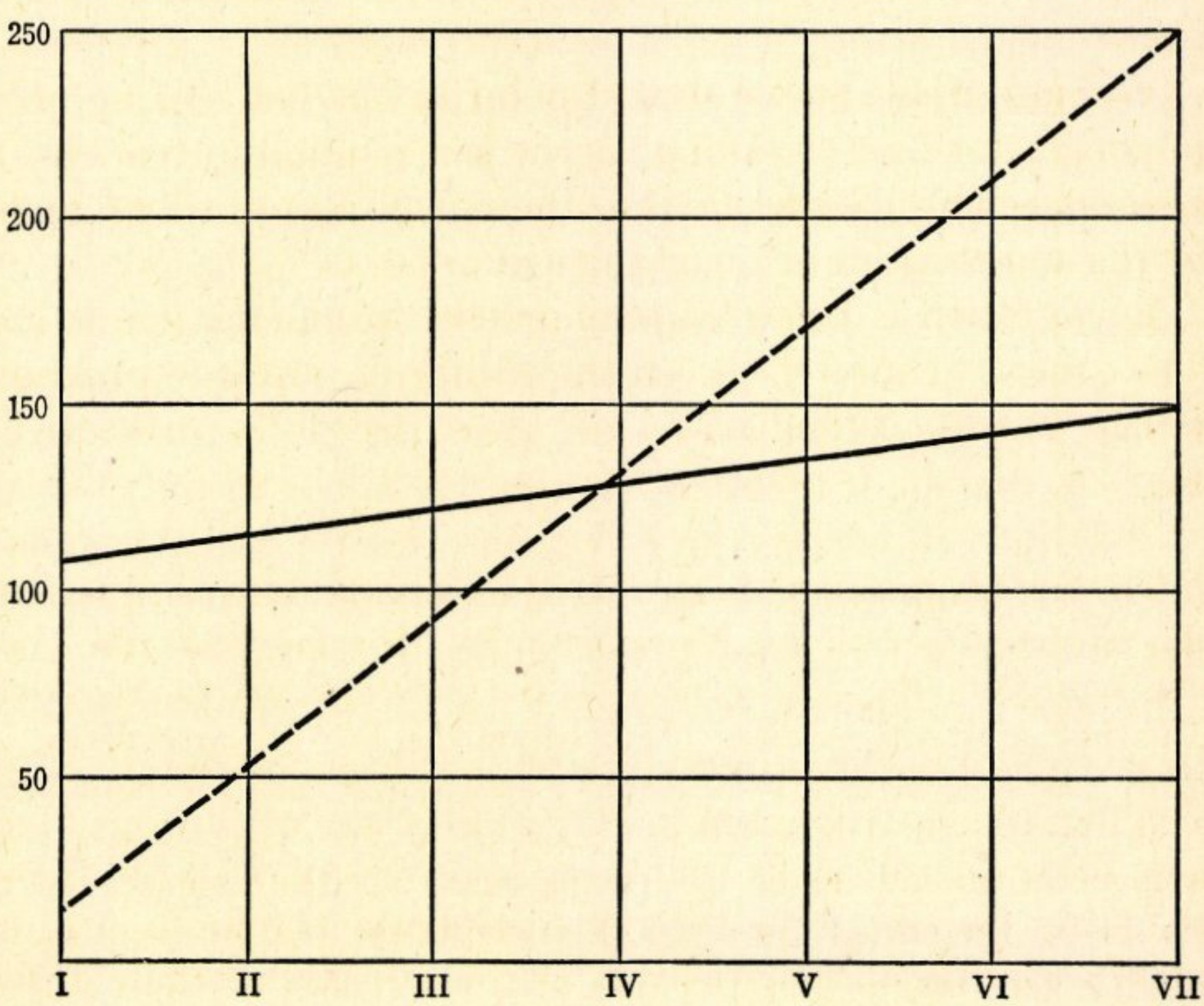

FIG. 16. Improvement in rate of articulation and in rate of recognition of printed words in successive grades. The full-drawn line represents the rate of articulation. The broken line represents the rate of recognition of words. (From "Reading: its Nature and Development," by C. H. Judd)

emphasis on pronunciation in the grades preceding the fourth tends to pull up, to improve, the ability of pupils to recognize words; emphasis on pronunciation in the grades following the fourth tends to pull down, to retard, the development of the ability of pupils to recognize words. Stated in terms of oral and

[1] C. H. Judd, Reading: its Nature and Development, pp. 144–146.

silent reading, the conclusion is: oral reading in the lower grades tends to build up the capacity of pupils to read silently; in the upper grades oral reading is a positive hindrance to the development of good silent-reading habits.

Let us proceed now to a consideration of our third point—that the child at the age of nine or ten years enters a period of development different in character from the one which precedes it.

Socal imitation characterizes the former period. In a preceding chapter (Chapter III) we have had pointed out as one of the reasons why the age of six is the crucial age in which to begin the teaching of reading the fact that primary pupils are socially imitative. Children take delight in copying the actions and manners of speech, the accomplishments and performances, of their elders. What everybody does the child wishes to be known as doing. It being the fashion (or a part of the fashion) for the adult to peruse the newspaper, books, and magazines, and to write upon paper, the child is willing, even anxious, to advertise himself as having the ability to carry on the same performances. Though his product be of the crudest possible sort, the child of the primary grades is willing to read, to write, to cipher, to construct, and to play at all these activities so long as he finds himself to be under the approving eye of his elders. His desire for social approval, his tendency to imitate, and his docility are the most noticeable characteristics of the child of six to eight or nine years.

The age of nine is a turning point. In the primary grades the normal child has been content to be a social imitator. His interest has been centered primarily in performing, and in pretending to perform, the same activities in which his elders are engaged. His interest has never been centered primarily on the character of his product. He may be said to be entirely unconscious of how exceedingly crude his productions are. The normal child goes through the whole of the primary-school period without manifesting any attitude of criticism of the work that he does.

Gradually there comes a change. The child continues to read until his attention becomes centered on his product; that is, the result of his performance rather than the performance itself. In handwriting the mere act of writing no longer satisfies. The child begins to notice how ineffective his efforts are and what crude results he is able to produce. For the first time he compares in a critical way the results of his efforts at reading, writing, drawing, arithmetic, etc. with like results of his fellows in school and with those of his elders. Any such comparison is distinctly unfavorable when considered from the standpoint of the child, who is now learning to make the comparison. He becomes all the more critical of his own efforts; his interest becomes centered in himself rather than in social approval; he becomes self-conscious; in short, the normal child at the age of nine ceases to comply in a spirit of willingness and satisfaction with the demands the school has up to this time been making upon him. His interest in himself as an individual reveals to him the fact that he is now an independent master of reading, writing, and language. Henceforth his desire is to use these subjects for his own private purposes. The child ceases to be a social imitator. He now has become an individualist.

The results of the change are easily observable among pupils of the intermediate grades. Here, for the first time in the school period, the problem of discipline becomes a serious one. The intermediate pupil is disregardful of the rights of others. He refuses to follow the dictates of the teacher. Whenever possible he asserts his independence in social matters. In his studies he turns away from the directions of the teacher in his effort to assert himself as an individual. In writing, the copybook is neglected, and the child turns to the task of composing a note to a friend in a rapid, scrawling hand. In drawing he forsakes his models and book of instructions, and in their stead produces a caricature which he labels "teacher." His mother tongue he neglects for a mysterious language of his own invention,—*Iay oday otnay antway otay ogay otay oolschay*, translated "I do

not want to go to school,"—the "hog Latin" of the preadolescent boy. The child's attitude toward reading is described in the following account of the experiences of a young and somewhat inexperienced elementary-school principal:

> During my first year as principal of the school I noted the fact that the instruction in reading in the primary grades appeared to be exceedingly well done. The pupils read with expression, and their mastery of the mechanics appeared to be as great as one might hope to secure in pupils of their age. In the fourth grade, appearances were quite different. Fully a third of the pupils read haltingly and without expression. Words were mispronounced and omitted; sometimes even whole lines were skipped. The work in this grade was considered exceedingly poor. At the end of the year, however, these pupils were promoted "on trial," not because they were deemed worthy of promotion but in order to make room for the incoming third grade. During the succeeding year and the years that followed not one of these "trial promotions" failed to complete the work of his grade, some of them standing far ahead of the average of their class.
>
> During my second year I expected to find the work in reading in the fourth grade very much improved because of the exceptionally good records of the pupils who had been promoted from the third grade. Much to my surprise the work in oral reading this year was just as lacking in all qualities of excellence as the work I had witnessed the first year.

Our discussion has proceeded far enough to disclose the fact that the age of nine is a turning point in the life of the child. The fact is impressed upon us that the pupils of the intermediate grades are not the same children they were in the primary grades. Their tastes differ; their desires have changed; their attitudes of mind and habits of work can hardly be recognized as belonging to the same children we knew a year or two previously.

The change demands a different mode of instruction. What is the significance of the change at the age of nine from a period of social imitation to a period of individualism? From the standpoint of the school the significance is that the methods of

instruction which are suitable to children in the primary grades are not productive of results when used with children in the intermediate grades. The meaning is that our methods of teaching reading in the intermediate grades need to be carefully revised. The child no longer is satisfied—indeed, he often is quite emphatic in his refusal—to continue the slow and tedious and very formal drills in oral reading. Attending to form and expression for the sake of the teacher's commendation no longer is a chief interest with him. His interest in reading now becomes an individual one. His interest is in content; he wants to secure meaning in the quickest way possible. His apparent inferiority in oral reading, such as was referred to in the above quotation, is in reality an indication of progress. His apparent inferiority is due to the fact that in his effort to secure meaning he is willing to slight the pronunciation of words and phrases. His ability to recognize words is now greater than his ability to articulate. His eyes now run along the words and phrases so rapidly that his vocal apparatus is hopelessly left behind. It is clear that now is the time when the school should shift the emphasis from instruction in oral reading to instruction in silent reading. Reading for meaning now can be emphasized without difficulty because that is the only kind of reading which has an appeal to children of the intermediate grades.

Conclusions. We are now in a position to answer with some degree of assurance the question raised in our minds through the reading of the first part of the present chapter; namely, (1) Shall oral reading be entirely neglected? (2) What is the relation of instruction in oral reading to instruction in silent reading? (3) When shall the school begin to shift the emphasis from oral to silent reading? Our answers are as follows:

1. Oral reading is the natural form of primary reading.

2. Oral reading in the primary grades contributes to the development of the pupil's power in the recognition of words; in the upper grades oral reading tends to retard such development.

3. The beginning of the intermediate grades is the point where the shift in emphasis from oral to silent reading needs to be made. Fig. 16 makes it clear that at this point the rate of recognizing words begins to exceed the rate of pronouncing words. Our recent discussion has emphasized the fact that at the age of nine the normal child is at the beginning of a period of development radically different from the preceding period.

It should be noted that the foregoing conclusions insist upon a *shift in emphasis* from oral to silent reading, not upon a radical change from oral-reading instruction to silent-reading instruction. The conclusions only state that oral reading shall receive the emphasis before the fourth grade and silent reading after the fourth grade. Later discussions will make clear that silent-reading instruction has a place in the work of the primary grades (Chapters XI–XIII) and that oral-reading instruction has a place in the work of the intermediate grades (Chapter XIV).

It should be noted also that the point where the shift in emphasis should be made may vary with different schools and with different modes of instruction. Let us return to an examination of Fig. 16 and assume that in a given school the quality of instruction in recognizing the meanings of words and in silent reading for meaning is much better than the ordinary, and that as a consequence the rate of recognizing words is higher in every grade than is represented by the broken line. It can be seen that the line that would represent rate of recognizing words for such a school would cut the line which represents rate of articulation before the fourth grade is reached, and thus would indicate the necessity for a shift in emphasis from oral to silent reading before the fourth grade. Thus in every school where the quality of the instruction in reading for meaning is improved we may expect that the pupils will be prepared to devote the larger portion of their time to silent reading earlier than will the pupils in the average school.

The school should teach silent reading. Notwithstanding the fact that the importance of training pupils to read so that they will be able to secure meaning rapidly is almost universally recognized, the schools persist in the attempt to emphasize oral reading to the neglect of silent reading. The reason may be attributed, at least in part, to superiority in methods of instruction in the former type of reading over methods in the latter type. The lack of systematic methods of instruction in effective rapid silent reading is one of the most unfortunate shortcomings of our schools. For centuries pupils have been taught to read orally, because oral reading best met the needs of a former day, and as a consequence oral-reading methods have been carefully worked out and systematized. The situation with respect to silent reading has been exactly the reverse. In former times the demands for training in silent reading were very few; the schools paid little if any attention to instruction in silent reading. Whatever ability pupils were able to secure in silent reading they secured incidentally and largely by accident. As a consequence very few teachers have ever paid the slightest attention to the task of devising ways and means of teaching silent reading. The reason is clear why oral reading continues to receive the emphasis to the neglect of silent reading. Teachers as a rule choose to make use of systematic and well-organized methods and devices of instruction in preference to those which are unsystematic and poorly organized.

That the schools should teach silent reading we hardly need to repeat here. The burden of the discussion of this book bears on this point. Whatever demands of repetition that may yet exist may be met by a restatement of the necessity of a change in emphasis in reading instruction at the beginning of the intermediate grades. The following paragraphs are pertinent to this point, and at the same time they provide for us an excellent summary statement:

> Why have the schools failed to recognize these facts? The answer is doubtless twofold. First, there is a natural tendency to continue

methods which have proved successful in the lower grades even after the original justification for such methods has disappeared. Secondly, there are enough poor readers in every school to cover up the evil effects of slow methods in the upper grades. The conscientious teacher supplied with a reading book and a period in the program carries on with painful punctiliousness the well-known reading farce in the vain hope that the effects of unsuccessful teaching will be overcome by a liberal application of the same methods that produced the difficulty.

Teachers ought to recognize with clearness the fact that in the upper grades silent reading is the really useful type of reading. They ought to understand that pupils outgrow oral reading just as infants outgrow creeping when they learn to stand up and walk.

Even where the reader is deficient but has arrived in the upper grades there are methods other than those of phonic analysis and oral drill which will help him to master his difficulties. [There are methods of word analysis] which avoid the mistake of merely repeating in the upper grades the primary methods which are no longer appropriate.

Many schools have not recognized the demand for a new type of instruction in reading from the fourth grade on and as a result have seriously hindered the development of pupils. At this period the power of recognizing printed words has developed to the point where the pupil tends to throw off the limiting influences of oral language. In practical experience this is exhibited by the fact that the fourth-grade child reads with interest and avidity. Sometimes his eyes run along the line so rapidly that his vocal apparatus is hopelessly left behind. Fourth-grade teachers sometimes call attention to the fact that pupils who were very good oral readers in the third grade begin to stumble in the fourth grade. This stumbling is due to the failure of articulation to keep up with recognition.

It is at this point that a very radical change in attitude ought to be assumed by the school. Even before this stumbling begins the school ought to see the propriety of giving training in silent reading. In the fourth grade the pupil should be encouraged to make this the chief form of his reading. Later, if it is deemed wise, the school may come back to training in oral reading for the sake of appreciation and public exhibition. It is a mistake to jeopardize the child's independent, fluent silent reading in the fourth grade by insisting during this period on the usual oral exercises.[1]

[1] C. H. Judd, Reading: its Nature and Development, pp. 146, 151.

Summary. The purpose of the present chapter has been to point out the relationship between instruction in oral reading and instruction in silent reading. The characteristic differences between these two types of reading were first considered. Our examination of the two processes led to the conclusion that training in the former type does not guarantee progress in the latter. Considering next the three important points of the chapter—namely, (1) that oral reading is the natural form of primary reading, (2) that the fourth grade marks the point where the power to recognize words begins to exceed the power to pronounce words, and (3) that the age of nine is a turning point in the life of the child—we reached the conclusion that the schools should emphasize oral reading in the primary grades and silent reading in the intermediate grades.

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PART III. THE COURSE OF STUDY IN READING

CHAPTER X

THE DEVELOPMENT OF MODERN METHODS IN READING

The history of reading and of reading methods is a chapter in the history of civilization. So long as man was unable to learn of and from the experience of others, civilization was static—it did not progress. As soon as it became possible for man to participate vicariously in the experience of others, civilization began to move forward in ever-lengthening strides. It is impossible to conceive of our present civilization—indeed, of any former and ancient civilization—as being the result of the work and learning and experience of one generation. It is rather the result of the experience of the present generation combined with and superimposed upon the experience of every generation which has preceded. When, as in prehistoric days, the individual trod the pathway of life guided wholly by his own experience, he attained the stature of manhood and declined into old age, having reached no higher levels of intellectual and moral development than those reached by his fathers. When, as in the present day, the individual has opened before him the combined experiences of all the ages, and has given to him the opportunity of participating vicariously therein and of learning thereby, he is permitted to progress into a civilized state not merely as far as his fathers before him have gone but, by adding thereto the results of his own experience, to go one step farther. Carried on the vehicle of his own imagination one is

today permitted to enter by way of the gateway of *reading* into the experiences not only of all that is present but also of all that is past. The history of civilization is indeed the history of the development of the language arts.

The purpose of the present chapter defined. It would be of interest, and perhaps highly instructive, if we were to trace the development of the reading art from the day when prehistoric man scratched on stone a crude pictograph of his prowess in the chase or as a warrior. But that would be going too far afield from the more practical purposes of this book. It is important for us here to select from the history of reading and of reading methods only those phases which have a bearing on our central theme; namely, *principles* and *methods*. The present chapter is one of transition from a discussion of general principles and of our present-day conception of the reading process to a discussion of specific problems and methods of the classroom. The aim to be chosen is unmistakable. Our theme, accordingly, shall be to point out the intimate relationship which has always existed between the methods of teaching reading and the conceptions people have had of the nature of the reading process.

The early conception made no distinction between writing and reading. The art of writing had its inception in the effort of prehistoric man to communicate with his fellows by means of written symbols. The symbols first used were crude pictures which represented the objects which were most prominent and most significant in the deeds and ideas to be communicated. Gradually the pictures used became conventionalized to the extent that a given picture or group of pictures always conveyed the same meaning. Later this crude portraiture was modified so that an idea could be expressed by means of a single symbol. Picture-writing in its final stage of development consisted in the combination of pictographs and ideographs, the former representing objects by conventionalized picture signs, the latter representing ideas by conventionalized idea signs.

A thorough understanding of the meaning of the conventionalized symbols was necessary in order to be able to write. Reading demanded the same thorough understanding. In this respect there was no difference between the two processes. In either case the proper relation between symbol and idea had to be made. Writing consisted in choosing the proper symbols to express the idea; reading consisted in determining what idea fitted the symbols which were being translated. Reading was thus the opposite of writing. Ability in the one art presupposed a corresponding ability in the other. Whatever instruction, therefore, was given to the youth of an ancient day in picture-writing served just as well and was just as useful to him as instruction in reading. Thus we see that from the very dawn of civilization the idea that writing and reading were kindred arts fastened itself upon the race.

The influence of the invention of an alphabet. Gradually the art of representing ideas by conventionalized symbols was developed to the point where it was recognized that symbols could be selected and agreed upon to stand for sounds as well as for ideas. It came about through the practice which had grown up of using the same sign to represent two words of like sound but having different meanings. Thus, the symbol for *sun* could just as well be used to represent *son*.

By degrees, also, it was discovered that the different words of the language were expressed by various combinations of a few elementary sounds. The two discoveries, put together, constituted a momentous triumph in the efforts of men to perfect a written language. Instead of being compelled to familiarize himself with thousands of symbols, each representing a different idea or word, and to tax his imagination to the limit to invent a new symbol for each new word, the writer now was able to represent any word in his language by first analyzing the word into its constituent sounds and then representing each sound by the use of the proper symbol chosen from a list of twenty-six. "Could the prephonetic scribe of Egypt have had a

vision of such a system and its possibilities, he would have deemed it the miracle of miracles. His thousands of characters and his fertility of resource in their use were taxed to their utmost to produce results that were far inferior to the work of these simple letter-forms."[1]

The significance of the invention of an alphabet, so far as we are concerned here, is that it marked an advanced stage in the art of *writing*, and that its very importance to the writing art tended to implant in the mind of the race a conception of reading that has proved to be a means of stagnation rather than of development to the latter art.

Word analysis was demanded by writing. We have seen how the invention of an alphabet came about in part by the discovery that a word was made up of a combination of certain elementary sounds. To be able to represent the elementary sounds by the correct symbols arranged in proper order constituted all that was necessary in order to be able to write. The ability to analyze words into their sound elements was the criterion. He who had this ability became the scribe, and thus to qualify became a badge of distinction. The scrivener occupied a place in society set apart from the common herd; he was the possessor of a peculiar ability which for a long time was looked upon by the ordinary man with awe and reverence.

Not only was there an undue amount of importance ascribed to word analysis by those who did not possess the ability, but even those who were adepts in the art of writing considered the ability to analyze words into their constituent sounds as the all-important function of their art. The very importance of the invention of an alphabet and the superiority of its use over other systems of writing tended to emphasize and hold attention upon the means by which it was discovered. The invention came about by word analysis; word analysis was considered, therefore, as the ability of supreme importance.

[1] From Huey's "Psychology and Pedagogy of Reading," p. 204. Used by permission of The Macmillan Company, publisher.

Word-building was considered the requirement for reading. The old conception that reading was a process just the opposite of writing continued to wield its influence after the invention of an alphabet. The conception continued to prevail that the reader must traverse the same road as the writer but in an opposite direction. The ability to record ideas, to inscribe them in permanent form, to write, was held as the ability of primary importance. Quite naturally any instruction that may have been given in reading had its source in the prevailing conception of writing. Now it was that writing meant the breaking up of words into their A B C's; reading, being the opposite process, meant the reassembling into words of the A B C's that had been written down. Writing meant the dividing of words into letters and inscribing the letters on paper; reading meant the sensing of the letters as they appeared on the page and building them into the proper words.

We have seen in a previous chapter (Chapter V) how the psychologists of more recent times worked out the underlying principle of the alphabet method. With reference to the very plausible discussions of Pestalozzi of his "from simple to complex" theory of method we need have no concern here. It is enough for us to note that Pestalozzi added nothing new to the prevailing conception of the process; that his theories had their basis in the time-worn conception that reading consisted in building words out of their essential elements.

It is difficult for us in this later day to conceive of the reading process in other than the modern sense. However, unless we do examine into the former conception of reading and comprehend how firmly implanted it came to be in the mind of the race, we will be unable to understand how it came about that such a wasteful method of teaching reading as the alphabet method was looked upon by teachers for so long a time with such blind devotion.

The influence of the former conception on methods. From the earliest times of which the history of reading gives us a

record down to the middle of the nineteenth century the word-building conception of the reading process has ruled over school methods with almost undisputed sway. The A B C method was general among the Greeks and Romans. It was the method of the cloister schools, and the new impetus given to the study of reading by the Reformation produced in it no material change. It characterized the teaching in the schools of the colonies, and even today its effects are still to be observed in not a few of our backward schools.

From time to time the alphabet method has been variously modified, but with each modification no change in principle has resulted. One writer (Quintilian, A. D. 68) advised the use of blocks and tablets containing the letters to be learned; another (Basedow, 1723–1790) recommended the "gingerbread method," which has been described as follows:

> To Master John the English maid
> A horn book gives of gingerbread,
> And that the child may learn the better,
> As he can name he eats the letter.
> Proceeding thus with vast delight
> He spells and gnaws from left to right.[1]

Every school was to be supplied with a bakeshop for the purpose of keeping the children of the reading classes well supplied with letters of gingerbread. The "New England Primer," 1690, sought to encourage the learning of the letters by means of rimes; for example:

> A In Adam's fall
> We sinned all.
>
> . . . . .
>
> Z Zaccheus he
> Did climb the Tree
> Our Lord to see.

[1] Quoted by Huey, The Psychology and Pedagogy of Reading, p. 241. The Macmillan Company, New York, 1915.

A century later Webster's "Spelling Book," 1783, undertook to assist the development of the reading process by emphasizing the spelling of long lists of words, combining in one volume the alphabet, speller, primer, and reader. Innovations came and went, each doing no more than to clothe the old-established method in a garment which was new.

The A B C method continued in our schools so long as the prevailing conception of the process gave it sanction. As soon as a new conception arose in the minds of the people generally, a new method was developed to take the place of the old. Let us turn our attention to the manner by which modern methods of teaching reading have developed.

The development of modern methods of teaching reading has come as a result of two conditions; namely, (1) dissatisfaction with the very inadequate results of the A B C method, and (2) the development of a new conception of the reading process.

The A B C method produced meager results. Learning to read by the A B C method consumed an enormous amount of time. After years of school instruction, with daily drills in the letters and in putting them together into syllables and into words, children learned to read only in a fashion which was mechanical in the extreme. If we are to believe the critics of the wasteful methods of a former day, we cannot but see that the ability to get meaning was hardly considered in the aims and outcomes of instruction. Horace Mann, in his second annual report to the Board of Education of Massachusetts in 1838, writes as follows:

> Entertaining views of the importance of this subject, of which the above is only the feeblest expression, I have devoted especial pains to learn, with some degree of numerical accuracy, how far the reading, in our schools, is an exercise of the mind in thinking and feeling, and how far it is a barren action of the organs of speech upon the atmosphere. My information is derived, principally, from the written statements of the school committees of the respective towns,—gentlemen who are certainly exempt from all temptation to disparage the schools they superintend. The result is, that more than eleven-twelfths of all

the children in the reading-classes, in our schools, do not understand the meaning of the words they read; that they do not master the sense of the reading-lessons, and that the ideas and feelings intended by the author to be conveyed to, and excited in, the reader's mind, still rest in the author's intention, never having yet reached the place of their destination. And by this it is not meant that the scholars do not obtain such a full comprehension of the subject of the reading-lessons, in its various relations and bearings, as a scientific or erudite reader would do, but that they do not acquire a reasonable and practicable understanding of them. It would hardly seem that the combined efforts of all persons engaged could have accomplished more in defeating the true objects of reading.

How the cause of this deficiency is to be apportioned among the legal supervisors of the schools, parents, teachers or authors of school-books, it is impossible to say; but surely it is an evil, gratuitous, widely prevalent, and threatening the most alarming consequences. But it is not a remediless one. There is intelligence enough in this community to search out the cause, and wisdom enough to find and apply a remedy.[1]

The alphabet method is blamed for the very inadequate results in reading. We read:

> . . . The general practice is founded upon the notion that the learning of letters facilitates the correct combination of them into words. Hence children are drilled on the alphabet until they pronounce the name of each letter at sight. And yet, when we combine letters into words, we forthwith discard the sounds which belonged to them as letters. The child is taught to sound the letter *a*, until he becomes so familiar with it, that the sound is uttered as soon as the character is seen. But the first time this letter is found, even in the most familiar words, as in *father*, *papa*, *mamma*, *apple*, *peach*, *walnut*, *hat*, *cap*, *bat*, *rat*, *slap*, *pan*, &c., &c.,—it no longer has the sound he was taught to give it, but one entirely different. And so of the other vowels. In words, they all seem in masquerade. Where is the alphabetic sound of *o* in the words *word*, *dove*, *plough*, *enough*, *other*, and in innumerable others? Any person may verify this by taking any succession of words, at random, in any English book. The consequence is, that whenever the

[1] Horace Mann, "Second Annual Report of the Secretary of the Board of Education, 1838," in "Life and Works of Horace Mann," Vol. II, pp. 531–532. Lothrop, Lee & Shepard Co., 1891.

child meets his old friends in new company, like rogues, they have all changed their names. Thus the knowledge of the sounds of letters in the alphabet becomes an obstacle to the right pronunciation of words; and the more perfect the knowledge, the greater the obstacle. The reward of the child, for having thoroughly mastered his letters, is to have his knowledge of them cut up in detail, by a regular series of contradictions, just as fast as he brings it forward. How different, for instance, is the sound of the word *is*, from the two alphabetic sounds, *i* and *s*;—of the word *we*, from the two sounds, *w* and *e*;—of the word *two*, from the three sounds, *t*, *w*, and *o*. We teach an honest child to sound the letters, *e*, *y*, *e*, singly, until he utters them at sight, and then, with a grave face, we ask him what *e*, *y*, *e*, spells; and if he does not give the long sound of *i*, he is lucky if he escapes a rebuke or a frown. Nothing can more clearly prove the delightful confidence and trustfulness of a child's nature, than his not boldly charging us, under such circumstances, with imposition and fraud.[1]

The influence of the prevailing conception of the reading process was not overlooked by Mr. Mann. Failure to understand the "true objects of reading" was mentioned as a contributing cause of unintelligent reading:

. . . Another cause consists in a most pernicious error on the part of parents in regard to the true objects of reading. Many teachers have assured me that they are perfectly aware that the time spent in reading is mainly lost; but that the usages of the school and the demands of the district prohibit them—perhaps under penalty of dismission—from adopting a better mode. It is said, that the first and only inquiry made by parents of their children is, "how many times and how much have you read?" not "what have you read about?" A question like the last presupposes some judgment and some ability to follow it up with further inquiries; but anybody can put the first, for it is an easy problem which solves the ratio of mental progress by the number of pages mechanically gone over. The children's minds are not looked into, to see what new operations they can accurately perform; but the inquiry relates only to the amount of labor done by the organs of speech;—as though so many turns of the bodily machine would yield, perforce, a

[1] Horace Mann, "Second Annual Report of the Secretary of the Board of Education, 1838," in "Life and Works of Horace Mann," Vol. II, pp. 521–522. Lothrop, Lee & Shepard Co., 1891.

corresponding amount of mental product. It is characteristic of the learned professions, that the person employed directs the employer; and it is earnestly to be hoped, that teachers will soon deservedly win so much of the confidence of the community, that they will no longer feel constrained to practice methods they know to be valueless, in order to harmonize with opinions they know to be pernicious.[1]

The new conception of reading developed gradually. Teaching reading by a method different from the alphabet method was suggested by Comenius in the "Orbis Pictus" as early as 1657. In his preface Comenius says:

> The very looking upon the thing pictured suggesting the name of the thing will tell the child how the title of the picture is to be read. And thus the whole book being gone over by the bare titles of the pictures, reading cannot but be learned—and indeed, too, without using any ordinary tedious spelling—that most troublesome torture of wits.[2]

Other advocates of a method which was different are referred to briefly by Huey as follows:

> There were glimpses of better things in the phonetic system of the Jansenists, and in the primer of Gedike, in 1791, which advised teaching words before letters, as the natural order is from the whole to the parts; but none of these had appreciable effect in changing current A B C practice until Jacotot (1770–1840) advocated the word-method as a part of his system, and set forth clearly the arguments for it.
>
> In America, Worcester's Primer, in 1828, seems to have been the first beginners' book to recognize any other than the alphabet method. The author says in his preface: "It is not, perhaps, very important that a child should know the letters before it begins to read. It may learn first to read words by seeing them, hearing them pronounced, and having their meanings illustrated; and afterward it may learn to analyze them or name the letters of which they are composed." Bumstead, in the first book of his series of readers, published in 1840–1843, stood stoutly for the word-method, and urged that a scholar be never required to spell a word "before he has so far learned it as to be able to read it."[3]

[1] Ibid. p. 509.

[2] From Huey's "Psychology and Pedagogy of Reading," p. 258. Used by permission of The Macmillan Company, publisher.

[3] Ibid. pp. 258–259. Used by permission of The Macmillan Company, publisher.

A final quotation from Horace Mann's second report will serve to show how great a reform in theory had been accomplished by the end of the first half of the nineteenth century:

> During the first year of a child's life, he perceives, thinks, and acquires something of a store of ideas, without any reference to word or letters. After this, the wonderful faculty of language begins to develop itself. Children then utter words,—the names of objects around them, —as whole sounds, and without any conception of the letters of which those words are composed. In speaking the word "apple," for instance, young children think no more of the Roman letters which spell it, than, in eating the fruit, they think of the chemical ingredients—the oxygen, hydrogen, and carbon—which compose it. Hence, presenting them with the alphabet, is giving them what they never saw, heard, or thought of before. It is as new as algebra, and, to the eye, not very unlike it. But printed names of known things are the signs of sounds which their ears have been accustomed to hear, and their organs of speech to utter, and which may excite agreeable feelings and associations, by reminding them of the objects named. When put to learning the letters of the alphabet first, the child has no acquaintance with them, either with the eye, the ear, the tongue, or the mind; but if put to learning familiar words first, he already knows them by the ear, the tongue, and the mind, while his eye only is unacquainted with them. He is thus introduced to a stranger through the medium of old acquaintances. It can hardly be doubted, therefore, that a child would learn to name any twenty-six familiar words much sooner than the twenty-six unknown, unheard, and unthought-of letters of the alphabet.[1]

Since the days of Horace Mann not a few modifications have been made in the prevailing conception of the underlying principles which should govern the teaching of reading. The first of these modifications followed close upon the realization that a strictly word method was inadequate if the child is to arrive at an independent mastery of the words he meets in his reading. Other modifications relate themselves to the necessity of being able to recognize in meaningful phrase-units and sentence-

[1] Horace Mann, "Second Annual Report of the Secretary of the Board of Education, 1838," in "Life and Works of Horace Mann," Vol. II, pp. 520–521. Lothrop, Lee & Shepard Co., 1891.

units, to the importance of instruction in silent reading, and to the demand for content in the reading material.

Let us consider each in turn. We may do this by examining the various systems of school readers which have been published in recent years. These offer a very fruitful field for the study of reading methods and of the principles which underlie them. One reason is that methods of teaching reading in our schools are determined in large measure by the systems of readers in use. Another reason is that a system of readers is usually accompanied by a teachers' manual which outlines the particular method to be employed and states the principle which should govern each step of the process.

The word method proved to be incomplete. In Chapter VI we have noted the reasons why the word method by itself does not lead to an independent mastery of words. These reasons very quickly impressed themselves on the minds of those who first substituted the word method for the A B C method. It was found that the word method was an excellent substitute so long as the child was learning the printed forms of short, familiar words, but that it fell short of being adequate for the teaching of words which were long and relatively unfamiliar. The following quotations describe the method of phonic analysis which was devised to supplement the strictly word method:

> The difficulty the child experiences in determining a new word, is, in general, directly proportional to the number of parts he has to recognize in it. By the use, then, of compound phonograms, which, being taught as wholes, are no harder to recognize than simple ones, hundreds of long and hard words are practically transformed into short and easy ones. Thus, the word *lightning*, which the child learning by this method reads, *l ight n ing*, he finds no more difficult than the short word *left*, in which also he has to recognize and put together four separate sounds.[1]
>
> A system of phonetics is developed as a means of word-getting. This begins in the fourth week with oral ear-training exercises, developing in the eighth week into the analysis of simple two-letter and three-

[1] E. G. Ward, The Rational Method in Reading: Manual of Instruction, p. 2. Silver, Burdett and Company, 1907.

letter words, each containing a short vowel. The method is analytic, taking words that are familiar to the child, analyzing them into their elements, and recombining the elements into new words. The initial blend is used as the foundation of word-building, for the reason that in pronouncing a word we naturally and inevitably join the initial consonant with the vowel which follows it, and if we pause it is between the vowel and the succeeding consonant. This is the natural division.[1]

The method of teaching phonetics by the use of the *initial blend*, or *natural blend*, has been fully and successfully developed by Superintendent James H. Fassett in the Beacon Readers (Ginn and Company). The method set forth in this Manual, however, differs from Mr. Fassett's in that it first analyzes known words into their phonetic elements and then recombines these elements into new words, while the Beacon system begins with a study of the phonetic elements. The Beacon system is *synthetic*; that is, it builds up words by putting together the elementary sounds. The present system is *analytic*; that is, it first analyzes or takes apart known words in order to discover the phonetic elements, and afterwards builds new words from the elements so obtained.[2]

Sentences, not words, are the units of thought. It has come to be recognized that a child can become proficient in the recognition of words and yet not develop into a good reader, because he may read a word at a time, neglecting the while to put the words together into meaningful phrases and sentences. Thus we have the justification in part of the sentence method which was worked out by Farnham in 1870 and which was widely adopted between 1885 and 1890. The principles which govern the method are stated by Huey as follows:

> . . . The method urges that the sentence, and not the word or letter, is the true unit in language, expressing whole thoughts which are the units in thinking. If the sentence is the natural unit in language, it is the natural unit in reading as in speaking. As the word is not a mere sum of letter-sounds and letter-names, neither is the sentence merely

[1] Field and Farmer, A Teachers' Manual (to accompany the Field Readers), p. 7. Ginn and Company, Boston, 1922.

[2] W. T. Field, An Outline for the Elementary Teaching of English Phonetics, p. 16. Ginn and Company, Boston, 1922.

a sequence of word-sounds and word-names. It has a distinctive total sound and appearance and meaning indicated plainly in the way it is spoken when its meaning is felt. It is read and spoken naturally only when this total meaning is prominent in the consciousness of the reader or the speaker. Hence the attention to letters, elementary sounds, words, and word-meanings—cultivated by the alphabet, phonic, and word methods—must be displaced by attention to sentence wholes and sentence meanings.[1]

Attention to the sentence still remains an important phase of widely used methods, as indicated in the following quotation:

> The only criterion acceptable today for the soundness of any method of teaching reading to a beginner is this: Does the method from the start train in power to grasp not a word but a related set of words, a sentence, an entire situation? Does the method proceed from wholes to parts and back again to clearer wholes? Does it advance from a unit of thought, a sentence, to the words as words without loss of the relationship among the words? Is a flow of association maintained among the words as parts of the original whole from which they have been disentangled, or as parts of a different whole created anew out of the same words set in other relations?
>
> It is this relation idea that makes for true reading, as opposed to mere word calling with little or no consciousness of a higher unity. Does the method ingrain this sentence habit first, and then proceed, and not till then, to treat a word as a whole, analyze out of it the constituent parts, and synthesize these parts back again into the original word or new words?[2]

Silent reading should be taught. Enough has been said in our previous discussions in favor of devoting greater attention to instruction in silent reading to make it unnecessary to review the arguments here. It is sufficient for us here to note that the idea is being gradually adopted and that as a consequence

[1] From Huey's "Psychology and Pedagogy of Reading," p. 273. Used by permission of The Macmillan Company, publisher.

[2] Burchill, Ettinger, and Shimer, The Progressive Road to Reading: Plan of Work, p. v. Silver, Burdett and Company, 1919.

methods are being modified. A recent manual treats of silent reading as being the most important phase of instruction:

> In our search for new roads to reading it is strange that we seldom think of the time that would be saved if pupils were trained to get the thought from a page at the first rapid, silent reading of it. If we can train a pupil so that at the first reading of a lesson he will do it intensively and grasp the thought expressed by the printed page, it will be unnecessary for him to read it again and again, repeating the printed text, word for word, until the thought is impressed on his mind.
>
> . . . . . .
>
> Silent reading is a necessity and any system that trains pupils to grasp the thought at sight is developing in the child an incalculable power for future education. In view of this fact it seems strange that silent reading has not been emphasized and that no method for training in it has been heretofore presented. When we consider that all our information from books is obtained through silent reading, and that oral reading is seldom employed for this purpose, we become convinced of the value of the former. If we reflect on the saving of time, we can readily perceive that *rapid* reading is also an essential.[1]

Along with silent reading rapid reading is coming to be considered as an important outcome of instruction:

> Reading is a process of thinking. Training in rapid reading means training children to read for meaning. Silent reading is most important in establishing a rapid rate. Impelled by interest in the story, led on by the teacher's question or suggestion, the pupil hastens to find the conditions of the next important event.
>
> . . . . . .
>
> About the time the pupil enters the fourth grade his silent-reading rate gains on his oral-reading rate, his eye hurries on ahead of his voice. From this time on more attention should be given to establishing a rapid rate of silent reading; less oral reading should be called for.[2]

[1] Teachers' Manual, The Method used in the New Barnes Readers, Primer and Book One, p. 1. A. S. Barnes and Company, 1916.

[2] Frances Jenkins, How to teach Reading. A Manual for Teachers using the Riverside Readers, p. 20. Houghton Mifflin Company, 1913.

Getting the meaning is a most important aim. One of the most potent factors in recent years in shifting the emphasis of instruction from the purely mechanical phase of reading to reading for meaning has been the demand for reading material which has content both interesting and familiar to children. Critics of the word method and sentence method, as originally devised, have based their criticisms in a very large measure on the fact that a thought basis is lacking in each. Not a few of our more recent systems of readers justify their publication on the grounds that they stimulate the child's interest in reading by means of meaningful reading material. The following quotations, selected at random, are sufficient to show the trend of the times.

The importance of utilizing the interest of children in their own familiar experiences and in stories is thus set forth:

> The primer work, covering the first sixteen to eighteen weeks, is a *continued story* about some of the well-known Mother Goose characters, with the old rimes interwoven. The advantage of this arrangement is that the children start their work with a set of characters that are somewhat familiar and intensely interesting to them; and the interest is sustained by following these old friends instead of meeting strangers in every new selection. . . .
>
> The method suggested in the Manual is primarily a thought method. Reading is but a means to an end, and that end is *thought-getting. Word-getting* is necessary as a first step, but unless there is thought behind it, it makes no appeal to children and hence loses its force. The plan suggested is to carry forward the two operations, word-getting and thought-getting, simultaneously, holding the pupil's interest and making the acquisition of words a pleasure because of the thought which they carry with them.[1]

The necessity of fostering the child's desire to read through interesting content is the special plea of another system:

> Primary reading, as is true of all reading, is for the purpose of promoting thought, and right reading habits are laid by first developing

[1] Young, Field, and Farmer, A Teachers' Manual to accompany the Young and Field Literary Readers, Book One, p. 2. Ginn and Company, Boston, 1917.

an interest in and love for reading. Reading is not, primarily, word study or word recognition. Even the simplest kind of reading means getting thought and feeling from written or printed characters. Oral reading is a still more complex process, involving, not only getting ideas, but all that goes to make oral expression of the thought and feeling. Children are led by desire and interest to get the thought, and the interest is sustained through their love for stories. The most important factor in teaching a child reading is to develop and foster his desire to read. The only means of ensuring these conditions is to provide reading matter that all children enjoy.[1]

Another system makes a plea for interesting content as a means of developing literary appreciation:

In the Merrill Readers the authors have provided a simple method of learning to read, combined with reading matter of high literary quality. The series aims to help the child to read easily and intelligently, and to give him reading matter that is of real interest and value to him.

The ultimate aim of all school reading is to develop in pupils an appreciation of literature. While the mastery of the mechanics of reading and the formation of right reading habits—which involve the ability to get the thought from the printed page and to vocalize it correctly—are important factors in the teaching of reading, they should never lead us to neglect the ultimate aim. To realize this aim it is essential that the reading material should be of high literary quality and should have genuine interest for the child.[2]

Summary. Methods of teaching reading have always paralleled the conception people have had of the nature of the reading process. In prehistoric times writing and reading developed as kindred arts, each being considered the opposite of the other. With the development of an alphabet this conception became more firmly fixed in the minds of men. Consequently, since writing was in the beginning necessarily so nearly a process of word analysis, reading, which was its opposite, was looked upon

[1] Free and Treadwell, Primary Manual for the Reading-Literature Readers, p. 5. Row, Peterson & Company, 1916.

[2] Dyer and Brady, Suggestions to Teachers to Accompany the Merrill Readers, p. 5. Charles E. Merrill Company, 1915.

merely as a process of word-building. As such, reading was taught, and, because the conception was such a powerful one in its influence, the A B C method of teaching has prevailed even down to recent years.

In recent years modern methods of teaching reading have developed. It has been shown that the development of modern methods followed the dissatisfaction with the inadequate results of the A B C method and paralleled the development of a new conception of the reading process. The new conception established a basis first of all for the strictly word method and later for a number of modifications which have followed. These modifications relate themselves to the demands (1) for phonic analysis as a supplement of the word method, (2) for ability to read in units larger than the word, (3) for instruction in silent reading, and (4) for content in the reading material.

READINGS

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SMITH, W. A. The Reading Process, chaps. ii and iii, on "The Evolution of Written Language." The Macmillan Company, New York, 1922.

WELLS, H. G. The Outline of History, chap. xvi, on "Writing." The Macmillan Company for the *Review of Reviews* Company, New York, 1921.

The teachers' manuals which accompany the various systems of reading in common use should be studied.

CHAPTER XI

READING IN THE FIRST GRADE

In the chapter just preceding it was pointed out that a very close relationship has always existed between methods of teaching reading and the ideas people have had of the nature of the reading process. The dependence of the specific methods and devices which may be used in the classroom upon basic principles was there emphasized. It is well, therefore, that we begin our study of first-grade reading with a review of the general principles which seem to relate themselves especially to the work of this grade.

General principles reviewed. The following general principles appear to be especially applicable:

1. The problem of reading in the first grade is to train pupils to attach meanings to printed symbols.

2. The meanings which pupils are to learn to attach to printed symbols have been derived by them from their reactions, feelings, and attitudes of mind toward the corresponding spoken words and the objects, actions, and situations for which they stand.

3. The appropriate reactions, feelings, and attitudes need to be perfectly familiar to the children and already a part of their experience. It is necessary, therefore, to begin the work of the first grade by using printed symbols of words with which the children are acquainted.

4. The content of the reading material used should not only be familiar but should also possess for the pupils a wealth of meaning. The more interesting the content the greater will be the desired results in interpretation.

5. Objects and pictures in the reading class should be used sparingly and with discretion. Care should be exercised that the pupils are employed with no means of distraction from the serious business of attaching meanings to printed symbols.

6. The context is influential in determining meaning. Words in context,—in phrases and in sentences,—rather than words in isolation, should be the basis of the reading lessons.

7. From the standpoint of recognition, words, not letters, provide the logical starting point in teaching to read. In the beginning no attention should be paid to the complex of letters or phonic elements in the word.

8. As the words of the reading lessons begin to be more difficult and less familiar to the children, a limited amount of training in phonics should be undertaken.

9. The analysis of words into letter-elements and sound-elements must not be ready-made for the children.

10. The fact that reading is a mechanical process must not be forgotten. The various mechanical phases of the process need to be drilled upon and practiced by the children until at least a beginning is made toward rendering them automatic. The drills should be well organized and should be conducted in separate periods in order to avoid the possibility of distracting attention from the interpretative phase of reading.

11. The training given the children should lead quickly to an instantaneous recognition of words and phrases.

Main points of the discussion. Two chapters are devoted to the discussion of reading in the first grade. The present chapter discusses the various steps which are involved in beginning the task of teaching children to read, and emphasizes the importance of reading as a thought process. In the following chapter reading as a mechanical process is emphasized; there the necessity of giving training in phonics and word analysis is considered together with a few of the special devices recommended for use in conducting such instruction and in perfecting the process of word and phrase recognition.

Three steps to be followed in teaching reading to beginners are discussed in the present chapter; namely, (1) developing the content, (2) establishing relations, and (3) reading the story from the book. Each step is considered in order.

The first lessons demand elaborate preparation. The chief requirement of an effective method of organizing the reading lessons of the first grade is to make sure that all lesson material has its basis in real, interesting content. If the problem of first-grade reading is to train pupils to attach meanings to printed symbols, it will be necessary for the teacher first of all to select and to present to the children lesson material which guarantees meaning in abundance. To this end it behooves the first-grade teacher to refrain from accepting bodily any ready-made word or sentence method of teaching children to read. The reason is that such a ready-made system is apt to attract the whole of the teacher's attention to its very excellent and very carefully worked out mechanical organization, and to persuade her to forget that, in spite of the extreme necessity of perfecting the mechanical phases of the reading process, the close relationship to the interpretative phase must always be preserved. It behooves the teacher rather to select from whatever ready-made systems may be at hand such a variety of methods and devices as best suits the purposes to be accomplished and to make sure that for each device and method selected the proper content basis can be provided. The *first step*, therefore, toward the solution of the general problem of first-grade reading is for the teacher to see that there is a sufficient and proper *development of the content* which is to form the basis of the beginning series of lessons. The pupils are to attach meanings to printed symbols; meanings to attach must be provided for the children before they are introduced to the printed symbols which correspond.

Content may be developed in several ways. No hard and fast rules applying to the manner of developing the content can be set down; indeed, it would be unwise to attempt a universal

application of any method of development. It remains for the individual teacher to devise the necessary ways and means, the effort being to make use of those methods which best fit the material to be presented. Telling the story to the children, conversation about various points brought out in the story, questions by the teacher and answers by the pupils, oral reproduction of the story, recitations, and dramatization,—all have their parts to play in the acquisition by the children of an abundance of meaning.

Children in the primary grades especially are constantly in danger of developing the idea that the reaction expected at the sight of printed symbols is the one of pronunciation; to say the words as they appear on the page a large number of children consider as satisfactory reading. Proper development of the content of the first reading lessons in a variety of ways is the only insurance against such a danger. In order to guard against the mistaken reaction of pronunciation it will be necessary for the teacher to employ every means possible to furnish the proper reactions of meaning. An abundance of meaning—of reactions, feelings, and attitudes of mind—is the requirement; in order to meet the requirement it is necessary that a variety of methods be employed. Let us examine a few typical methods.

Telling the story. We will assume that the primer which is soon to be used by the children as a first book in reading opens with the familiar Jack and Jill rime and other Mother Goose rimes and little Mother Goose stories in prose. The teacher begins the work by telling a story of Jack and Jill:

Once upon a time a little boy named Jack and a little girl named Jill lived with their father and mother in a little old house in a beautiful valley at the bottom of a high hill. Jack and Jill had lots of good times playing around their house and in the lanes and fields in the valley. They would play hide and seek around their house, and they would run races in the lanes, and they would gather flowers in the fields and make bouquets. They had such good times that the children who lived in the valley close by would come to play with them whenever they could.

The story goes on with the telling of how hard their father and mother had to work and how helpful Jack and Jill tried to be—how they would go up the hill every day to Mother Goose's well to get drinking-water for the family before they would think of asking to go out to play.

One morning Jack and Jill had been helping their mother in the garden,—pulling weeds and doing all sorts of things,—and the garden looked very neat indeed. So their mother said: "Now, Jack and Jill, you may go up to Mother Goose's well to get a pail of water. You may visit with Mother Goose a little while, and when you come back you may play all afternoon with the children who are coming to see you."

"O goody! goody!" said Jack and Jill. "Come on; let's hurry." With that they seized the pail and ran up the hill toward Mother Goose's, carrying it between them.

Pretty soon their father came in from his work and asked where the children were. The mother replied:

Jack and Jill
Went up the hill.

Jack's dog came running in, and in barking seemed to say, "Where are they?" Their mother understood, and answered:

Jack and Jill
Went up the hill.

Jill's kitty mewed the question, "Where did they go?" And the dog barked the answer:

Jack and Jill
Went up the hill.

Jack's chum came up from the village to play. He asked, "Where are Jack and Jill?" The father said:

Jack and Jill
Went up the hill.

Jill's friend came, too, and asked where they were, and their mother answered:

Jack and Jill
Went up the hill.

Then a lot of children came in and said: "We came to play with Jack and Jill. Where are they?" And the father replied:

Jack and Jill
Went up the hill.

Then they all ran out to see, and there they saw Jack and Jill up at Mother Goose's well on the hill, and they all ran and shouted:

Jack and Jill
Went up the hill.

Questions and Answers. After telling the story the teacher talks with the pupils about it, asking such questions as: Where did Jack and Jill go when they had finished work in the garden? What did the mother answer the father? What answer did Jack's dog bark at Jill's kitty? What did all the children shout as they ran? In answer to these questions the children are to give the rime. Often the answers should be in concert; often individual pupils should be called upon for an answer. Thus every pupil has a chance to take part.

Playing the Rime. Following the telling of the story and the discussion about it, the children play the rime. One child is Jack, one is Jill; one plays the part of the mother, and one that of the father, and so on. The teacher may be Mother Goose, and her desk could be the well on the hill. In the dramatization the rime is repeated over and over. Thus, when the story has been told, reproduced by questioning, and dramatized, most pupils know the rime perfectly. It should be kept fresh in their minds through repetition—repetition in which the rime is really used, not merely repeated.

Using the Chart. Pictures. In telling the story the teacher illustrates its various phases by appropriate pictures which she draws on the board and which appear in the *chart* which accompanies the primer. In reciting the story the children also use the drawing and the pictures for illustration.

It is to be noted that in the telling of the story the rime is constantly being repeated *in the exact way that it will appear* in following lessons. Frequent repetitions of the rime are provided for in the conversations about the story, in the dramatization of the story, and in the discussion of the pictures that illustrate the story.

When to proceed to the second step in teaching beginners. The lessons and exercises in content development should be continued for two or three days or for a week until the following results have been accomplished:

1. Until the first rime or sentence to be presented holds for every pupil a wealth of meaning; until an abundance of pleasurable reactions, feelings, and attitudes is aroused at each repetition of the rime or sentence.

2. Until every pupil has learned the rime or sentence *exactly as it will appear* in the lessons of the second step.

The pupils now have in mind a rime or sentence which has become quite familiar. They have at their disposal plenty of meaning reaction. It remains now for them to connect the meaning reactions to the appropriate printed symbols. *Establishing the relation between meaning and symbol* is, accordingly, the *second step* in the process of teaching reading to beginners.

The relation between meaning and symbol must be established. Using the blackboard is the most convenient and effective means at the disposal of the teacher in her efforts to train pupils to attach meanings to printed symbols. Specially prepared charts are also very useful, except that they permit no variation in the methods employed. What the teacher needs in taking this second step is a plan that is flexible, and one that is easily adjustable to the needs of the moment—one that makes use of both chart and board as the children's knowledge of the rime demands. In this step relations are to be established. This means that more than a casual connection between meaning and symbol is to be made. The connection must become firmly fixed once for all through a variety of drills and repetitions. The step is taken in the following manner:

The teacher writes on the blackboard the rime or sentence that the pupils have learned and for which they now have an abundance of meaning. She reads aloud as she writes. She may repeat the parts of the original story that lead to a repetition

of what is written, pointing at the same time to the board. By questions and discussions she impresses the fact that the "chalk has said" what the pupils have been learning. The children learn to recognize the written rime or sentence *as a whole*. Next, they learn to recognize certain *words* and *phrases* by their position in the sentence, by comparison with the same words in the sentence, and finally in isolation and without reference to position. The drills and repetitions are continued until the necessary relations have become firmly established.

The second step illustrated. An outline of the various parts, or "steps" to be taken, in the *second step* would be somewhat as follows: (1) recognition of the rime or sentence as a whole; (2) recognition of phrases and words by their position; (3) recognition of phrases and words by comparison; (4) independent recognition of phrases and words; and (5) drill in rearrangement.[1] The work may be done in the following way:

I. *Recognition of the Rime as a Whole*

The teacher retells the original story of Jack and Jill, writing the rime on the board, or pointing to it on the chart, each time she comes to it.

Jack and Jill
Went up the hill.

The children help out with the story, and as they come each time to the rime the teacher makes clear that the "chalk says it" or the "chart says it." As the children learn what is printed on the chart or written on the board, they read the rime as a whole, first from the board, then from the chart, from the board again, and so on. All the children read the rime.

II. *Recognition by Position*

Now the teacher underlines the phrases *Jack and Jill*, *up the hill*, and has them read. The children read them as the teacher points, and

[1] For this outline the author has drawn upon the discussions of Burchill, Ettinger, and Shimer in their "Progressive Road to Reading: Plan of Work," pp. 3–6. Silver, Burdett and Company, 1919.

point as the teacher calls the phrases. Words are next underlined and read the same way. The teacher underlines and points to words in order, and the children read them. The teacher calls the words, and one child after another points to as many as he can recognize by position.

III. *Recognition by Comparison*

With the rime still on the board the teacher writes first phrases, then words, beneath the same phrases and words in the rime, and lets the children name them by comparison. The drill goes on, as the teacher writes the phrases and words on different parts of the board and points to them as they appear on the chart, until the children can recognize any phrase or word without reference to the rime.

Jack and Jill went up the hill
Jack and Jill up the hill
and went up the hill
Jack Jill up hill

This phase of the work should be thorough. Children cannot be expected to recognize the phrases and words of the rime independently until the necessity for comparison is reduced through practice to a minimum. The slower children should be given extra help and more than the usual amount of practice so that they will learn to be sure of themselves from the beginning and not be inclined to resort to guesswork.

IV. *Independent Recognition*

When the teacher is sure that the children know the phrases and words without reference to their position, she should cover the rime on the chart and erase it from the board. The phrases and words should now be written in columns here and there on the board. Now the children should be required to recognize them instantly. Column after column is written in order to make new presentations of old words.

up the hill	up	went
Jack and Jill	hill	and
Went up	Jack	the
up the hill	went	hill
the hill	and	Jack
Went up up up	the	Jill
Jack and Jill	Jack	up etc.

Flash cards and the word and phrase lists of the chart should be used in a similar manner for drill in independent recognition.

V. *Drill in Rearrangement*

Sentences containing the now familiar words and phrases in rearrangement are presented and read by teacher and pupils. This adds variety to the drills and at the same time tends to keep before the children sentence unity and the relation between words. The children are ready for this drill only when they can recognize readily all the words of the rime. If it is attempted too soon, the children will be apt to read haltingly. The children can now recognize instantly seven words.

The first step again: telling the story; playing the story. The teacher again calls upon a pupil to tell the story of Jack and Jill. The teacher asks, "Why did Jack and Jill go up the hill?" and elicits the answer:

Jack and Jill
Went up the hill
To get a pail of water.

She weaves into the original story the same question by the father, the dog, the cat, and the children in turn, and gives or secures the answer in each case:

Jack and Jill
Went up the hill
To get a pail of water.

The children play the story as before, constantly repeating the longer rime.

The second step again. The five "steps" of the *second step* are taken again, this time with the longer rime, and the drills are continued until the children can recognize instantly the six additional words. And so the work goes on, the teacher providing abundant meaning reaction in the first step and conducting interesting effective drills in the second. Thus each day

the children review what they learned on preceding days, and each day they learn something new. Thus they come to master the entire Jack and Jill rime, other Mother Goose rimes, a Good-morning song, and others that are to be found in their primer.

The teacher should write, not print. The blackboard work should be written in script, not in print. The reasons are: (1) The pupils must learn both forms; they are best learned simultaneously; to delay the presentation of either form necessitates a repetition of the learning process that was carried on in connection with the other. (2) The printing of most teachers is quite as unlike the printed page as is their script.

When to proceed to the third step in teaching beginners. The lessons and exercises in the first and second steps should be continued until the purposes of these steps are fully accomplished, that is to say, until the relation between meaning and symbol has been fully established and until the symbols—the words and phrases—have become so familiar that they may be recognized instantaneously. The pupil is now ready to undertake the *third step*, which is *reading the story* directly from the primer or reading book.

The third step is a necessary one. In the taking of the first and second steps, as described above, the children have not actually read, but have received considerable preparation for actual reading. They have acquired considerable meaning which relates to the story in their primer, and they have learned to attach the appropriate meanings to a small stock of printed (and written) symbols and to recognize instantaneously whole sentences, whole phrases, and words as wholes. But during the taking of the first and second steps they have not been engaged, except incidentally, at any time in reading one sentence following another for the meaning they contain. Now since later reading is for the purpose of *extracting* meanings from printed symbols, here, in the third step, an opportunity should be offered to begin such a process. Reading for meaning is the dis-

tinctly pleasurable, profitable, and important phase of the reading process and the end toward which all instruction should lead.

The third step in instruction is a necessary and an important one, and their previous instruction has made the children ready to take it. As a result of having taken the first and second steps, the children are able to *extract* from the story of the primer the meaning which they have been engaged in *attaching* to the symbols which compose it. Now, immediately following the period of concentrated attention to meaning, is the time to give what practice is possible in reading for meaning. Such practice should continue from story to story to the extent of the children's ability to indulge in it.

The third step should not be prolonged. The very importance of the third step and the very evident pleasure manifested by the children in their reading of the first stories of their primer very frequently induce the teacher to prolong this step with a given story to the point of monotony. When the pupils have read the meaning out of their selection, they should be permitted to pass on to the next one, where the same steps are undertaken and the same processes are performed as before. Continually to repeat the reading of a story in the primer will cause the pupils to tire of the performance, and it is apt to lead them to believe that the reaction of pronunciation is the only one desired by the teacher. If the work of the first and second steps has been thorough, a single reading of the selection at hand is frequently quite sufficient to enable each child to extract the maximum of meaning.

The same causes—the importance of the step and the pleasure of the children in undertaking it—also lead the teacher to slight the work of content development and of establishing relations, and to undertake the reading of a story before the children are ready to read. It is obvious without further discussion that meanings cannot be *extracted* from printed symbols before the two have been *attached*; that the children must

be prepared for their reading for meaning—otherwise their reading is a farce.

What the three steps accomplish. A restatement. 1. In the *first* step the content of the selection of the primer or reading book is developed.

2. In the *second* step the relations are made between meaning and symbol. Drill is continued until instantaneous recognition results.

3. In the *third* step the pupils read the selection for which preparation was made in steps one and two.

Steps one and two are important only as preparatory steps. The relation between the three steps can be seen. Steps one and two are important only as they prepare for step three; step three is the all-important one, because in it practice is given in reading for meaning. It is obvious that in the very beginning of the first year's work most of the time needs to be devoted to steps one and two of preparation; but that as time goes on, and as the pupils learn to attach meanings to an ever-increasing stock of printed symbols, larger and larger proportions of time can be devoted to reading for meaning and smaller and smaller amounts are needed for preparation.

With proper training the point is very quickly reached where little or no content development of the new story is needed, and where the exercises in establishing relations need not be quite so elaborate as in the beginning. Very many stories are to be found in the primers and first readers whose meaning is quite clear and which contain no more than one or two new words. With such stories elaborate preparation exercises are not needed. The pupils may be permitted to pass almost directly to the third step—that of reading for meaning. The point to be kept in mind by the teacher is that in the beginning quite elaborate and very carefully organized preparatory steps are to be undertaken with all the stories read, and that such preparation is to continue in connection with later stories only to the extent that may be necessary, and not beyond. As much practice as can be

provided should be given in reading for meaning. Such practice is necessary because of certain mechanical difficulties which are peculiar to the third step.

Pupils have difficulty in reading connectedly. However much preparation pupils may have had in the steps of content development and of establishing relations, they are not able when they begin to read to get the meaning from their story in any connected form. The pupils may get the meaning from the sentences one at a time, but their reading stops short of combining the thoughts into a larger whole. Single sentences may be read with good expression, and the children may give evidence in other ways that they grasp the thought of each sentence; but when they undertake to read a sentence whose meaning depends on the thought of preceding sentences, they exhibit every evidence of failure to extract the meaning.

The reason such failure exists is clear. It is that no training in reading sentences connectedly is given in the preparatory steps. In the establishment of relations between meaning and symbol the very longest unit of thought undertaken is the single sentence. Even this unit is too unwieldy for thorough training in attaching meanings to printed symbols, and the major part of the practice has to be given to word and phrase recognition. So the pupil comes to the third step with no training in handling thought-units larger than the single sentence.

The handling of thought-units larger than the sentence must be made a special feature of the pupil's training if he is eventually to acquire a mastery of such a process. Such training is not provided in the preparatory steps of content development and of establishing relations; it comes only with large amounts of practice in reading for meaning not only single sentences but whole paragraphs and entire stories. The difficulty in reading connectedly is a mechanical one; it requires time and plenty of practice for the pupils to become so familiar with the printed page that they can gather the thought as easily through that medium as they do through the medium of oral speech. The

problem of giving the necessary amount and proper kind of training in order to overcome this difficulty is an important one for the teacher to consider at this point in the training. Let us examine briefly the suggestions that are pertinent to the task of overcoming the difficulties encountered in the third step.

1. **The children should read selections which are easy and familiar.** The difficulty of reading connectedly is in the main the mechanical one of carrying on the process of thinking necessary to the interpretation of the selection being read simultaneously with the process of word and phrase recognition. The task is so difficult in the beginning as to require a rest period—a breaking off of the reading process—at the end of every sentence. The purpose of instruction is, necessarily, to eliminate such rest periods at the earliest possible moment. To this end the children should be given the opportunity to read selections in which the mechanical difficulties have been reduced to a minimum. Interesting selections which have already been studied may be returned to frequently for sight reading. Simple selections chosen from supplementary readers involving familiar words furnish excellent material for this purpose. A blackboard revision of the story by the pupils in which all phases of difficulty have been skillfully eliminated by the teacher may be of assistance. Hectographed copies of such revisions may be distributed to the children and read at sight. Very simple selections of the types mentioned above should provide the material of frequent reading lessons. The selections may be read rapidly and fluently. The purpose is to develop those habits which are useful in the reading of more or less unfamiliar selections.

2. **The children should read selections which are repetitive in form.** Fluency in reading results only from continued practice intelligently organized. Not only should the children read selections of the type mentioned in the preceding paragraph, which provide drill in fluent reading from one day to the next;

they should read selections which possess the additional feature of providing repetitive drill material in their own make-up. An example of such selections is the cumulative tale:

This is the house that Jack built.
This is the cheese
That lay in the house that Jack built, etc.

A kid, a kid, my father bought
For two pieces of money.

Then came the cat
That ate the kid
That my father bought
For two pieces of money.

Then came the dog
That bit the cat
That ate the kid
That my father bought
For two pieces of money, etc.

The constant repetitions of the cumulative tale afford a means of ready and natural retention with minimum effort, for they are indulged in not for the sake of reiteration but because they are a vital part of the story itself. Each time a given phrase or group of phrases is read it is more easily recognized than it was before, and the intimate relation between form and the thought expressed renders the acquisition of thought all the easier as the pupil reads from the beginning to the end of the selection. The mechanical difficulty of a given phrase is being reduced constantly the while the blending of phrases one with another is being encouraged by both form and thought. Frequent drills of this type increase the span of recognition and lead to improvement in rate of reading and in fluency of expression. Other selections involving the use of sentences in repetition may be read with similar results. Such selections are valuable in securing fluent, connected reading of sentences.

3. **The children should be instructed to engage in silent reading.** Just as soon as the children begin to gain an independent mastery of the printed page, however inadequate such mastery may be, their attention should be directed to the activity of reading silently. The purpose of this type of instruction is to encourage independent effort on the part of the pupils in learning to read, and to secure thereby a very important supplement to the efforts that are being put forth in class under the direction of the teacher. The silent reading exercises may take a variety of forms. The children may study the selections which they are to read orally in class, they may read a story for the sake of being able to tell it to others, or they may read stories for their own personal pleasure. Often the class exercise may be given to the silent reading and obeying of commands and directions which the teacher writes on the board.[1] The discussion of reading in the second and third grades will deal with this topic somewhat more in detail. The following paragraph from an article by Professor Gray is pertinent at this point:

> The value of silent-reading exercises in the first grade depends largely upon the contribution which they make to the needs of the pupils. If the exercises are wisely chosen, it is probable that their use will result in rapid growth. If they are poorly selected, their use may prove of little value. Hence it is necessary that a teacher think of the various silent-reading exercises which may be used in terms of the kinds of growth which they will probably stimulate, and to select for immediate use those exercises which will secure the type of improvement of which the class stands most in need. From this point of view it is helpful to classify silent-reading exercises into the following types: (1) Those which emphasize reading as a thought-getting process. Such exercises range in length from a brief command which directs the pupil to do something to the long story which is read by the pupil in order that he may tell it to the class. (2) Those which secure better command of the mechanics of reading. Selections of medium difficulty can be studied profitably by the pupil. Very difficult selections should be avoided,

[1] These and similar exercises are now available in flash-card form in the Horn-Shields Silent Reading Flash Card Exercises. Ginn and Company.

or studied only with the assistance of the teacher. (3) Those which increase the rate and span of recognition. Simple selections are appropriate for this purpose inasmuch as the pupil can pass rapidly from the symbol to its meaning and pronunciation.[1]

4. **The children should engage in oral reading not for the sake of expression, but for meaning's sake.** The discussion of Chapter IX of this book has emphasized the fact that in the primary grades oral reading should predominate, for the reason that it is closely connected with oral speech. The discussion of this point need not be continued here; the practice of emphasizing oral reading, in these grades especially, is universal, thus making it unnecessary to seek justification by a continuance of the argument. What we should consider at this point, however, is the purpose of oral reading, whether for expression or for meaning.

The ultimate aim of reading instruction is to train pupils to get meaning from the printed page. It is evident that the instruction of the first grade should be organized primarily with this aim in view, rather than for the sake of training pupils to express thought to others. Good expression is, of course, a valuable result to be sought after; it should come rather as a by-product of instruction than as a product of first importance.

The bearing on our present discussion of the ways of overcoming the difficulties of reading connectedly is that the progress of many pupils in reading for meaning—fluent, connected reading—is interrupted by the efforts of the teacher to secure good expression. The practice is an all too common one. The fluent, connected reading of the pupil is interrupted by the teacher sentence after sentence with corrections, questions, contradictions, etc.—all for the sake of securing the clear enunciation of a word or the proper emphasis upon it. For example, the pupil reads "The little red hen found a bag of flour" and, in his haste to go forward and absorb the meaning of the next sen-

[1] William S. Gray, "Reading in the Elementary Schools of Indianapolis," *Elementary School Journal*, March, 1919, pp. 515–516.

tence, slurs the pronunciation of "little red." The teacher interrupts the reading with a correction, or with the question "*What* found a bag of flour ?" or she contradicts with the statement "The *large white* hen" etc. The pupil finally reads, "The *little red* hen found a bag of flour."

It should be borne in mind by the first-grade teacher that the pupil is learning to read not for the sake of providing pleasure and information for others, but for the sake of his own pleasure and enlightenment. The purpose of oral reading is to help the pupil to read for meaning, to provide him an outlet for his reactions, feelings, and attitudes toward the selection he may be reading. The progress he may be making toward the goal of fluent, connected reading for meaning ought not to be interrupted by the substitution of a secondary purpose of instruction for the one that is of primary importance.

Summary. This will conclude our discussion of reading in the first grade as considered from the standpoint of emphasis on reading as a thought process. The following chapter will continue the present discussion, but will stress especially the devices and methods necessary to be followed in order to perfect the mechanical phases of reading. The steps to be followed in teaching reading to beginners have been discussed. They follow:

1. In the first step the content of the selection of the primer or reading book is developed.

2. In the second step the relations are made between meaning and symbol. Drill is continued until instantaneous recognition results.

3. In the third step the pupils read the selection for which preparation was made in steps one and two.

In each instance the importance of the step under discussion was considered. In connection with the discussion of the third step the importance of training in connected, fluent reading was emphasized. Four suggestions were made which bear upon methods of training, as follows :

1. The children should read selections which are easy and familiar.

2. The children should read selections which are repetitive in form.

3. The children should be instructed to engage in silent reading.

4. The children should engage in oral reading not for the sake of expression, but for meaning's sake.

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BUSWELL, G. T. Fundamental Reading Habits: A Study of their Development, chap. iii, on "Detailed Analysis of First-Grade Reading." Department of Education, The University of Chicago, 1922.

MCMURRY, C. A. Special Method in Reading in the Grades, chap. iii, on "First Grade Stories," chap. vi, on "Method in Primary Reading," and chap. vii, on "Exercises and Lessons." The Macmillan Company, New York, 1911.

PARKER, S. C. How to Teach Beginning Reading, Section I, on "General Picture of First-Grade Activities," Section II, on "Pre-primer Blackboard and Chart Reading," and Section III, on "Beginning Book Reading." Reprinted from the *Elementary School Journal*, September–December, 1921, Department of Education, The University of Chicago, Chicago.

PARKER, S. C. Types of Elementary Teaching and Learning, chap. v, on "Beginning Reading." Ginn and Company, Boston, 1923.

STONE, C. R. Silent and Oral Reading, chap. iii, on "Teaching Reading in the Primary Grades." Houghton Mifflin Company, Boston, 1922.

The teachers' manuals which accompany the various systems of reading in common use should be studied.

CHAPTER XII

READING IN THE FIRST GRADE (CONTINUED)

Purpose of the chapter. The purpose of the present chapter is to call attention to the need of special instruction and drill in the mechanics of reading and to discuss briefly a few of the devices that are useful and appropriate for carrying on such work. The discussion of the chapter will bear on the following points: (1) the importance of phonics, (2) the general method of conducting instruction in phonics, (3) the importance and general principles of effective drill, (4) word drills and typical devices that are useful in perfecting the mechanical phases of reading, and (5) the importance of practice in reading for meaning. Topics (1) and (3) are brief reviews; the remaining topics comprise the body of the discussion.

A general principle that was reviewed in the preceding chapter needs to be restated in part here: the drills on the various mechanical phases of reading should be well organized and should be conducted in *separate* periods in order to avoid the possibility of distracting attention from the interpretative phase of reading.

Phonic analysis is an important device of instruction. The preceding chapter was descriptive of a method of teaching children to read by means of calling attention to the meanings of the easy, familiar words of the children's vocabulary and of attaching these meanings to the appropriate printed symbols. By using such a method the teacher is successful in getting her pupils to read the selections of their primers and elementary readers in a remarkably short time. It might seem that continued emphasis on the various steps of this method is all that is required of the teacher, and that by such a means the pupils

will in time develop into effective readers. We need but to return to the discussion of Chapter VI to find the evidence which proves the inaccuracy of such an assumption.

In Chapter VI we discover that the strictly word method of instruction breaks down in the midst of the work of the first year, owing to the fact that the child becomes distracted by his efforts to recognize the somewhat difficult and unfamiliar words he is beginning to meet. Without proper guidance the distraction becomes more and more serious as the pupil is led to attack more and more difficult reading material. His wretched attempts to read under the burden of such a handicap we found to be so very unproductive of results as to deserve to be characterized as "periods of confusion." Phonic analysis is the device necessary to train pupils to avoid periods of confusion. The school finds that the child distracts himself by his own unguided efforts; the school attempts, therefore, to organize its work so as to distract the child to some purpose by teaching him the while how to master distractions.

Phonic analysis must not be imposed upon children as a ready-made system. The purpose of leading the children to undertake the phonic analysis of words defines the extent to which the school ought to emphasize such instruction. The school is not concerned with having the children gain a mastery of phonics as a complete system; it does not organize its instruction for the sake of thoroughness in phonics. Only as the children need to make use of phonics in attacking new and difficult words does the school organize instruction in the use of that device. For this reason no attempt is made to start the children with the simplest phonograms and to lead them to a knowledge of those which are more and more difficult until finally they have been made familiar with a complete phonic system. The principle "from simple to complex" does not operate here any more than it does in connection with the teaching of word recognition. The principle to be followed is to lead the pupils to analyze the necessary phonograms out of their

familiar stock of words and to recombine these phonograms into words which are new and heretofore unfamiliar. The procedure is not from "parts to wholes," but from "wholes to parts, and back again to different wholes." The following paragraphs are descriptive of the method to be followed.

Ear training requires clear enunciation and articulation of words. From the very first day of school ear training may be given the pupils by means of the conscious effort on the part of the teacher to enunciate and articulate clearly. Such an effort should be required of the children to the extent of their ability to comply. Slurring the sounds of the consonants ought to be corrected and never again permitted. For example, the *t* should be plainly heard in *sent* and *went*; likewise, the *d* in *and* and *find*. Defective pronunciation of consonants ought to be remedied as early as possible, the pupil taking his cue from the teacher as to the correct position of the external organs of speech. Illustrations are the tongue between the teeth in substituting the correct *them* for the incorrect *dem*; the teeth together and the tongue held back in saying *six* instead of *thix*; biting the lower lip in learning to say *very* instead of *wery*.

Careful attention to the enunciation and articulation of words has a purpose entirely apart from formal instruction in phonics. That it is also a very fitting and necessary introduction to such work cannot be denied. It is futile to call upon pupils to analyze words into their sound elements before they are able to make accurate discriminations of these sounds by ear. Recognition of the sound elements of the spoken word by means of the ear is necessary before recognition of the phonograms of the written word by means of the eye can take place.

Familiar words provide the starting point of training in phonics. When the pupils can recognize instantaneously the small stock of easy, familiar words which make up the vocabulary of the early part of their primers, they are able in a measure to recognize the similarity in sound of a number of these words and the similarity in appearance of their printed sym-

bols. Now it is that phonetic training can begin, inasmuch as the burden of carrying on phonic analysis and phonic synthesis should as far as possible be placed on the pupils themselves. Moreover, the children must be made acquainted with the process of taking words apart and putting them together in connection with easy and familiar words before they may be expected to carry on such a process in connection with somewhat difficult and unfamiliar words.

Let us say that the following words and their printed symbols have become familiar to the pupils: *hill*, *till*, *fill*, *will*, and *mit*, *mid*, *mince*, *milk*, and that the word *mill* has not as yet been taught by the process of step two, as described in the preceding chapter. The purpose is to lead the pupils to recognize the new word *mill* through efforts somewhat more independent than those necessary for step two. The process to be learned is the one of analyzing out of the two groups of words the phonograms *mi* and *ll* and of blending these phonograms to make the new word *mill*. In teaching the process there are four steps.

The first step calls attention to known words arranged in a family, or sound, group. The pupils have learned to recognize the words *hill*, *till*, *fill*, *will*, in the order of their appearance in their primer, but as yet there has been no conscious effort on their part to relate the words one with another. The teacher writes the words on the board

hill
till
fill
will

and the pupils recognize and pronounce them in different orders. The similarity in sound is mentioned and discussed. The common element, *ll*, of the four words is distinguished and pronounced separately.

The second step analyzes words into their sound elements. The very prominence of the phonogram *ll*, due to the fact that

it is common to the words of the group, in itself may lead the pupils to recognize the essential difference in the words. The sounds of the phonograms *hi*, *ti*, *fi*, *wi*, may be emphasized as follows: have the pupils pronounce each word slowly. The fact that the phonogram *ll* has been so thoroughly emphasized gives opportunity for the pupils to concentrate on the sounds of the initial phonograms. The last part of the words may be covered while the pupils pronounce slowly the initial sounds. The words may be written

hi - ll		hi -
ti - ll		ti -
fi - ll	or	fi - ll
wi - ll		wi -

By the end of the second step the pupils are able to distinguish and to pronounce separately the five phonograms of the four words.

It should be mentioned that the sound groups (*ll* and *mi*) are used here only for purposes of illustration and that the work of phonetic instruction does not necessarily begin with their use. Indeed, considerable effort may be put forth with profit by the children to learn the phonograms that represent the elementary sounds and to master the initial blend of consonant and vowel before they are led to deal very much with word families and sound groups. To illustrate: when the children know the words *mat*, *mill*, *am*, and *him* they can be led to discover that the initial sound in *mat* and *mill* and the final sound in *am* and *him* are the same, that this is the sound of *m* which they have learned in their ear training from such spoken words as *mamma* and *my*, and that this sound is represented by the letter *m*.

By similar methods the pupils can learn the short *a* sound from such words as *at*, *am*, and *and*. After they have also learned *n* from *no*, *not*, *ten*, *den*, or similar known words, they can blend these three sounds (*m*, *a*, *n*) to give a new word, *man*. Drill on the *initial* blend of consonant and vowel, to give the

open sound, is useful and appropriate at this point: *ma n, man*; *ho t, hot*; *te n, ten*; *ca t, cat*. By further analysis of familiar words and practice on the blends the pupils will gradually learn the phonograms that represent the elementary sounds and gradually develop a method of attack on new words, and with this knowledge and skill will come increased power in word recognition.

NOTE. Attention is called to the form of the word analysis here recommended, which unites initial consonants with the vowel which follows to give the *open* sounds *hi*, *ti*, *fi*, *wi*. If we pronounce a monosyllable, such as *till*, slowly, we find that the stress is upon the blend *ti*, and that we naturally and correctly pronounce it *ti-ll* rather than *t-ill*. An initial consonant cannot well be pronounced apart from the vowel that follows it. When an effort is made to do this another obscure vowel sound inevitably is formed, and the word becomes *tu-ill*.

This fact the teacher should keep in mind in grouping words into families, or sound groups, for purposes of phonic instruction. The principle should be to group such words as emphasize the *natural* blend of initial consonant with following vowel to give the *open* sound. Attention is called to the superiority of the sound group.

mi-t
mi-d
mi-nce
mi-lk

which emphasizes the *open mi* sound. The tendency in pronouncing a sound group like *hill*, *till*, *fill*, *will*, is to emphasize the common element, the *ill* sound, and to make the incorrect analysis

h(u)-ill
t(u)-ill
f(u)-ill
w(u)-ill

instead of the correct one

hi-ll
ti-ll
fi-ll
wi-ll

The *hill*, *till*, *fill*, *will*, family is used to illustrate the first three steps, not because of its excellence as a sound group but in order to call attention to what the teacher should seek to avoid, as well as to show the correct method of analysis when such groups are suggested and used.

Family phonograms, like the word *ill* in *hill*, *till*, *fill*, *will*, or the part of a word *ot* in *hot*, *not*, *lot*, are useful in building up words mechanically *after the pupil has mastered the initial blend.* Initial blends, like *mi* in *mit*, *mid*, *mince*, *milk*, are not, except for purposes of analysis, family phonograms, or sound groups. In word-building they simply represent the first step in the blend. *Mill* is composed of three elementary sounds which are blended, and *mi ll* represents the first step in the blend and *mill* the second step. *Ill* (in *mill*) is a family phonogram and is used mechanically in building up word families. *Mi* (in *mill*) indicates the blend of the two initial sounds in a word. It shows *something to do* or *something done.* The former is correctly used as a sound group in word synthesis after a certain mastery of word analysis has been attained; the latter is correctly used as a sound group in word analysis.

The third step recombines the sound elements into the original wholes. To gain an understanding of how the parts of a word are blended to give the word follows next as a third step of instruction. The pupils are not only to learn that a word may be analyzed into separate sound elements but also to be made conscious of the fact that a blending of these sounds produces the word as a whole. In this step no emphasis is placed upon the phonograms; indeed, once the ability of phonic analysis of a word has been gained, the effort should be to turn attention away entirely from the process of analysis to the process of synthesis. Recognizing words as wholes is the important outcome of instruction in phonic analysis, not alone the ability to carry on the process of analysis.

The first three steps which have just been described cover the process of proceeding from wholes to parts and from these parts back again to the original wholes. The purpose of the instruction is not for its own sake, but to lead the children to the ability to understand the fourth step, which is the building of new words.

The fourth step recombines the sound elements into different wholes. Before the pupils are able to proceed to the task of building new words they must be made acquainted with the phonograms that are to be derived from more than one word family. Accordingly the first three steps of the process of phonic analysis and synthesis are repeated with the words of other sound groups; for example, with the words *mit*, *mid*, *mince*, *milk*, etc. This repetition is carried on until the pupils are able, largely on their own initiative, to take a part of one known word or word family and a part of another and to join the two elements to form another word which is familiar, but which they recognize in print now for the first time. In the present illustration the *mi* sound of one family is blended with the *ll* sound of another to form the new word *mill*.

The four steps of training are repeated with the words of a number of families, or sound groups, in order to acquaint the children with as large a stock of phonograms as possible. As instruction proceeds, the burden of the work of analysis and synthesis can be placed more and more upon the children. In every case the discovery of the heretofore unknown printed symbol of a familiar word should as largely as possible be the children's discovery. This is to be the aim and chief outcome of the instruction; namely, independence in attacking new words. The formation of new words out of familiar phonograms ought not, therefore, to be imposed by the teacher. The teacher should suggest and direct; the pupils should make the discovery, so that, once made, the discovery will be theirs.

Caution: unfamiliar words should not be emphasized in the phonic drills. The implication of the foregoing paragraphs is that the work in the four steps of phonic instruction shall be thorough and continued until the children are able to make an intelligent attack on the new words they meet from day to day. We need at this point to remind ourselves of the danger to the process of reading for meaning that follows an overemphasis on phonic instruction.

The carefully organized and systematic drills in phonics that are conducted by the thoroughgoing and conscientious first-grade teacher lead the children immediately to undertake the work of phonic analysis and synthesis with a great deal of interest and zeal. As soon as the children discover what things are to be done, they find the doing of them very satisfactory because of the pleasure they get in the abundant and varied mental activity that is required. Just at this point there enters a danger. Pronunciation is the important outcome of phonic instruction; everywhere the reaction of pronunciation receives the emphasis. Because of their great interest in the activities of the phonic instruction and drills, the pupils of the first grade may be led to believe that the reaction of pronunciation is the important one and the one demanded by the teacher. Reading for meaning may be lost sight of in the efforts of the pupils to meet the demands of the school for phonetic development and skill. It is clear that the school ought to organize its instruction in phonics in such a way as to avoid the danger thus described. At this point in the training it offers, the school faces a problem it cannot afford to ignore.

The solution of the problem is to be sought in the kind of phonic instruction that does not entirely divorce itself from the reactions of meaning which the pupils may have acquired. To this end it is necessary that the familiar words of the children's reading vocabulary and the words which are to appear immediately in their reading lessons be made the basis of the instruction in phonics. When such words are used the attention of the pupils cannot be withdrawn entirely from the familiar reactions of meaning, however much the lessons in phonics may emphasize the reaction of pronunciation. On the other hand, when unfamiliar words are used the only reaction possible to the children is the one of pronunciation. It is necessary, therefore, that the instruction in phonics should lead the children to discover the sounds of familiar words rather than the sounds of words that are unfamiliar. It is permissible, however, to use

such unfamiliar words as appear in succeeding reading lessons, because immediately following the emphasis that is placed on the reaction of pronunciation the attention of the children becomes centered on the *meanings* of the words in question. In such instances the reactions of pronunciation are forced immediately to surrender the right of way to the more important reactions of meaning.

This will conclude our review of the importance of phonic instruction and our discussion of the general methods of conducting such instruction. We turn now to a review of the importance and general principles of effective drill and to a consideration of a few typical drill devices.

Drill is necessary in order to complete the learning process. In our discussion of the importance of emphasis on mechanics in Chapter VI we were impressed with the fact that once a process has been learned, considerable drill is necessary, else the process is soon forgotten and the learning has been for naught. Another reason for drill stood out with equal force. It was that the process of reading for meaning is so important as to require as much of the reader's attention and energy as he can spare from the necessary process of mastering mechanics, and that, therefore, the mechanical phases of the reading process should be made as easy as possible by making them, through drill and practice, as automatic as possible. Certain general principles of effective drill were suggested in the discussion of Chapter VI. A restatement at this point is desirable. We may add others to suit our present purposes.

Principles of effective drill. Professor Parker, in his interesting chapter on "Drill and Practice,"[1] discusses what he considers the six principles of effective drill. Five of these are especially applicable to our present discussion. They follow:

1. Only correct practice makes perfect; therefore,

a. Delay drill until a correct start is assured.

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 247–268. Ginn and Company, Boston, 1919.

b. Always subordinate speed to accuracy.

2. Avoid wasting time on nonessential and accessory processes.

3. Secure zeal, interest, and concentration of attention with short, snappy, interesting, and varied drills.

4. Use ready-made drill systems.

5. Continue drill until automatic responses are secured.

Preceding discussions have suggested these principles of drill. We are at liberty to pass over a discussion of them here in our effort to consider certain typical drill devices which exemplify them. Let us consider a few of the drill devices which have been used with success in the teaching of reading in the first grade.

Effective drill devices. The following drill devices have been used with success by first-grade teachers. They are quoted directly from three typical sources of such material; namely, (1) a teachers' manual of a recently published reading system, (2) a textbook of special methods of teaching reading, and (3) a textbook of general methods of teaching in elementary schools. They exemplify the principles of drill which were stated in the foregoing topic.

The manual of one well-known reading system suggests the following devices:

Climbing the Hill. Let the children go uphill after Jack and Jill. Have words arranged like this:

Jack and Jill

crown

broke

hill

went

up

See how many children can climb up to "Jack and Jill" on the top of the hill without falling; that is, without missing a word.

Boxing Words. Let children "box" words that they can recognize, and send them away to New York or Chicago or any other place. This is

done by putting a box, or square, around the word, as tumbling, broke. Let the child who boxes the word tell where he will send it, and proceed until all the words are boxed and sent away (erased).

The Merry-go-round. A circle with words around the circumference is drawn on the board. See who can make the merry-go-round go round the fastest; that is, see who can read all the words the most quickly.

Climbing Ladders. Write columns of words representing ladders. (1) A pupil climbs up and down the ladders until he falls, by making a mistake; then another tries. (2) One pupil climbs until he falls; then the others help him up again by saying the word, and he continues climbing. At the second or third fall someone else may take his place. Rearrange the words every few days, making new ladders to prevent the children from identifying words by position.

The Pail of Water. Draw a "pail of water" with a number of words written on it. See how many children can carry it without spilling any of the water; that is, name all the words without missing.[1]

Silent Reading through Action Sentences. Let one of the pupils impersonate Mother Goose and be seated in a chair at the front of the room. Let two others represent Jack and Jill respectively. Say to the class that today the chalk is going to tell them what to do. Ask John to do what the chalk says. Then write on the board *See Mother Goose.* John will look at Mother Goose. Then tell Mary that the chalk is going to say something to her. Write *Run to Mother Goose.* Mary will run to Mother Goose. Ask Jane to do what the chalk says; then write *Run to Jack.* . . . Repeat these directions in varying order to each member of the class. . . .

This exercise is valuable not only because it provides an opportunity for drill on the sentences which have been written but also because it motivates them.[2]

The following devices are copied from a textbook for teachers on the principles and methods of reading in the public schools:

Some Devices for Drill

1. Words in bold print or script are held for a second before the eyes of the pupil, then turned away. These should be words the child has

[1] Field and Farmer, A Teachers' Manual to accompany the Field Primer and the Field First Reader, pp. 60–61. Ginn and Company, Boston, 1922.

[2] Ibid. p. 33.

met in sentences during some previous lesson, or words so similar that he should be able to recognize them very quickly. The "perception" cards, about four by six inches, may be easily made of manila paper by the teacher and printed with a Fulton Sign Marker, a useful tool for every primary teacher. The speed of this exercise should be gradually increased, but never so far as to result in haphazard guessing by the children.

2. Hide these cards about the room. Send groups of children to find and bring before the class all they can recognize.

3. Match the words on these cards with words upon the board or chart. This is a device to be used early in the first year.

4. The purpose of this exercise is to teach the child that certain symbols, regardless of position, size, or color, always represent a certain word.

(*a*) Write one of these words at a time among other words on the blackboard.

(*b*) Write it in different places on the blackboard.

(*c*) Write it in different sized letters.

(*d*) Write it with different colored crayon.

5. Have the children build words with letter cards. This is a good device for seat work.

6. Promote a contest between members of the class in pronouncing rapidly the words to which the teacher or some child points, the words being before the eyes of the whole class.

A variety of other devices for enlivening this formal exercise, called a word drill, can be used to aid in reaching the desired results. Whenever possible the imagination of the child should be stimulated by the thought of the lesson. If the lesson is the story of "Hiawatha's Brothers," the teacher writes on the board such words as:

beavers	acorns
reindeer	timid
squirrel	built
rabbit	swiftly
lodges	hid
ran	why

She then says, "Play you are Hiawatha. All these words are *your* friends, hiding in the forest. See if you can find them out and tell their names."

Or, "At first the beasts were a little afraid of Hiawatha and ran away. How many can you catch before this eraser makes these friends disap-

pear?" She erases a word here and there, the children pronouncing as fast as words vanish from the board.

Or, if the lesson is one about the seashore, the teacher may suggest, "I have written all these words in the sand. Charlotte may play she is a big wave. She may wash away (erase) all she can get (pronounce)."

Or, "See all these pretty shells! Who can get a basketful of them?" The children pronounce in turn and claim as theirs the words they recognize.

These devices should be appropriate to the moment; it is almost impossible to suggest suitable ones for general use. They are numerous, but their use should be limited.[1]

A final quotation is introduced to illustrate how the teacher may in a few minutes employ a variety of devices. Typical devices are given, together with the principles of drill they are intended to exemplify.

Six tricks in first-grade drills with vocabulary cards. A first-grade teacher, in about the seventh week of school, had taught the children to read a chart containing such sentences as the following:

We have two pets.
They are white mice, etc.

These sentences had been used by the children in telling about their two mice. At the present time we are interested in part of the drill which followed the reading of the chart as a whole.

At the beginning of the reading lesson the next day the teacher had arranged on the blackboard ledge eight stiff cards, on each of which was printed one of the words learned recently; namely, "mice," "white," "have," etc. The pupils were seated in little chairs at the front of the room. The lesson proceeded as follows:

1. The teacher gathered the cards and, holding them so that the class could see, said, "Here we have some of our old words. Let's see if we can name them." She then displayed one card after the other. The class, whispering, named the words in concert.

2. The class then stood up. The teacher handed a child a card. If he named the word successfully, he sat down, keeping the card and holding it so that the word could be seen from the front of the room.

[1] T. H. Briggs and L. D. Coffman, Reading in the Public Schools, pp. 72–74. Row, Peterson and Company, Chicago, 1911.

3. After all the cards were given out, each of the children that still remained standing was permitted to pick, from those sitting, a card containing a word which he could name correctly and then to be seated. Finally all were seated.

4. The teacher then said, "I want the card which says 'mice.'" The child having it ran quickly and gave it to the teacher. This was repeated until she had all the cards.

5. The cards were then redistributed among the children by the teacher and called for again as in paragraph 4. As attention was beginning to flag slightly, the teacher said, "I think some of the children are sleepy"; whereupon these children sat up and paid attention.

6. The teacher then placed the cards in a row on the blackboard ledge, the children reading them quietly in concert as each was placed.

7. The drill was then concluded with the following game: A chosen child ran into the cloak room. Another child ran quickly and pointed at a word, for example, "mice," then returned to his seat. The child in the cloak room returned. He pointed at a word, for example, "have," and said, "Is it 'have'?" The children replied in concert, "No." He continued to point at and name words until he said, "Is it 'mice'?" Whereupon all the children clapped their hands, and he returned to his seat. The game was then repeated once.

Eight words, six tricks, six minutes, ten repetitions at intervals and with attention, application. After the class was seated and ready for the above drill, the total amount of time consumed by it was about six minutes. In this brief time six different tricks, stunts, or devices were used. The necessity for this variety is shown by the fact that the attention of the little six-year-olds began to flag after the fifth step in the drill. The teacher, consequently, proceeded quickly to the seventh step, which involved more physical activity for some and more interesting activity for all; namely, watching to see if the child guessed the right word and clapping their hands when he did. By these devices, each word was attentively observed by most of the children at least ten times. The observations of each word were not consecutive however, the attention having been drawn to other words in the intervals which elapsed between the observations of any given word. After the drill had concluded with the game which provided for physical activity, the reading lesson was continued by reading on the chart the story of their pets, in which the words of the drill occurred in sentences.[1]

[1] S. C. Parker, General Methods of Teaching in Elementary Schools, pp. 248–250. Ginn and Company, Boston, 1919.

The teacher of first-grade reading is concerned with the organization of a variety of effective drill devices, not for the sake of finding tasks to occupy the spare time of her pupils but for the sake of rendering automatic the mechanical phases of the reading process. The teacher, accordingly, gives carefully worked-out and well-organized systems of drill which gradually develop in the pupils such powers as the ability to make an intelligent attack on new words, the ability to recognize instantaneously familiar words once their printed symbols have been learned, and the ability to recognize and to read in meaningful phrase wholes. The interpretative phase of the reading process is closely interwoven with the mechanical phase. For the sake, then, of being able to read for meaning without interruption—for the sake of the reader's being able to devote the whole of his attention to the important process of thought getting—the mechanics of reading needs to be rendered automatic through intelligent practice and drill.

Practice is needed in reading for meaning. Not only is considerable practice necessary in order to overcome the difficulties of the strictly mechanical phases of the reading process but also in order to develop connected, fluent reading. The preceding chapter was clear on this point. One learns to read by much practice in reading. The point is important enough (aside from its relation to the present discussion of practice and drill) to return to for a second examination. Our present purpose is to consider the materials that are suitable for practice in reading for meaning and the extent of the practice that is to be indulged in.

The content of primary reading should be varied. The requirement of variety is important for two reasons. In the first place, much practice in reading cannot be secured by reading and re-reading the same selections. The preceding chapter pointed out the danger pupils encounter of adopting the reaction of pronunciation if a selection is re-read too frequently. Generally speaking the more frequently a given selection is

read, the less practice it provides in reading for meaning. The reading of a variety of selections which provide meaning in a variety of ways is the requirement. A second reason for variety in the content is that it accords with the principles of effective drill. Let us consider the extent to which variation may be carried.

Klapper suggests the following types of stories as suitable for primary reading and as necessary to meet the requirement for variety:

1. Nursery rimes.
2. Personal stories of class and school life and experience.
3. Fairy tales.
4. Animal and nature stories.
5. Folk tales and fables.
6. Cumulative tales.
7. Humorous stories.
8. Dramatic stories.
9. Bible stories.
10. Myths, legends, traditions, etc.[1]

Advocates of silent reading would add to this classification still another type of reading matter—factual material.

"As the prime purpose is to get the thought, the material must lend itself readily to this end and must contain a thought that is worth while. This is even more important in the primary grades than it is in the more advanced grades."[2]

Illustrative of the type of reading selections here referred to as "personal stories of class and school life and experience" are the methods suggested in the following excerpts from the writings of Professor Gray:

. . . In a number of schools teachers use leaflets which have been printed for their special use. One teacher used a leaflet entitled "Our

[1] Paul Klapper, Teaching Children to Read, pp. 83–86. D. Appleton and Company, New York, 1916.

[2] Ernest Horn, "The Beginnings of Silent Reading," *Journal of Education*, March, 1923.

Grocer." The amount of interest which the pupils displayed, the eagerness with which they read, and the amount of constructive thinking displayed by the pupils during the exercise served as strong recommendations in favor of reading selections which make a direct appeal to the interests of the pupils. In other schools objective materials from the museum were made the basis of the reading lesson. One teacher placed a mounted bluebird before the class, and the reading lesson grew out of carefully directed discussions concerning the bird. The superior results secured through the use of these carefully selected exercises, as contrasted with the results secured through the use of some of the stereotyped reading selections, justify the recommendation that a widespread movement be initiated by teachers to introduce materials which appeal more directly to the interests of pupils and which lend themselves, because of their more vital content, to effective presentation.[1]

The teacher questioned the pupils to find out what things were needed to make a bowl of goldfish. In answer to her questions the pupils suggested the following: bowl, water, shells, weeds, and fish. The teacher wrote these words on the board as they were suggested, thus affording opportunity for the association of meanings and symbols. At the same time the teacher gave cards to the pupils upon which had been written plainly the words under discussion. The pupils attached these cards to the appropriate objects.

The teacher then said that they were ready to put the things together. As she wrote the following suggestions on the board the pupils read them, and the one who read the sentence first was assigned the task suggested in the direction.

Get the bowl.
Put water in the bowl.
Put shells in the water.
Put weeds in the bowl.
Put fish in the water.

Later in the day the pupils related their experience of the morning and composed the following story, which was written on the board by the teacher:

[1] From Judd and others, "Survey of the St. Louis Public Schools," Part 2, p. 145. Copyright, 1918, by the World Book Company, Yonkers on Hudson, New York.

GOLDFISH

We have four goldfish.
We put them in a dish.
We put water in the dish.
We put shells in the water.
We put weeds in the water.
Fish like green water weeds to eat.
We named the fish.
The father fish is Dick.
The mother fish is Lassie.
The little fish is Weewee.
The other little fish is Weenee.

The third lesson was a reading lesson. Hectographed copies of the story were distributed to the pupils. These were read and discussed by the pupils and finally entered into their books of reading lessons.[1]

The point that is made clear by the foregoing reference and quotations is that suitable reading material for the pupils of the first grade is *extensive* rather than *intensive* and that it is to be derived from a variety of sources.

Reading material should be abundant. The question arises, How is it possible to provide such a variety of reading material as is necessary to give sufficient practice in reading for meaning in a single primer and first reader? The answer is obvious. Children in the first year of school are obliged to read considerably more material than is provided within the confines of the ordinary primer and first reader. Successful teachers of first-grade reading find that their pupils are able to read with profit the stories in from three to six primers and four to eight first readers, and numerous stories in "supplementary readers" besides. This means that the majority of such stories are not "taught" by the teacher or "studied" by the pupils, but are *read* by the pupils for the pleasure they derive in their meaning reactions.

[1] W. S. Gray, "Reading in the Elementary Schools of Indianapolis," *Elementary School Journal*, March, 1919, pp. 510–511.

Summary of reading in the first grade. Three steps are necessary to be undertaken in teaching reading to beginners. They are (1) developing the content, (2) establishing relations between meaning and symbol, and (3) reading for meaning. In the third step pupils have difficulty in learning to read connectedly and fluently. Four suggestions are pertinent, as follows:

1. The children should read selections which are easy and familiar.

2. The children should read selections which are repetitive in form.

3. The children should be instructed to engage in silent reading.

4. The children should engage in oral reading, not for the sake of expression but for meaning's sake.

In the present chapter the importance of training in phonic analysis and synthesis was emphasized. Informal training should be provided by insisting on correct pronunciation and clear articulation of words. Formal training should begin when the pupils have made the acquaintance of the printed symbols of a stock of easy, familiar words. Four steps in the training must be undertaken:

1. The first step calls attention to known words arranged in a family, or sound, group.

2. The second step analyzes words into their sound elements.

3. The third step recombines the sound elements into the original wholes.

4. The fourth step recombines the sound elements into different wholes.

A second phase of the training in the mechanics of reading in the first grade was considered in connection with the discussion of the need and the principles of effective practice and drill. Descriptions of typical drill devices were quoted from a variety of sources. Finally, the importance of considerable

practice in reading for meaning was emphasized, and the extent to which such practice should be carried was indicated. The conclusions from the latter phase of our discussion follow:

1. In order to render automatic the mechanical features of the reading process it is necessary for the teacher to organize and to conduct correct, systematic, short, snappy, interesting, and varied drills.

2. Pupils learn to read through much reading. Practice is just as essential in order to make proficient the interpretative phase of reading as it is in order to render automatic the mechanical phase.

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The teachers' manuals which accompany the various systems of reading in common use should be studied. On phonetics the discussions in Fassett and Norton's "Beacon Reading: A Manual for Teachers" and in Field and Farmer's "Teachers' Manual to accompany the Field Primer and First Reader" are especially valuable.

CHAPTER XIII

READING IN THE SECOND AND THIRD GRADES

General principles reviewed. 1. The primary grades form the period most appropriate for mastering the mechanics of reading.

2. Ability in the mechanics of reading may be developed at the expense of ability to get meaning.

3. The ability to interpret depends for its development upon a coördinate development of ability in the mechanics.

4. The two abilities are capable of coördinate development. The development of both should be emphasized.

5. Context is influential in determining meaning. Pupils need to be provided with an abundance of contextual material.

6. Reading material must be easy and its content not difficult to understand.

7. The content of the reading material must appeal to the instinctive interests of the children.

8. The training in mechanics should be such as to lead (1) to instantaneous recognition of words once learned and (2) to independence in attacking new words.

As a result of the instruction in reading in the first grade, as outlined in the two foregoing chapters, the children are able by the time they enter the second grade to read with a fair degree of independence the simple, interesting selections of their primers and first readers. They have learned to attach meanings to the words of which these selections are comprised. Moreover, they have acquired some ability in the recognition of new words. On the other hand, they are unable to recognize at sight many words which they hear daily in the conversations

of their parents and friends and in the schoolroom, and they have not yet learned to read with a great deal of fluency, owing to the fact that they read a word at a time rather than in meaningful phrases. Instruction in the second grade must begin at the point where first-grade instruction has ceased. It must continue in this and in the succeeding grade the work already begun in the first grade, gradually developing and perfecting the abilities necessary to a mastery of the mechanics of reading.

Instruction in the second and third grades may be considered as a unit. The aim in each grade is the same: to lead the children gradually to a mastery of the mechanics. Throughout the two grades the aim is always to bridge the gap between the abilities which were started to develop in the first grade and the abilities that need to be perfected by the beginning of the intermediate grades. That is to say, reading in the second and third grades may be considered as a unit of work in that it aims to *perfect* the mechanical phase of the reading process, while reading in the first grade stands out by itself as a unit of work in that it aims to *begin* the reading process.

Fluent oral reading is the goal of instruction. The discussions of the second part of this book have made clear what is meant by the mechanics of reading. They involve (1) the instantaneous recognition of the familiar words of a selection, (2) the ability to determine with independence and accuracy the somewhat unfamiliar words, and (3) the ability to put the words together with fluency into connected wholes. The first and second qualities are necessary to the third; indeed, they are a part of the third. To have mastered the mechanics of reading means, then, that one is able to read fluently and connectedly. The ability to read fluently is a partial statement at least of the goal of instruction in the second and third grades. A full statement would mention, also, the *kind* of reading that is suitable to these grades.

Oral reading is the natural form of primary reading. It is closely related to the oral speech of the child, it provides an

outlet for his meaning reactions during reading, and it serves to increase his power in the ready recognition of words. It does, however, tend to the development of lip-reading, which is so great a hindrance to both speed and comprehension in the silent reading of later life.[1] Educators are therefore beginning to recommend work in silent reading, paralleling the training in oral reading, in the first three grades as well as in the upper grades. The aim of the work in these grades is to develop the fundamental habits and associations that are involved in fluent oral reading and to lay an enduring foundation for the silent reader of the upper grades.

Mechanics must be closely related to interpretation. In the development of the fundamental habits and associations that are involved in fluent oral reading it is important for the teacher to bear in mind that this immediate, proximate goal of instruction must hold its proper relation to the final goal of instruction. The final goal is effective rapid silent reading. In the second and third grades the purpose is to train pupils to become fluent oral readers, not for the sake of the oral reading, but that they may develop eventually into effective rapid silent readers. That is to say, the fundamental habits and associations involved in fluent oral reading must be thought of in connection with and as necessary to the development of the fundamental habits and associations involved in effective rapid silent reading.

The matter may be stated in another way. The mechanics of reading is to be perfected in the second and third grades, not for the sake of the satisfaction the children may derive from the perfection of their mechanical skill, but in order that the children may become proficient in a process which, while it involves mechanical skill, is many times more useful and valuable than mere mechanical perfection; namely, the process of reading for meaning.

[1] See Germane and Germane, Silent Reading, pp. 106–107. Row, Peterson and Company, Chicago.

Preceding discussions have impressed us with the necessity of organizing our instruction in reading in such a way as to insure a mastery of the mechanics in the lower grades of the school so that the children of the intermediate and upper grades may be enabled to devote the whole of their attention to the highly important activity of reading for meaning. The dependence of ability in interpretation upon ability in the mechanics has been referred to again and again. Moreover, what is still more important for our consideration is the danger, which has also been the burden of preceding discussions, that the mechanical phase and the interpretative phase of the reading process may not experience a coördinate development, but that the former phase may develop at the expense of the latter. Teachers of reading in the second and third grades need frequently to remind themselves that mechanics must be emphasized and developed in these grades in their proper relation to interpretation, else they will develop entirely apart from and at the expense of interpretation. Teachers need to be aware of the futility of expecting a coördinate development of the two qualities if they are at all negligent in emphasizing both simultaneously. Emphasis on the content of what is read, then, needs always to be a primary consideration, even at times when the development of mechanics is an important purpose of instruction.

The problem of the teacher. The foregoing paragraphs indicate the problem of the teacher of reading in the second and third grades. It has been pointed out that the problem takes its character from the abilities pupils possess at the time they enter the second grade and the abilities they should have developed by the time they leave the third grade. The teacher must build upon the work already begun in the first grade, organizing the instruction in such a way as to develop the fundamental habits and associations that are involved in fluent oral reading in their proper relation to the fundamental habits and associations that are necessary in reading for meaning. The following paragraphs suggest the extent of the teacher's task:

The fundamental purpose of reading is the acquisition of meanings or experiences from printed materials. All instruction in reading, therefore, should place emphasis on the content of what is read. As was pointed out earlier in this section, however, a thorough mastery of the mechanics of reading is prerequisite to effective progress in the acquisition of reading ability. Recent investigations have shown that the second and third grades form the most appropriate period for emphasizing this phase of reading instruction. The result which is desired by the end of the third grade is ability to read fluently and intelligently, either orally or silently, any material of ordinary difficulty. In the accomplishment of this result attention must be concentrated primarily on the content of what is read. If attention is directed too largely to the mechanics of reading, it is probable that reading will become a process of word-calling rather than of thought-getting. If attention is not directed to the content of what is read, the pupil will probably lose interest in reading and will not put forth that type of persistent effort which is prerequisite to rapid progress.

By the time a pupil enters the second grade, he has learned to associate meanings to the words of simple selections, he has mastered a reading vocabulary of a few hundred words, he has gained some power in the recognition of new words, and he is able to read simple, interesting selections independently with a fair degree of success. On the other hand, he is unable to recognize at sight many words which he hears daily in the conversation of his parents and friends, he recognizes individual words rather than groups of words at each fixation of the eyes, and he is unable to read with a great deal of fluency. Further progress in reading is dependent on the development of additional skill in the recognition of unfamiliar words and greater fluency in the grouping of words. The major problems of the second and third grades relate, therefore, to the development of ability along three lines: namely, (*a*) comprehension, (*b*) rate and fluency, and (*c*) accuracy and independence. In order to secure effective progress along these lines pupils should be given frequent opportunity to read so that various habits which have been partially developed in the first grade will be more effectively established. Furthermore, it is necessary to introduce pupils gradually to selections of increasing difficulty in order that they may gain power in attacking increasingly difficult problems both from the standpoint of meaning and of pronunciation.[1]

[1] W. S. Gray, "Reading in the Elementary Schools of Indianapolis," *Elementary School Journal*, March, 1919, pp. 525–526.

Comprehension, rate and fluency, and accuracy and independence are suggested as the three qualities to be emphasized in the second and third grades. The problem of the teacher, then, is to devise ways and means by which ability in these three qualities may be developed. Let us examine the methods and devices which apply to each in turn. Here we may separate the three types of ability for the sake of convenient discussion. The wise teacher will seek, however, to develop each, not as a separate and distinct ability, but as one closely related to the others and having its proper bearing on the development of what we designate by the general term as reading ability.

Attention to meaning is necessary in order to secure meaning. It has been implied throughout our discussions of the nature of meaning that the mind is an active organized personality which responds to excitations from the outside world. Meaning has been explained as the product of the reactions, feelings, and attitudes of the mind toward the objects, actions, expressions, etc., and their corresponding symbols with which we are surrounded. The necessity of the action of the mind and of the attention of the mind in the apprehension of meaning has been impressed upon us again and again. It is important at this point in our discussion that we remind ourselves once more of the importance of securing and of directing attention if the school is to make progress in the improvement of its pupils in the ability to comprehend.

In this connection we may recall the nature of the two kinds of attention, namely, *forced* attention and *spontaneous* attention, with the fact that the latter is by far the more important and the kind to which the school should make its appeal. The problem of the school is to employ such devices and to provide such reading material as will make the greatest possible appeal to the spontaneous attention of its pupils—such devices and reading material as will force the children's attention, in the sense of directing it, to the end that spontaneous attention will eventually be aroused. In considering how this problem may

be solved the following devices will be discussed: (1) technique of class instruction, (2) directed study, and (3) independent reading.

Comprehension may be improved through class technique. The following third-grade reading lesson is reported as suggestive of the means of directing the attention of children to the meaning of a selection:

The teacher began the class exercise by introducing the story of "King Tawny Mane," as follows:

There was once a lion whose name was Tawny Mane. He was so strong that all the other animals were afraid of him, and so he was called the king of the forest. He liked to kill every animal that came in his way, and there was no living thing in all the land that was safe from him.

At last, one day, all the animals met to talk about their troubles, and see if they could not find some plan to save themselves from King Tawny Mane. They talked a long time, and then agreed what to do.

In the evening they went together to the lion's den. King Tawny Mane had just had a full meal, and so he did not try to harm any of them. "What do you want here?" he roared.

This frightened them very much. Some of them ran back into the thick woods. But the bravest stood still. "Speak, and tell me what you want," said the king.

Then Sharp Ears, the fox, stood up and spoke. . . .

To make sure that all the children had caught the drift of the story thus far, the teacher asked: "Why were all the animals meeting at the den of King Tawny Mane?" "What do you think Sharp Ears, the fox, talked about when he spoke to the king?" From the answers given it was clear that the children understood that Sharp Ears told the king of the plan the animals had proposed to save themselves. A brief discussion ensued in which the children speculated concerning the probable plan Sharp Ears proposed. All agreed that the plan would have to satisfy the king by assuring him of a plentiful food supply.

The teacher now passed to the class supplementary reading books, and the children were instructed to turn to the story and to find out what Sharp Ears said to the king and what plan he proposed. When these had been found out, each child was to close his book and signal to the teacher by raising his hand. Care was taken by the teacher that no child should read into the story greatly beyond the following passage:

"O king," he said, "we have come to see you about a very great matter. Do you know that if you keep on as you have begun, you will soon kill all the beasts in the forest?"

"And what if I do?" said Tawny Mane.

"Then what will become of you?" said Sharp Ears. "What kind of king will you be when you have killed all your subjects?"

"But I must have something to eat," said Tawny Mane. "I must have food."

"Yes," said Sharp Ears, "and that is just what we have come to talk about. We have thought of a plan by which you shall have all the food you want without going out of doors to get it."

"That would be a good plan," said Tawny Mane. "But tell me what it is."

"We will give you one animal every day," said Sharp Ears. "We will draw lots, and the one upon whom the lot falls shall come to your den. You will not have to hunt at all."

"Good!" said the king. "We will try your plan and see how we like it."

For some time after this, things were very quiet in the forest. Every morning one of the animals went down into Tawny Mane's den, and never came out again. The lion liked the new plan quite well.

Presently every child was ready with his answer to the question, "What plan did Sharp Ears propose?" Some of the more rapid ones had read into the story to include the following:

At last the lot fell upon a little rabbit named Cotton Tail, and he was sent to make a call upon the king. He was in no hurry to go. He played along the road until after dinner time. Then, with big eyes and gentle steps, he went and stood at the lion's door.

King Tawny Mane was very hungry, and when he saw the rabbit he roared: "Why are you so late? Even the elephant knows better than to keep me waiting."

The rabbit bowed low and said: "I know I am late. But if you could only see what I have seen, you would not blame me."

One was allowed to open his book and read the extra paragraphs to the class. Discussion followed as to what Cotton Tail had seen on his way to the lion's den. The hint was thrown in that Cotton Tail perhaps was scheming to escape from the dinner table of the king. The children were told to open their books and to find out what Cotton Tail had seen on the way.

"What have you seen?" said the lion.

"I have seen something that may have a good deal to do with your keeping this kingdom," said Cotton Tail.

"Tell me about it," said the lion. He was always afraid that something would happen to drive him out of his kingdom.

"I cannot tell you," said Cotton Tail, "but if you will come with me, I will show you what I saw." Then he hopped away, and the lion followed him until they came to the mouth of an old well. At the bottom of the well was a little water, and under the water there was nothing but soft sand.

"Just look in here," said Cotton Tail.

King Tawny Mane looked in. He thought he saw another lion at the bottom of the well. He showed his teeth; the other lion showed his teeth. "I am the king of the forest!" roared Tawny Mane. The other lion said nothing; but Tawny Mane thought that he roared.

"I will show you that I am the king," growled Tawny Mane. He was so angry that he did not know what to do. He jumped into the well, only to find that there was nothing but water and soft sand at the bottom. He could not get out.

Then little Cotton Tail peeped down and called to the lion. "Tawny Mane," he said, "your kingdom is at an end!"

Little by little, Tawny Mane sank in the sand. In the evening Cotton Tail peeped down again. All was still. . . .

Questions like the following were now asked:

Was Tawny Mane a good king? What did the animals do about it? Who did the talking for the animals? What plan did Sharp Ears talk about? What did Tawny Mane think about the plan? Did he like it?

Designated pupils were allowed to read the answers orally from the book, and such questions were continued until all had read.

In the lesson just described the attention of the pupils was centered from first to last on the meaning of the selection. In their reading they looked for meaning, and the discussions showed that they found what they sought. It should be noted that the class discussions stopped short of entering into details. The discussions served to introduce the thought and to inspire the children to look for meaning. When meaning was secured, discussion was at an end.

Comprehension may be improved through directed study. In this, the second, type of suggestion looking to the improvement of pupils in ability to comprehend, attention is directed to the meaning of a selection by means of questions and problems which the pupils seek to answer and to solve. Interest is

centered not so much in the reading exercise as it is in the question or problem. The important point is that by such means pupils receive practice in looking for meaning as they read.

A variety of devices may be employed. Questions may be written on the board and the pupils directed to find the answers to them, or the pupils may be directed to write questions concerning designated parts of a selection, or to write or to prepare to tell about the important and interesting points. At times the problem may be to prepare to dramatize the story. Frequently problems arise in other classes, and the pupils may be set to the task of solving them through reading. The following are illustrative:

The second-grade class had been engaged in the study of Indian life. They had already grasped a fair idea of the manners, customs, and mode of living of the Indians, and were now busily engaged in modeling an Indian village in the sand table. Wigwams had been constructed, a lake for fishing with a pane of glass to represent the water had been provided close by, in the distance (at the far end of the table) was a forest of paper trees, and in between the forest and the village there was a field of corn represented by blades of grass stuck into the sand. Miniature figures of Indian men and women had been cut from paper and colored. With the placing of these figures in their proper places the children were now busying themselves. Indian men were placed by the lake to fish, and Indian men in the forest to do the hunting; but when it came to peopling the cornfield a dispute arose regarding the propriety of placing Indian men there. Some were certain that work in the cornfield ought to be performed by the men, while others were equally sure that Indian men did nothing but fight, hunt, and fish, and, therefore, had no time to work in the cornfield. Two or three were willing to compromise by placing both men and women in the field. The question was submitted to the teacher. The teacher did not decide the question, but directed the pupils to seek the answer through reading in their books about Indians.

The third-grade class was engaged in the study of the lives and adventures of the Vikings. To provide a basis for the class discussions, the teacher had assigned to various groups in the class the task of preparing oral reports on such stories from Jennie Hall's "Viking Tales"

as the following: "The Story of the Tooth-Thrall"; "How Olaf sought his Farm"; "Olaf's Fight with Havard"; "The Story of Foes-fear," etc.

During the class discussions the children had frequently to return to the exercise of reading from their books for confirmation of the opinions and ideas they expressed in class.

The foregoing examples illustrate how questions and problems that arise in other classes may be used as bases of exercises and assignments in reading.

Comprehension may be improved through independent reading. By far the most important type of device for the improvement of ability in comprehension, and the one least considered in schoolroom practice, is the third of our list; namely, independent reading. Such reading is personal in character; its results are to the highest degree of the personal sort. It is the most natural kind of reading for the reason that it is undertaken through motives which are the least artificial. Reading of this sort does not permit the intrusion of any outside or artificial requirement between the printed page and the reader; neither does such reading keep uppermost in the reader's attention a question to be answered or a problem to be solved. In its exercise schoolroom requirements do not intrude to interrupt the thought-getting process. Moreover, such reading is governed in the largest possible measure by the spontaneous attention of the reader, and it is undertaken more than any other kind for the sake of satisfying the cravings of one's immediate and personal interests.

Reading of the kind just described bears a very striking resemblance to one's observation of a motion-picture play and its results. In the first place, one attends the motion-picture theater not for the sake of securing information which will help in answering a question or in solving a problem, but in order to spend a pleasant half-hour. When one has entered, the pictures appear before his eyes in rapid succession, and the story being portrayed gradually, but rapidly, unfolds. The mechanical difficulties of following the movement of the play have

been swept aside pretty largely by means of the most modern improvements on the cinematograph and through the technique of scenario writing and film production. The serious purposes of the outside world are shut out; no requirements to answer questions about the story, to tell or to write the story, or to prepare for a class discussion about the story intrude themselves between the screen and the observer. The results of such observation are familiar. They are rich in reactions, feelings, and attitudes of mind. The observer is for the time carried away in fancy; in his imagination he is present in person at every scene. He actually *experiences* every action that is portrayed.

It is the common experience of all who read these lines that one goes away from the witnessing of a motion-picture production with his mind filled with information, sometimes with important ideas, perhaps with ideals of conduct, good or bad, and often with points of view on life and its affairs, also good or bad, such as he may never have had before. So it is with the independent reading of suitable selections which may profitably begin in the primary grades. The children approach such reading exercises, not to answer questions or to solve problems, but because of the inner drivings of their instinctive interest in entertaining stories. The school removes the mechanical difficulties which may attend by providing reading material which can be read easily and rapidly. The serious purposes of the outside world—of the classroom—are forgotten. On the wings of imagination the children are carried to other lands and other times; they *experience* every action and every scene portrayed on the pages before them; their minds are filled with meaning reactions.

It is true that children in the lower grades of the school have to be given considerable formal instruction before they are able to undertake any large amount of independent reading. The requirement of formal instruction, however, does not in any degree detract from the value of this type of reading as

practice in thought-getting. No reason has yet been found why children of the primary grades may not just as well read such stories as "Little Red Riding-hood," "Jack the Giant Killer," "Cinderella," and dozens of others, rapidly outside of class, and get therefrom just as beneficial results in improvement in comprehension as it is possible to secure by mulling over them in long-drawn-out class discussions. Certain it is that by the former method the children will become acquainted with a wider range of stories and receive many times the amount of practice in reading for meaning. In this connection it is barely needful to repeat one of the general principles that were worked out in the second part of this book—namely, context is influential in determining meaning, and therefore children ought to be provided with an abundance of contextual material and (we may add) be permitted by means of independent reading to make use of as much contextual material as possible.

The second problem of the teacher of the second and third grades is now before us; namely, that of devising ways and means by which ability in rate and fluency may develop.

Rate and fluency of reading is not a separate ability. The discussion in the first part of this chapter shows that rate and fluency of reading ought not to be looked upon as an ability separate and distinct, but as one which should be closely related in its development to the various other phases of reading ability. The causes of slow and laborious reading are sufficiently indicative of the close relationship to which we have just referred. Slow and laborious reading may be due to one or all of the following causes: (1) inability to recognize words instantaneously, (2) inability to group words and to read in meaningful phrase units, and (3) inability to grasp the meaning of a selection easily. The statement of these causes emphasizes the fact that improvement is not made in the other phases of reading ability without a consequent development, or at least without a consequent opportunity for development, in rate and

fluency. Improvement in rate and fluency follows the elimination of the three causes just mentioned. The suggestions for their elimination are similar to the ones which will follow in our discussion of how to develop accuracy and independence and to those which have just been given under the heading of how comprehension may be improved.

The first cause—inability to recognize words instantaneously—is a condition which results from the lack of familiarity with words. We may recall the word drills of the first grade as a means of increasing children's acquaintance with words. The suggestions which relate to the development of accuracy and independence apply equally as well.

The second cause—inability to group words and to read in meaningful phrase units—is a condition which results from the same lack of opportunity and training as that which results in the condition implied in the third—inability to grasp the meaning of a selection without difficulty. These conditions result because pupils are given only a limited opportunity for reading. Opportunity to read page after page instead of a sentence or two at a time must be provided if these conditions are to be overcome.

Rate and fluency should not be emphasized as a distinct phase of instruction. It is well at this point to review the suggestions of the present chapter and of the two preceding ones, which bear upon the development of fluent reading and upon improvement in reading for meaning. In Chapter XI are given the following suggestions bearing upon fluent connected reading:

1. The children should read selections which are easy and familiar.

2. The children should read selections which are repetitive in form.

3. The children should be instructed to engage in silent reading.

4. The children should engage in oral reading not for the sake of expression, but for meaning's sake.

In Chapter XII practice in reading for meaning is emphasized. The points are stressed that the content of primary reading should be varied and that the reading material should be abundant.

In the present chapter we have the following suggestions for developing ability in comprehension:

1. Comprehension may be developed through class technique.
2. Comprehension may be developed through directed study.
3. Comprehension may be developed through independent reading.

Learning to read through much reading is the most important and most comprehensive of all the suggestions given, and the one implied in all our discussions. We need to remind ourselves of it again and again, not only here, because it bears upon the development of rate and fluency, but elsewhere in our discussions, because it lends itself to the improvement of every phase of reading ability.

The suggestions bearing upon the development of fluent connected reading and of comprehension have been restated in this connection in order to impress once more the fact that improvement in rate and fluency ought not to be emphasized as a separate undertaking, but in connection with—rather as a by-product of—the development of other phases of reading ability. The teacher may keep in mind the development of rate and fluency as a separate ability in order that it may not be neglected; but the undertaking should not be a separate one, for the reason that the danger is always present that the ability may develop at the expense of comprehension.

The following paragraphs from the report of an effort to increase the reading rate of fourth-grade children are especially applicable to our present discussion. They repeat, and give emphasis to, the point of view the present chapter has been developing.

These children must become vitally interested in reading. The desire to read must be made paramount before they will conscientiously under-

take the mastery of the mechanics of reading. To stimulate this desire, I worked with the children individually to find out their particular interests. I pasted pictures on cardboard with a simple little story beneath. At some odd moment during the day a particular child would be called to me, to whom I would show the picture and ask the question, "What would you like to know about this picture?" After the child had responded, I would say, "Would you like to read this little story and find the answer for yourself?" Usually the child was willing to do so. At all times I helped with the hard parts. As soon as the child was able to read the selection as well as possible under the circumstances, the card was his own.

Another method was this. I told part of a story and then referred the children to the reader to find the climax for themselves.

Library books containing illustrations were frequently presented. If the child was sufficiently interested to attempt to find out what the pictures were about, he might have the book. The children were taken to the library and taught how to find books for themselves. . . .

Eight children in this group were lip-movers.* I told them that I knew a secret about something that happens to some people's lips when they are reading to themselves. I wouldn't tell the secret; they must find out for themselves by watching their parents as they read the newspaper, and their schoolmates as they prepare their lessons. Very soon the secret leaked out. One small boy reported that he had seen an old man in the street car who moved his lips as he read a book. He illustrated the account, and the children immediately realized how foolish a lip-mover appears. Thereafter many a finger was pressed tightly over the lips to keep them in place.

In working along the lines of word-grouping in the early stages, the simple device of having the pupils find nouns with their qualifying adjectives was employed. The children selected such groups as a "naughty, disobedient prince," or "a very strange-looking house." Then

*Lip-movement has been quoted elsewhere in this discussion as one of the causes of slow speed. The point of view of the present writer is that lip-movement is but the outward manifestation of the inward difficulty of the poor reader,—a condition which usually accompanies slow reading, though not a cause of it. Accordingly, a consideration of lip-movement has not been given a place in our discussions. The reasons for its exclusion are the same as those which would justify the omitting of a detailed consideration of the diffuse and useless movements of tongue and feet from a study of methods of improving the handwriting of first-grade pupils.

we selected phrases, such as "in the garden" and "by the sea." These were combined into larger and larger groups. In the beginning, the children's oral reading was disconnected and choppy. The results of this work appeared in a more natural rendition of the text. . . .

In every instance, the reading rate has been accelerated and, with but one exception, the number of ideas [the pupils were able to reproduce] increased. . . .

The conclusions to be drawn are self-evident. Generally speaking, there has been an acceleration of both oral- and silent-reading rates of the entire class as well as a decided improvement in the number of ideas retained.[1]

A final quotation may be included for the sake of lending further emphasis to the suggestions of the preceding pages. In his recommendations to the teachers of Indianapolis relative to the methods to be used in improving rate and fluency, Gray writes:

One of the cities with which Indianapolis was compared secures excellent results in this phase of reading instruction through quantitative sight reading. Daily exercises are conducted in which pupils read page after page without detailed comments or discussion. The reading is done at sight in connection with relatively easy selections concerning some problem in which the pupils are interested. At the time that one class was visited the pupils were working on the problem of how cotton is grown and marketed. The pupils in turn read long passages, commenting occasionally on the significant points. Whenever it was needed, the teacher gave effective help on difficult words, but in a way which did not take the attention and interest from the main points of the story. A list was kept of the common words upon which help was needed, and at the close of the hour or in some special drill period these words were studied in detail. Such exercises bring the pupils in contact daily with pages of material and provide abundant opportunity for the association of symbol, meaning, and pronunciation. If these selections are wisely chosen, the pupils encounter relatively few difficulties at any one time. The results are that words which were partly familiar are fully mastered, groups of words are recognized at one fixation of the eyes, rate of reading increases, and oral expression improve noticeably.

[1] Bessie Waldman, "Definite Improvement of Reading Ability in a Fourth-Grade Class," *Elementary School Journal*, December, 1920, pp. 277–278, 279, 280.

In connection with quantitative reading exercises of the type described above, the pupils who were observed not only read the story, but they contributed many interesting, relevant facts which had been learned outside of the classroom. They brought in objects or materials which related to the problem at hand, and they told or read to the class interesting contributions which they had found in other books. At the end of the day they wrote significant sentences based on the reading of the hour, and at the end of the week they wrote short stories which summarized their readings. Through the use of such methods, attention can be centered on the content of what is read, and permanent interest in reading can be developed, because the pupil discovers that he is rapidly mastering the process of reading and that he has reached a point in his development where he can secure interesting information and pleasure from his reading without great effort. Much oral reading once a day is recommended for second- and third-grade classes of Indianapolis. Attention should be centered primarily on the content of what is read, but the exercises should be so conducted that the habits and associations which are prerequisite to fluent reading have abundant opportunity to develop effectively.[1]

From the foregoing suggestions which bear upon methods of improving comprehension and rate and fluency we turn now to a consideration of the ways and means of increasing the ability of children in accuracy and independence. We shall keep in mind as we proceed that this phase of reading ability may develop in connection with the development of comprehension and rate and fluency, but will confine our discussion to a consideration of those suggestions which bear especially upon the improvement of accuracy and independence in the recognition of words.

The phonic instruction of the first grade should be extended. A review of the first section of the discussion of the preceding chapter will recall to our minds the necessity and importance of phonic instruction in the first grade. The purpose of such instruction was there revealed as systematic mastery of the distractions offered by difficult words and improvement of the

[1] W. S. Gray, "Reading in the Elementary Schools of Indianapolis," *Elementary School Journal*, March, 1919, pp. 525–527.

pupil's power to recognize new words with accuracy and independence. Starting with known words the pupils of the first grade are led to an acquaintance with their constituent sound-elements and are given training in putting these elements together to form new words. In beginning the discussion of the present chapter it was laid down as a guiding principle that the problem of the second and third grades is to extend and to improve upon the instruction of the first grade. Accordingly our first suggestion looking to improvement in accuracy and independence is that the phonic instruction of the first grade should be extended in the second and third grades. Such a suggestion contemplates that the elementary phases of phonic instruction will be departed from, to the end that greater results in ability to recognize words will be attained.

The children should learn to analyze words into syllables. The phonic instruction of the first grade, we remember, includes the task of providing training in analyzing the very simple words of the children's vocabulary into their sound-elements and in recombining these sound-elements to form new words. The training given is supposed to be so thorough as to insure the employment of phonic analysis and synthesis in the determination of the new words the children meet from day to day in their reading. It follows, then, that the first task of the second-grade teacher is to satisfy herself that the phonic instruction of the first grade has been sufficiently thorough before proceeding to the more elaborate work of second-grade instruction in word analysis. The teacher is now ready to extend the instruction in analysis of short words into their sound-elements to include analysis of long words into their syllable elements. To this end instruction is given in breaking up the longer and more difficult words into their familiar parts and in putting these parts together in order to determine the original wholes. The following will illustrate the method:

The children of the second-grade class had experienced considerable difficulty with the words *grandmother*, *neighborhood*, and *carefully*,

which occurred in one of their early reading lessons. The teacher had helped the children over these words and now undertook the task of showing them how they might determine such words for themselves.

The teacher wrote the words on the board and had the children pronounce them. "How easy these words are, now that we know them, but do you remember how hard they seemed when you first read them a while ago?" The children recalled the difficulty they had had, and some volunteered to tell what they thought the words were at first.

"These words are like all other words; when we don't know them they seem hard, but when we know them they are easy." The children were willing to recall words to illustrate this statement, but they were not encouraged to proceed far in the effort. "Now," said the teacher, "would you like to learn how to become friends with other words like these, so that they will always be easy and never seem hard? Let us see how we can make easy words out of hard ones."

The teacher now proceeded to divide the somewhat unfamiliar words into their familiar parts, pointing out the while each step of the division and securing as much help as possible from the children, as follows: *grandmother* became *grand mother*, *grandmother*; *neighborhood* became *neigh weigh neigh bor*, *neighbor hood*, *neighborhood*; *carefully* became *care full y*, *careful ly*, *carefully*. Enough repetition was had to insure a thorough understanding of every step of the process.

The children should learn to attack new words boldly. One great difficulty that is to be observed in the reading work not only of the lower grades but of every grade of the school is the apparent timidity and uncertainty experienced by the children in attacking new words. In their reading work children form the habit of halting at a new or difficult word and waiting for help from the teacher, or from another pupil, in pronouncing it. When they do attempt to determine the word independently for themselves, they seem never to be certain of the results of their efforts. We have seen elsewhere in our discussion (Chapter VI) how such dependence of effort hinders the development of good reading habits. Accuracy and independence need to be developed. The second and third grades provide an excellent opportunity for checking the growth of habits of timidity and uncertainty by means of specific training in making bold at-

tacks on new words. The following continuation of the lesson which was reported in the preceding topic illustrates a method of training:

In the drill period which followed the exercise with the words *grandmother*, *neighborhood*, and *carefully*, the children were directed to look through their reading book and find as many *hard* words as they could. The following words were quickly pointed out by the pupils and written on the board by the teacher:

farmhouse	whichever	handkerchief
middle-sized	flattered	valuable
woodland	amusement	remembered
huntsman	permission	quicksilver

The children now pronounced, both individually and in concert, the easy and familiar subdivisions of each word, as *farm house*, *wood land*, etc., and following the separate pronunciation of the parts of each word, they blended the parts and pronounced the word as a whole. With some words the teacher gave assistance; with others the children needed no prompting, but pronounced them independently of the teacher, and seemed to take pride in their accomplishment.

On the following day the drill was continued with the same words, and a few new ones contributed by the teacher. The children now seemed to understand the process and to know what to do whenever they met a new and difficult word. The teacher repeatedly cautioned the children that it was necessary to stop to break up a word into its parts and pronounce the parts separately only *when the word was hard and they could not tell what it was otherwise*.

In the assignment of a number of reading lessons which followed from time to time the teacher would indicate the difficult words and have the children determine their pronunciation. In nearly every case the teacher would suggest: "Now you know that word so well that you won't have to stop while you are reading the story to find out what it is."

The foregoing illustrations point out the value of giving specific training in the analysis of words and in attacking new words boldly. Importance of thorough training was emphasized, and at the same time it was made clear that the training should be stopped at the point beyond which it is no longer needed.

Summary. In the present chapter the work of the second and third grades is considered as a unit. Its purpose is to continue the training already begun in the first grade and gradually to lead the children to a mastery of the mechanics. The goal of instruction in these grades is fluent oral reading so taught and so emphasized as always to maintain its proper relation to the development of the habits and associations involved in effective rapid silent reading. Accordingly it was pointed out that the emphasis on mechanics in these grades must not divorce that phase of reading from the more important one of interpretation, but should be so directed as closely to relate the two phases of the process. The teacher's task in the attainment of the purpose there set up was defined as that of selecting and making use of the devices and methods which lead to improvement in the following abilities; namely, (1) comprehension, (2) rate and fluency, and (3) accuracy and independence.

The important suggestions which relate to the means of improvement in the three abilities follow:

1. Comprehension may be improved through class technique.
2. Comprehension may be improved through directed study.
3. Comprehension may be improved through independent reading.
4. Rate and fluency should not be emphasized as a separate phase of instruction. Improvement in rate and fluency should be sought in the improvement of the other phases of reading in order that the former phase may not develop at the expense of the latter phases.
5. The children should learn to analyze words into syllables.
6. The children should learn to attack new words boldly.
7. Children learn to read through much reading. Preceding discussions have introduced this point, the present chapter lends emphasis to it, and later discussions will return to it again and again.

Summary of suggestions relating to silent reading. The important points of the present chapter relating to silent reading are as follows:

1. The goal of instruction in the second and third grades—fluent oral reading—is to be thought of by the teacher in organizing her instruction as a necessary step in the formation of the habits and associations involved in effective rapid silent reading.

2. Improvement in comprehension is the most important topic of the chapter; the most effective means of improving comprehension is independent reading, which is, necessarily, silent reading.

The following suggestions, which are quoted editorially in the December, 1920, issue of the *Elementary School Journal* from the report of the Supervisors' Round Table of Monmouth County, New Jersey, summarize very effectively a number of points discussed and implied in the present chapter:

GRADE II

With the foundation of the first year's work drills for quickening the reading pace and securing more accurate thought-getting should be furnished.

Assign longer selections for silent reading, two or three paragraphs. Test the results of this reading by oral questions, or by questions written on the blackboard to be read silently and answered orally.

Use review stories. Teacher begins story anywhere. Child who finds place first stands and reads.

See how far children can read in a given time, or how long it takes them to read a given selection.

Whenever possible, directions and assignments should be written on the blackboard to be read silently.

GRADE III

Give setting in a few words, or propose a simple problem which the reading will solve.

Sentences, paragraphs, and parts may be read in response to the teacher's questions, aiming to get the essential facts of the whole unit.

Give speed tests to ascertain how far pupils can read in a given time, keeping accurate records for future comparison.

Reproduce to test thought-getting.

Encourage the pupils to ask each other thought questions in silent-reading lesson.

Write headings for paragraphs. (Simple outlining.)

Train the pupil to select the essential facts in a selection read. Ask, "What parts must you remember to be able to tell the story? Read the selection again and notice what parts you may forget and still be able to tell the story."

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CHAPTER XIV

READING IN THE INTERMEDIATE GRADES

General principles reviewed. 1. In the intermediate grades pupils should have opportunity to engage in independent reading.

2. The purpose of reading in these grades is to develop the ability to extract meanings from printed symbols.

3. The meanings extracted from printed symbols are the sum total of the reader's reactions, feelings, and attitudes toward them; what the reader brings to the printed page by way of knowledge and experience determines meaning quite as much as does the printed page itself.

4. Context is influential in determining meaning. Pupils need to be provided with an abundance of contextual material.

5. Reading material must be easy and its content not difficult to understand.

6. The content of the reading material must appeal to the instinctive interests of the children.

7. Development of mechanics should be looked for in the constantly increasing power of pupils to read in meaningful phrases.

By the time a pupil has completed the work of the primary grades he should be able to read fluently and connectedly the simple, interesting stories of his reading books and supplementary readers. He should be able to secure with a high degree of perfection the meaning of such stories; and his rate of reading, silent as well as oral, should equal at least the ordinary speed of fluent, well-enunciated discourse. Moreover, the pupil should be able to determine new words with independence and

precision and to recognize old familiar ones instantaneously and with a minimum of effort. In short, the work of the primary grades should have led the pupil to a mastery of the mechanics of reading.

With ability in the mechanics fairly developed, the pupil is now able to turn the whole of his attention in reading to the exercise of securing meaning; reading for meaning can now proceed unhampered by mechanical difficulties. At this point in its instruction the school is called upon to provide opportunity and training in reading for meaning. We may secure an idea of the kind of opportunity and training to be provided by contrasting the former view of what constitutes good reading instruction in the intermediate grades with the view that is coming to prevail at the present time.

The former view emphasized the continuation and enlargement of primary methods. According to the traditional point of view the methods of teaching reading that have proved successful in the primary grades ought to be continued in the intermediate grades. To the teacher who holds to this point of view the later grades present no new problems for solution; the problems of the earlier grades still remain, except that they present themselves now in an enlarged and intensified form. The activities of the primary grades are continued; phonic analysis, word drills, elaborate preparatory steps introducing the selections to be read, long-drawn-out discussions following the readings, oral reading with close attention to pronunciation and emphasis—these and kindred activities are the order of the day. The only points of difference are that the subject matter has become more difficult, articulation and expression requirements more exacting, and discussions more detailed and analytical. Especially is it thought desirable to continue primary methods in instructing those pupils who have failed to make the required amount of progress in the primary grades and who, when they have arrived at the intermediate grades, are backward in reading. In handling such cases teachers as a rule

vainly attempt year after year to dispose of the difficulties by more and more liberal applications of the same methods that originally produced them.

The present view emphasizes the importance of adopting different methods. In striking contrast with the traditional point of view relative to the methods best adapted to the reading of the intermediate grades is the point of view of an ever-increasing number of teachers at the present time. The reasons for the changing conception of the purpose and nature of instruction in the intermediate grades have been put forward in previous discussions, in Chapter IX especially. Let us review them here.

1. Primary pupils are able to pronounce words more rapidly than they are able to recognize them, while intermediate-grade pupils recognize more rapidly than they are able to pronounce. Consequently oral reading in the intermediate grades tends to retard the development of recognition. Conversely,

2. In oral reading the eyes move ahead more rapidly than one can pronounce. Frequently they are so far ahead of the voice that words are mispronounced, even omitted, owing to the fact that vision and speech do not coöperate. Consequently the development of recognition becomes an enemy of excellence in oral reading.

3. The age of nine is a turning point in the life of the child. The intermediate-grade pupil has emerged from the period of social imitation and is now an individualist; he is more independent than the primary pupil in his desires, tastes, and habits of work. Not only so, but the instruction of the primary grades has made him capable of striking out for himself in the independent task of silent reading. Consequently,

4. The pupil of the intermediate grades will not respond to the formal instruction of the primary grades. His interest is no longer in form, because the teacher so desires, but in getting meaning from his reading in satisfaction of his own individual desires and cravings.

The contrast that we have just noted between the former and the present view of what constitutes good reading instruction in the intermediate grades emphasizes anew the proposition that silent reading shall predominate in these grades and that the aim of instruction shall be to make easy and rapid the process of reading for meaning. Effective rapid silent reading is again impressed upon us as the important outcome of instruction. The materials and methods of instruction are to be such as will best lend themselves to the development of the ability of pupils to comprehend what they read. What these shall be we may determine by recalling the discussions of Chapter VII relative to the nature of meaning.

Meaning is determined by habitual responses which grow out of experience. The discussions of Chapter VII have made clear that the meaning secured from the printed page is not to be explained by the mental imagery called up in the mind during the reading, but by the reactions, feelings, and attitudes of the reader to the words, sentences, and paragraphs as they appear in his consciousness. To this point there was added the important corollary that context is influential in determining meaning, and that it is necessary, therefore, that the reader be supplied with an abundance of contextual material. It is important now that we reconsider and give added emphasis to the point that it is one's *own habitual* mode of reacting that determines meaning. A complete statement of this point would be: What the reader brings to the printed page by way of knowledge and experience determines meaning quite as much as does the printed page itself.

For illustration let us consider one's habitual response to the word "cat." The response is the exact counterpart of the one that appears in the presence of the animal itself. It may be one of inward reaching out, of friendliness, or it may be one of inward withdrawal, of shrinking away, of fear. It is the outgrowth of one's first response in the presence of the animal, when friendly relations were first established or when one

experienced some unpleasant consequence from the first meeting, and of a long line of pleasant experiences or unpleasant ones, as the case may be, which has ensued. In other words, one's knowledge of the cat and his experiences in its presence determine his present relationship with the animal and, likewise, his habitual mode of response in the presence of the word. Thus it is to be explained that the word "cat" has for different individuals two entirely different meanings—the one representative of an animal to be friendly toward, to be petted, the other representative of an animal to be avoided and to be feared.

In like manner one's mode of reacting to all other words, to sentences, and to paragraphs is to be accounted for. One gets meaning—that is, he has reactions, feelings, and attitudes of mind—from the printed page, partly because of the arrangement of the words, sentences, and paragraphs on the page, but largely because of the habitual mode of response, which is the result of his knowledge and experience, that he brings to bear upon it. The more experience and knowledge one has as a background, the greater are the results in interpretation.

Extensive silent reading is an important means of broadening experience. Thus far our present argument justifies the following conclusions:

1. That meaning is to be explained by one's reactions, feelings, and attitudes; that is, one's habitual mode of response.

2. That one's habitual mode of response has been built up through experience.

3. That the secret of improving comprehension, therefore, is to enlarge and to broaden experience.

To these our present topic adds a fourth; namely,

4. That extensive silent reading is an important means of broadening experience.

This topic does not require explanation or discussion here. It expresses the point of view of the whole book; it is a summary statement of one of the central thoughts which Chapter II intends to convey; moreover, it will be returned to for

further consideration in the chapter which immediately follows the present one. The topic is introduced here as a connecting link between conclusion 3, above, and conclusion 5, which follows:

5. That extensive silent reading is the best possible means of improving the ability to comprehend.

The problem of the teacher. We are now able to state the problem of the teacher of intermediate-grade reading. It is to broaden the experience of the children through extensive silent reading in order that their ability to secure meaning from the printed page may develop. Improvement of the ability to read through much reading suggests the kind of methods to be employed. Selecting the largest possible amount and the right kinds of reading material and getting the children to read this material independently are the tasks which confront the teacher. Effective rapid silent reading is the goal of instruction.

The statement of the goal of instruction seemingly confronts the teacher as a twofold problem: in the intermediate grades children must learn to engage in reading that is both *effective* and *rapid*. How to organize instruction so that rate as well as comprehension will improve appears to be a distinct problem which requires separate consideration and a solution of its own. Actually, however, no dual task faces the teacher because of the demand for improvement in rate. In a preceding chapter (Chapter VIII) the point was impressed that *once the mechanics of reading has been mastered*, improvement in rate may be secured, not through the use of a special technique of instruction but only by a gradual increase in the children's power to read in larger and larger meaningful phrase units. Thus it becomes clear that in the intermediate grades the problem of improving rate of reading is in reality a problem of improving comprehension. The activities which lead to development of the ability to secure meaning react directly upon the reader's rate by endowing him with an increase in the powers necessary to an increase in speed.

Main points of the discussion. The foregoing paragraphs have indicated for further consideration two important lines of activity as means by which ability in reading of intermediate-grade pupils may develop. These are (1) activities of the teacher and (2) activities of the pupils. Let us discuss in turn each type of activity: the first for the sake of enumerating a variety of methods and devices of class technique; the second in order to impress the importance of extensive independent reading.

I. IMPROVEMENT THROUGH CLASS TECHNIQUE

The point of view of the present discussion relative to the importance of class technique as a means of improving ability in silent reading is implied in the following paragraph, which was quoted in Chapter II:

> So long has our profession taught that we think the only way to educate is *to teach*. We have not sufficiently known that *to live* will also educate. We have been busy providing the conditions for teaching. Only recently are we coming to know how to provide the conditions for living. Both have a place; and the main thing is living.[1]

In the following quotation the same viewpoint is expressed:

> In the third Nemean Ode of Pindar occurs an obscure passage which the English commentator Bury translates as follows:
>
> He whose knowledge is a lesson learned is a man in darkness, whose thought is as veering gale, and who never cometh to port with unerring course, but with ineffectual mind tasteth a thousand excellencies.
>
> For so many generations have teachers relied upon the "lesson learned" as the normal and ordinary procedure that lesson-assigning and lesson-getting have come to be pretty nearly synonymous with teaching and education in general in the mind, not only of the teacher, but of the general public as well. To such an extent is this true that

[1] Franklin Bobbitt, The Curriculum, p. 243. Houghton Mifflin Company, Boston, 1918.

even such praiseworthy innovations as the supervised-study movement have often tended to break down because they have merely tended to substitute one form of lesson-getting for another. Too often at that the new form of lesson-getting costs in training more than it gains in efficient learning. The nib of the whole supervised-study proposal is in the possibility it affords of substituting direct for indirect learning. Failing to make such a substitution, it often turns out to be only a partial success.

The lesson-giving, getting, and hearing type of procedure is really based upon the assumption that learning a lesson is transferable to learning the thing the lesson stands for. If the pupil learns something about Latin and enough about it, the assumption is that he can eventually read the thought of the Latin page. If he learns about the law of falling bodies, he will understand their behavior. If he can master a dozen pages in economics and stand cross-examination thereon, he will understand and can successfully react to the principles therein set forth. Such is the assumption, and, baldly stated, few could subscribe to it in theory, whatever their practice.[1]

The implications of the foregoing quotations are (1) that there are ways of learning other than the ones provided by class instruction and (2) that an important purpose of class technique is to encourage and to provide the materials for the learning process which must be carried on elsewhere. Let us consider them.

Our viewpoint emphasizes silent reading as an individual matter. That there are ways of learning other than those provided by class instruction is nowhere better illustrated than in the conception of the silent-reading process that is coming to prevail. Silent reading is an individual matter. The presence of one's fellows in class and of the teacher is not a requirement of the process. Between the reader and the reading material external factors do not need to be interposed; indeed, the entrance of external factors by way of questions, answers, discussions, directions, problems to be solved, projects to be performed,

[1] Henry C. Morrison, "Studies in High-School Procedure—Direct and Indirect Teaching," *School Review*, January, 1921, p. 19.

etc. not alone slows down the process but effectually prevents its performance. Silent reading is not a class exercise; any attempt to make it such destroys its very nature. It is not a process to be *taught* by the teacher; it is one that the pupil must *learn* through independent effort.

The teacher may encourage, but cannot teach, silent reading. The efforts of many teachers to organize class instruction in silent reading contrast sharply with the views they express of the nature of the process. They freely admit in discussion, though they forget in practice, that silent reading is an individual matter and that it ought to be undertaken by the learner as an independent exercise; and they are impressed with the importance of ability in silent reading as an outcome of instruction. And so, recognizing the importance of the process but failing to consider what it is like, they double their efforts to secure elaborate discussion of the content of reading selections, to analyze the selections into thought divisions, to ask questions, to provoke answers, to have passages read silently in class,—in short, to conduct "silent reading" as a class exercise. When the decision is reached to give additional emphasis to silent reading, many teachers seek to comply by increasing the length and the number of the class periods devoted to "silent reading" and by supervising more closely the independent efforts of the pupils. Enthusiasm becomes so strong that no selection is permitted to be read except in preparation of a lesson that is to follow. Most elaborate reports are demanded of the reading of the simplest selections.

What is the result of such efforts to "teach" silent reading? Briefly stated, such efforts do not provide for silent reading in class, nor do they encourage the children to engage in silent reading outside of class. Consequently the children do not learn to read silently, and the elaborately organized programs of the teacher fail of their purpose.

In order to be of service in improving the ability of children to read silently, class exercises should be organized not as a sub-

stitute for extensive independent reading, but as a means (1) of introducing new selections and stories to be read, (2) of checking the performance of the pupils and of recording the extent of their activities, (3) of establishing correct silent-reading habits, and (4) of stimulating the pupils to add to their efforts to read for meaning. The function of the teacher is to provide an abundance of suitable reading material, to introduce the children to this material, to encourage extensive reading, to provide suitable opportunities for independent reading during the school-day, and, finally, to keep the necessary check on the pupils' performances for the sake of recording their progress from time to time and of being able to recommend, as time goes on, the reading of selections suitable to their developing abilities and needs.

Silent reading is a process that cannot be *taught*; it must be *learned* through continued practice in *actual* silent reading extending over a long period of time. Pupils learn to read through much reading. The teacher's province is to *encourage* silent reading, not to try to *teach* it.[1]

The following pages give a number of suggestions for organizing class instruction so as to encourage extensive independent silent reading. Reports of methods and devices actually employed by successful teachers will be included. The suggestions and reports will be grouped in topics, as follows:

[1]For the backward pupil the teacher must organize special exercises for improving eye-movements and eliminating articulation and lip-movements. Abundant exercises aiming to improve eye-movements and the span of recognition, to decrease lip-movements, and to secure quick, accurate responses to thought units will not only increase for the backward pupil the rate of reading and comprehension but will correspondingly stimulate within him an interest in silent reading. The best device for securing these results is a series of flash-card exercises which can be given under time pressure (such as the Horn-Shields Silent Reading Flash Card Exercises, Ginn and Company; see, also, Watkins's "How to Teach Silent Reading," Lippincott). These enable the teacher to diagnose individual reading difficulties and work for correction of faults, while they train the pupils to read for thought, increase interest and speed, and lessen lip-movements.

1. The class work should be carefully planned.
2. A reading program should be provided.
3. The class exercise should set problems to be solved through reading.
4. The class exercise should encourage rapid reading for meaning.
5. Oral reading should serve to encourage silent reading.
6. The class exercise should introduce new reading material.
7. Recording and crediting the out-of-class reading of the pupils should be a function of the class exercise.

These topics we should keep in mind as statements of certain ways and means of encouraging children to learn to read through independent reading activities outside of class. Let us consider them.

The class work should be carefully planned. The foregoing paragraphs have indicated two reasons why the class work in silent reading should be subject to careful planning. In the first place, there is the necessity of organizing the class work in such a way as to avoid the usual round of questions and answers, discussion and disputation, which seem to be carried on in the average classroom entirely for their own sake. Secondly, the importance of utilizing the class activities as a means of encouraging independent silent reading out of class has been made the subject of explicit discussion. To accomplish properly the purposes of class instruction thus indicated the teacher must plan each recitation with care. The following "plan for a silent reading lesson" is introduced as illustrative of what the teacher may seek to accomplish through preliminary planning and preparation. It is an excerpt from a quotation from the report of the Supervisors' Round Table of Monmouth County, New Jersey. There is no intention in introducing it here to suggest its adoption as a fixed goal of endeavor in the preparation of every lesson. As a lesson plan it is somewhat formal and stereotyped, but as a suggestion of the possible aims of a class exercise it has its value.

PLAN FOR A SILENT-READING LESSON

Grades 3–5

The regular reading lesson should sometimes be a silent-reading lesson. Such a lesson should be chosen with reference to the type of response desired:

Narrative—involving action and conversation—is most suitable.
Exposition is good.
Description not easy to handle.

Children may answer orally or in writing. May illustrate by drawing or may dramatize.

I. Teacher's preparation.
   1. Thoroughly familiarize herself with selection.
   2. Look up all doubtful pronunciations and meanings.
   3. Prepare thought questions.

II. Preparation with the pupils.
   1. Teacher gives a background or setting for story by discussing (*a*) author; (*b*) type of story; (*c*) illustrations.
   2. New words and groups presented (*a*) by phonetics; (*b*) by comparison; (*c*) by sight.

III. Pupils read selection silently.
   1. Length of assignment depends upon the grade and difficulty of selection.
   2. During the first reading pupils should grasp the selection as a whole.
   3. Re-reading may be directed to finding specific information, or selecting facts which relate to a problem under discussion.

IV. Pupils explain difficult phrases in the text.
   1. Explanation of difficult phrases aims to (*a*) clarify ideas gained from silent reading; (*b*) increase pupils' vocabulary.

V. Teacher and pupils ask thought questions which involve:
   1. Grasp of the selection as a whole.
   2. Careful character study.
   3. Comparisons with previous reading experiences.
   4. Use of judgment.
   5. Word study.

VI. Oral reading of parts of the selection may be given as proof for:
   1. Answers to thought questions.

2. Character traits.
3. Facts which relate to a problem under discussion.

VII. Pupils reproduce the selection.
1. Written.
2. Oral.
3. Dramatization.
4. Occupational projects based on reading, such as sand-table, etc.
5. Pupils suggest original titles for the selection read.[1]

A reading program should be provided. In like manner the teacher of intermediate-grade reading should work out a reading program which should state year by year the purpose of the class exercises and give a schedule of the important class activities to be planned for each year. Such a schedule of large aims and major activities is just as important a means of giving the class exercises their proper bearing on independent reading as are the detailed plans for the daily class recitations. The following reading program for the intermediate grades is suggestive:

GRADE IV

Set a problem that reading will solve.

Prepare questions stressing the essential facts of the whole unit.

Determine the outline or plan of the story by finding the situations and naming them.

Expect pupils to reproduce a selection concisely after the first reading.

Make special assignments to different pupils to look up and report to the class.

Give speed tests to determine the reading pace and ability to gain thought.

Require the pupil to reproduce after a single reading what he considers the most important part in the selection read.

[1] Quoted editorially in the *Elementary School Journal*, December, 1920, pp. 249–250.

GRADE V

The silent-reading lessons in the fifth grade should aim primarily to train the pupils to acquire good study habits, such as: Concentration by means of speed tests. The ability to distinguish between important and unimportant statements. Rapid reference reading.

Have each child read a different book or story and prepare to read most interesting part to class. Require brief synopsis of the preceding and succeeding events.

Assign different projects or topics in geography, history or English to be worked out by referring to the library.

Encourage the pupils to read and discuss current events and to bring into the classroom clippings to prove their points.

Read story or book and make written report.

Pupils read and make thought-provoking questions to ask each other.

Let the class co-operate in making an outline to include the important facts or events contained in a selection assigned for silent reading.

GRADE VI

The teacher should guide each step in the pupil's work. The first essential to consider is the type of reading itself. This implies careful analysis, tabulation, and indexing of readers, grouping according to material, and so selecting the work that it will have a direct bearing upon the life of the child or correlate properly with his other work. In this grade children enjoy travel, biography, adventure, and fiction. Selections should comprise literary wholes.

The chief needs of this grade are: (1) broadening of vocabulary; (2) growth in appreciation; (3) development of rapid reading; (4) comprehension.

Skillful questioning by the teacher should emphasize and clarify uncommon uses of familiar words, puzzling phrases, unfamiliar idioms.

Growth in appreciation will increase in direct proportion to the skillful selection by the teacher of the material to be read.

Frequent testings should be made for rate of reading and for comprehension.

The teacher should prepare outlines and questions tending to produce the gathering of sentence elements into thought units, and the recognition of their relations to each other. Practice along these lines will develop the habit of skimming a page quickly, at the same time grasp-

ing the essentials of the page. In oral reading, this would permit the eye to run ahead of the voice, thus collecting the succeeding thought groups. In silent reading, it should produce rapidity.[1]

Continuing the quotation, we have the following suggestions for the work of the seventh and eighth grades which apply equally as well to the work of the intermediate grades:

GRADES VII AND VIII

. . . . . .

All sixth-grade suggestions apply here.

The proper teaching of silent reading implies careful preparation on the part of the teacher, analysis of the selection into scenes or situations, recognition of a definite purpose in giving each selection for study, and skillful questioning or outlining of the selection, so that the pupil may be able (1) to gain from the questions the gist of the selection, (2) to develop the same power of analysis in his own independent reading.

. . . . . .

The following outline may help to explain a good method for pupils to use:

1. Read the selection through to gain the general idea.
2. Into how many scenes (situations) does the selection naturally fall?
3. Classify the selection—humorous, narrative, descriptive, etc.
4. Read again, looking for unusual words, unusual groups, and so forth, using your dictionary where necessary.
5. Name and describe the chief characters, points of interest, etc.
6. Would you recommend the selection to a fellow-student? Why?[2]

Teachers of reading should make their own programs, shaping them to fit the peculiar needs of their pupils. They may take the form of a schedule of aims and activities suitable for differ-

[1] Quoted editorially in the *Elementary School Journal*, December, 1920, pp. 251–252.

[2] Ibid. pp. 252–253.

ent years, as illustrated in the quotations just given, or they may be worked out as a series of statements or recommendations to govern in a general way the whole course of study in the subject. To illustrate the second type of program we quote at length from a series of recommendations which has been suggested by Professor Bobbitt.

READING RECOMMENDATIONS FOR UPPER GRADES

It is recommended:

1. That the reading course be primarily designed to extend the thought and experience of the pupils to things beyond their immediate environment.

2. That silent reading be the method usually employed for this purpose.

3. That the translation of the thought and experience obtained from reading into oral expression for the purpose of passing it on to others (that is, oral reading) be of secondary consideration.

SILENT READING

4. That the content of the reading be chosen so as to give the pupils width of vision over, and depth of insight into, all important fields of human affairs.

5. That all reading done by pupils be taken into account in considering their training in reading.

6. That the reading side of all subjects be fully developed.

7. That most reading be for the sake of *having experience*, and not for the purpose of learning things in the sense of memorizing facts.

8. That the reading experience be adapted to the degree of maturity and the previous experience of the pupils.

9. That those responsible for the reading content be fully conscious of the purposes to be served.

10. That the content of the reading be chosen with definite relation, on the one hand, to the purposes to be served, and, on the other, to the characteristics of the children.

11. That out-of-school reading be considered educative experience as fully as intra-school reading; that pupils be given credit for such

reading; and that through the system of crediting and otherwise the outside reading be supervised by the schools.

12. That pupils be trained in the technique of silent reading so as to secure effectiveness and economy in the maximum possible degree.

13. That reading materials be so graded in degree of difficulty that the gradient is imperceptible.

14. That there be an *abundance* of reading experience covering in a *balanced* way all important fields of human experience.

15. That the quantity of reading material available be much greater than can be covered by any single pupil, however capable, in order to provide for all desirable types of personal tastes, desires, and appetites.

16. That minimum essentials which are to be covered by all be selected upon a basis of common needs, and furnished in sets of books large enough to supply all pupils of a class at the same time, for the sake of administrative effectiveness and economy.

17. That other sets of reading be chosen for special groups of pupils and supplied in sets large enough for these groups.

18. That readings beyond these minimum essentials be supplied in library copies sufficiently numerous to meet the demand.

19. That the children's reading habits be developed in connection with four types of library: (1) the room-library, in charge of the classroom teacher; (2) the school or building library, in charge of building librarian, preferably a branch of the public library, and open certain hours in the week if not all the time; (3) the central public library; (4) the libraries in the homes of the pupils.

20. That reading be always motivated in ways of which the teacher is conscious: human interest in the story; use of reading for problem-solving; getting information for pupil reports, etc.

21. That the teachers have a conscious technique for intensifying the motive actuating the pupils, and for stimulating them to read sufficiently.

22. That, as pupils grow sufficiently mature to understand, they be informed as to the various values and purposes of different types of reading; that they be stimulated to make application of this knowledge in their reading choices; and that in terms of this knowledge they be required to justify their choices.

23. That, in connection with their reading, pupils be trained to make sufficient and normal use of reference helps, dictionary, atlas, gazetteer, handbook of literary reference, etc.

24. That reading selections be used for *reading experience*, not for literary analysis, and not as things to be learned, recited, and examined upon.

25. That discussion, class work, etc., in connection with reading, be for intensifying, extending, and socializing the reading experience.

26. That the books in their mechanical make-up be adapted to the pupil's needs: clear print of proper size; proper length of line; proper spacing of lines; paper surface free from glare; no visual confusion due to "print showing through"; etc.

27. That attention be given to the proper posture of the pupils in their silent reading.

28. That for the sake of speed in silent reading the following conditions be observed:

a. Reading be strictly silent, not semi-articulatory.

b. Reading materials to be easy so that pupils can take in the thought rapidly and without hesitation.

c. Reading to be copious in quantity from the first grade onward.

d. Pupils to read straight ahead in the first reading of anything without interruption of any kind.

e. Flash-cards or their equivalent to be used in the intermediate grades for increasing the attention span. . . .[1]

The class exercise should set problems to be solved through reading. Although the round of questions and answers, reports and discussions, of the ordinary class exercise may not bear directly upon the process of reading for meaning, as was pointed out in foregoing paragraphs, yet it is possible and highly important for these activities to be organized so as to encourage independent reading for meaning both in and out of class. Questions may be asked, not for the sake of securing immediate answers, but for the sake of encouraging the children to look for answers in further reading. Reports may be had, not so much for the sake of testing reading that has been done as for the sake of enlarging the common interest in certain topics as a prelude to further reading. Discussions may be conducted in order to provide a desire for further information as well as to organize and to assimilate information already acquired. Class debates on disputed points are often found to be highly effec-

[1] Franklin Bobbitt, "Reading in the Elementary Schools of Indianapolis," *Elementary School Journal*, June, 1919, pp. 758–760.

tive in arousing interest in selections to be read. Pupils may be expected to secure meaning the more readily from the selections they read if they undertake the process looking for certain meanings, the clues to which they already have in mind. Questions, reports, discussions, debates, may be utilized to provide such clues.

For example, children may be assigned to read certain parts of "Some Merry Adventures of Robin Hood" in order to determine if Robin Hood should have been pardoned; they may read "Black Beauty" to find out the number of things Black Beauty had to become accustomed to in order to be a well-trained horse; they may read the story of the "Prodigal Son" to select the passages which illustrate the father's love; they may set themselves to the task of reading the "Man Without a Country" in order to prove that Nolan loved his country dearly. The following quotation further illustrates the point:

One lesson in particular belonged to a series of information lessons concerning Holland. The teacher had secured a large number of appropriate books on Holland. The teacher and class discussed the problem and selected a list of topics which should be developed. Each pupil chose a topic from this list and made it the basis of his study. He read carefully but rapidly all of the references which he could find relating to his topic. Pictures were secured, illustrative materials of various topics were collected, and the body of fact secured through his reading was organized in good form. Each pupil reported to his classmates the results of his investigation. Wherever necessary certain important references were read to the class. This method of procedure speaks for itself. It is highly recommended in place of some of the unprofitable exercises discussed in connection with oral reading in the intermediate grades.[1]

It is clear that in exercises of this type the interest is not in the reading exercise, but in the problem to be solved, the question to be answered, the meaning to be sought. Such exercises

[1] From Judd and others, Survey of the St. Louis Public Schools, Part 2. pp. 180–181. Copyright, 1918, by the World Book Company, Yonkers on Hudson, New York.

are valuable in that they "provide for the enlargement of experience, give ample opportunity for extensive reading, concentrate attention effectively on the content of what is read, and train in the careful selection and organization of subject matter."

The class exercise should encourage rapid reading for meaning. Closely akin to the class exercises which lead in an indirect way to improvement in reading for meaning are those which seek to improve this quality by means which are more immediate and direct. Such exercises provide for the process of reading to be carried on as an essential feature of the class work. The following paragraph describes the method:

> . . . The pupils read the paragraph rapidly and silently and then are questioned as to their comprehension of the thought. It is a method of enforcing rapid reading; of analyzing the essential ideas within the paragraph; of marshaling these ideas so that the pupil may have the information available. In certain classes there was observed an exceptionally superior method of testing the group's comprehension of the paragraph by means of certain types of problem-study rather than through simple reproduction. This type of drill appears to have a proper place in any well-organized plan of training pupils in methods of study. They need to be rather thoroughly drilled in this rapid comprehension and organization of the material in a paragraph. . . .[1]

Such is the common conception of a "silent-reading exercise." A somewhat more effective silent-reading exercise, and at the same time one that is unique and productive of abundant enthusiasm and interest, is reported as follows:

> MATERIAL: "How I Killed a Bear" by Charles Dudley Warner.
> PURPOSE: 1. *To improve comprehension and increase rate.*
> 2. *To assist in the appreciation of the humor.*
> PROBLEM: *To plan a motion-picture based upon this story.*
> PROCEDURE: 1. *Statement of problem.*

[1] Franklin Bobbitt, "Reading in the Elementary Schools of Indianapolis," *Elementary School Journal*, June, 1919, p. 749.

We see a great many moving pictures with many different plots. Where do you suppose the motion-picture director gets the stories for all the pictures he must produce? One pupil answered that people write them and another soon suggested that they take some from books. We are going to read a story this morning called "How I Killed a Bear" that I believe could be worked into an interesting motion picture. For the next half-hour let us forget that we are pupils of the Gardenville School and let us be motion-picture directors. Let us read through this story from the standpoint of a director and decide what scenes we will include and in what order.

2. *Solution of the problem.*

We will read ahead until we have decided upon the opening scene. The children set to work with a will, each one hoping to be the first to discover the opening scene. In a short time some one suggested it, adding graphic suggestions as to the arrangement of the stage and the action of the characters. All agreed to this and set to work to find the next scene. Here a difference of opinion arose. Some pupils wanted to include the account of the hero's previous experiences with a gun, but others objected on the score that this did not properly belong to the action "How I Killed a Bear." Some asked, "Well, suppose you do include it, how are you going to connect it with the story?" This objection was quickly answered by a wide-awake boy who responded at once, "Don't they often show what people are thinking about in motion pictures? All you would have to do would be to have him hold his gun and look at it as though he were thinking and then show these things." Here the teacher stepped in. "Before we can decide what to include in our picture I believe it will be necessary to decide whether the picture is to be exciting, funny, sad, or romantic." The name of the story suggested that it was exciting to some, while others, influenced by the humorous account of the hero's past experience with a gun as just read, insisted that it would have to be funny. The teacher suggested that the class read on before deciding.

The humorous account of a colored cook's encounter with a bear was read by the children with general amusement, as they were now on the lookout for humor. One member of the class who had insisted that this would make a good humorous picture, fearing that those on the opposite side would miss the point of the account, spontaneously arose and read aloud as soon as he discovered it, "He did not know whether she

would agree with him." At this point all agreed that the picture was to be humorous. Then if our picture is to be humorous, what kind of incidents must we be sure to include? "Funny," the pupils replied in chorus.

As the pupils went on to discuss each scene, even such minute detail as the "glad surprise" of the bear was appreciated. The pupils decided that they would have to have a well-trained bear, for if he failed to look glad, the audience would lose one laugh. They decided to include what the man was thinking when the bear came toward him, for it would certainly add humor. They explained that the scene in which the hero relates his experience to his home folks would have to be liberally interspersed with leaders, for the humor lay in the swift repartee. Then came a heated discussion as to the closing scene. Some wished to stop with the procession carrying the bear homeward, others with the crowd who assembled to view it, others with the hero just dropping off to sleep with "the last delicious thought," "I have killed a bear." This last suggestion was finally agreed upon, for the pupils decided that if it were presented skillfully it could be made very funny.[1]

The advantages to be derived from such a device as the one here described are thus reported:

The writer observed a part of this recitation and was struck with the enthusiasm and interest with which the pupils read and discussed. This is a fine example of the study-recitation type of silent reading, which should be used occasionally for the purpose of observing the pupils' silent-reading habits and for the purpose of developing better study habits. However, most of the silent-reading lessons should be of the type requiring definite study preparation in connection with problems set by the teacher or conceived by the pupils. This particular recitation is especially good in several respects. The method involved keeping constantly in mind the large view of the selection and at the same time a close scrutiny of the details in relation to the main problem. The pupils were learning how to select, compare, judge, exclude, appropriate, put together, and draw conclusions. It forced the slow readers to become more alert, concentrate better, and increase their rate of reading. The discussion helped them to keep the connection, to see their lack of thought-getting, and provided a motive for renewed effort. It resulted in keen appreciation of the characteristic elements of this unit of literature.[2]

[1] C. R. Stone, "Some Illustrative Silent-Reading Lessons," *Elementary School Journal*, September, 1920, pp. 30–31.

[2] Ibid. p. 31.

Oral reading should serve to encourage silent reading. Earlier discussions of this book have justified the organization of oral-reading exercises in certain grades on the grounds that they prepare for and assist in the development of some of the fundamental habits and associations involved in effective rapid silent reading. Moreover, it has been argued with marked insistence that such exercises should cease at the point where they begin to lose connection with the ultimate end sought in reading instruction, which is, generally speaking, at the beginning of the intermediate grades. The point has never been made, however, that a limited amount of oral reading may not be included as a necessary and important phase of the silent-reading class exercises. The fact that oral reading, at the proper times and in proper amounts, may be the means of encouraging further silent reading for thought we shall not lose from sight. Let us consider some suggestions, based on the experience and practice of skillful and successful teachers, which are pertinent to the oral-reading phase of the class exercises:

1. The members of a class may be encouraged to read passages in support of a judgment they are defending. The reader necessarily emphasizes the meaning phase in his reading; his hearers have certain phases of meaning called to their attention.

2. The pupils may be assigned the task of finding especially interesting, exciting, dramatic, or humorous passages in the articles they are reading silently and of preparing to read these orally in class. The preparation directs their attention to meaning; the oral reading may tend to encourage other members of the class to read the articles from which the passages were taken.

3. In content subjects, such as history, geography, nature study, and hygiene, the pupils may read clippings from newspapers and magazines and selections from books which are not accessible to all the class but which throw light on the topics under discussion.

4. Special "outside-reading" days may be arranged from time to time in which the pupils read interesting passages from

books that they have been reading independently. Others in the class are introduced to these books and may be encouraged to read them.

5. The teacher may occasionally read aloud for the pupils. The pupils unconsciously acquire ideals of good oral reading; at the same time they may be encouraged to undertake the reading of the same or similar stories and articles for themselves.

The class exercise should introduce new reading material. The foregoing suggestions about oral reading illustrate how the performance of the children may be made the means of introducing each other to new reading material, and suggest a device the teacher may employ for the purpose. Other devices and means should be employed as occasion permits in order to take advantage of this most important function of the class exercises. The mere mentioning of new reading material will sometimes secure the desired results, as "Here is a story in *St. Nicholas* telling of George Washington as an expert horseman," or, "This story is one of exciting adventure in the World War," or "This is about hunting wild animals in the jungles of Africa." Another effective means is to suggest the reading of certain articles and books by certain members of the class. This method was employed at the beginning of the year with a sixth-grade class under the writer's observation. At the end of three weeks thirty-three pupils had read eighty-seven new library books, and the more rapid readers were hurrying the slower ones so that an exchange of books could be effected at the earliest possible moment. Some teachers organize the class exercise once each week into a "library period" in which the merits of certain books are discussed by the pupils who have read them and the interesting features of new books are pointed out by the teacher. During this period the pupils return the books they have been reading, and others are assigned and charged to them.

Recording and crediting the out-of-class reading of the pupils should be a function of the class exercise. Recording and credit-

ing the out-of-class reading of the pupils are important tasks of the teacher for the following reasons: (1) A constant check on the pupils' reading activities is permitted. Whether the pupils are following or slighting the teacher's suggestions and assignments becomes thereby a matter of record. (2) The progress being made in silent reading by the various members of the class is brought to the attention of the teacher. Moreover, a record of the kinds of reading already done by a pupil is the best possible guide in determining what kinds he shall undertake next. (3) A comparative cumulative record of performance acts as a stimulus to all who are taking part. The slower readers are encouraged to read the articles and books that are listed as read under the names of a large number of their classmates, while the more rapid readers are encouraged to read still more in order to merit continued recognition as wide readers.

On page 268 is a description of a device made use of by a number of teachers and found to be effective: A large sheet of paper is ruled in cross section, and the names of the pupils and the names of the books being read are written in the spaces provided for them, as shown in the accompanying diagram. A sheet is provided that is wide enough to accommodate the names of all the pupils and long enough to contain the names of all the books that will probably be read during the year. When a book has been read its title is written in the first column, as shown, and a check ($\surd$) is placed under the name of the pupil who has read it. As others read the book checks are placed under their names. The record is posted in a conspicuous place in the room, and each week it is brought up to date. The record is given a prominent place in school exhibits, and favorable mention is made of it whenever occasion permits.

Summary. The problem of the teacher of reading in the intermediate grades is fundamentally different from that of the teacher of reading in the primary grades. In the primary grades

the purpose of instruction is to lead to a mastery of the mechanics; in the intermediate grades the purpose is to broaden experience through extensive silent reading, the idea being that the more of experience the child brings to bear upon his reading material, the greater are the results in interpretation. In the intermediate grades the child learns to read; that is, improves in reading through much reading. Consequently the problem of the teacher becomes one of selecting the largest possible amount of suitable reading material for the pupils and of getting them to read this material silently and for meaning.

Books Read	Pupil's Name								
		John Cotkins	Mary Brown	William Clark	Susan Ellis	Etc., Etc.			
Sailing the Seas		✓			✓				
Tom Sawyer		✓			✓				
Benjamin of Ohio	✓		✓		✓				
Captains Courageous	✓			✓	✓				
Etc., etc.									

The present chapter points out that improvement in silent reading does not result directly from class instruction, but directly from the independent exercise of silent reading. Silent reading is something to be *learned*, not something to be *taught*; proficiency in silent reading results primarily from the activities of the pupils, not from the activities of the teacher. But in order that the proper pupil-activities in silent reading may be carried on with the greatest possible enthusiasm, economy, and dispatch, the teacher finds it necessary to organize certain class exercises which are to serve as means of encouragement and direction.

The present chapter concludes with a discussion of a number of suggestions for organizing class instruction to encourage extensive independent reading. They are as follows:

1. The class work should be carefully planned.
2. A reading program should be provided.
3. The class exercise should set problems to be solved through reading.
4. The class exercise should encourage rapid reading for meaning.
5. Oral reading should serve to encourage silent reading.
6. The class exercise should introduce new reading material.
7. Recording and crediting the out-of-class reading of the pupils should be a function of the class exercise.

The chapter which follows will conclude the discussion of reading in the intermediate grades by pointing out how improvement may be secured through independent reading.

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CHAPTER XV

READING IN THE INTERMEDIATE GRADES (CONTINUED)

II. IMPROVEMENT THROUGH INDEPENDENT READING

The preceding chapter indicated two important lines of activity to be considered in undertaking the task of organizing instruction in reading in the intermediate grades; namely, activities of the teacher and activities of the pupils. The first type of activity has been discussed under the heading "Improvement through Class Technique." Its importance as a means of encouraging independent reading was made clear, and a number of methods and devices of class technique were introduced. We now arrive at the second main point of our discussion, "Improvement through Independent Reading." This we may discuss from three very closely related points of view; namely, (1) the nature of independent reading, (2) independent reading as a means of broadening experience, and (3) independent reading as a means of education.

The present chapter necessarily takes upon itself the nature of a review and of an elaboration of points already discussed. In this connection we should review the topic improvement of comprehension through independent reading in Chapter XIII and the introductory paragraphs of the topic on class technique in Chapter XIV in order to locate the following points, which provide the basis of our present discussion: (1) independent reading is silent reading; (2) it is individual reading; (3) it is easy, rapid, and interesting; (4) it is varied; (5) it is free from external requirements. Let us review each of these in turn.

Independent reading is silent reading. The facts which establish this point have been impressed upon us again and again.

The characteristics of silent reading and of independent reading are the same. Both are individual and personal; both should be easy, rapid, interesting, and varied; both are free from external requirements; both are undertaken because of individual, personal interests in the easy and rapid, free and uninterrupted assimilation of information about the varied phases of life and of its affairs and activities and conditions. Freed of its machinery of form and of all external requirements, and undertaken in order to gratify immediate personal interests, reading is necessarily both independent and silent—silent because it is independent, and independent because it is silent.

Independent reading is individual reading. The truth of this point is impressed upon the observer of ordinary reading practice in the intermediate grades. There the point is made impressive by contrast. Following ordinary practice the teacher insists that all pupils read from the same book. When one reads in class the rest must follow closely. When a lesson is assigned precautions are frequently taken in order to prevent the more rapid pupils from reading beyond bounds. The idea that different groups in the class may be reading different topics or chapters seems not to occur to the teacher, while the idea of each pupil reading a different book independently of class and teacher is looked upon, if it ever occurs, as a passing vagary of the wildest imagination. Reading under circumstances such as these is not individual reading, and it possesses none of the characteristics of independent reading. It is not independent, because it is not individual.

A wide difference in practice is to be observed in the schoolroom where independent reading is encouraged and where it is the rule and not the exception. Here an entirely different point of view prevails. The pupils read the articles and books suggested by the teacher, not for the sake of meeting a class requirement, but because their interests have been aroused in certain deeds of valor, in certain exciting experiences, in the habits of certain animals, in the modes of living of certain

peoples, in the lives of certain great men and women, in certain important discoveries and inventions, and they are seeking to satisfy these interests through reading. During the periods set aside for reading and during out-of-school hours the pupils may each be reading a different book: while one is reading "Tom Sawyer," another reads "Treasure Island," another "Captains Courageous," another the "Log of Tom Drake," another the "Life of Roosevelt," another "Old Stories of the East," and so on. One for the time is interested in romance and adventure, another in a particular biography, another in popular mechanics, and yet another in the most recent athletic news. Each possesses interests which are individual and personal; each is guided by individual desires and cravings; the reading done is necessarily individual reading, and being individual it is independent reading.

Independent reading is easy, rapid, and interesting. The present topic is closely related to two of the general principles which were worked out in an earlier section of this book. They are (1) reading material must be easy and its content not difficult to understand, and (2) the content of the reading material must appeal to the instinctive interests of the children. Our present discussion adds to the argument for a wider adoption of these principles.

Independent reading is necessarily easy, rapid, and interesting. If the reading is otherwise, it will not be undertaken *spontaneously* by the children; it will have to be *forced* upon them. It will be undertaken to meet certain class requirements, not to satisfy the individual interests and desires and cravings of the pupils. Independent reading is individual reading, and to be individual the reading must not be such as to discourage independent effort in undertaking it.

The distinction between "reading" and "study" needs to be kept in mind. Pupils will study—and it is important that they be required frequently to study—material that is neither easy, rapid, nor immediately interesting. This is perfectly in accord

with the demands of certain subjects that are to be learned, and does not disagree in any wise with the requirement for the development of more and more effective habits of concentrated application to the work of the school. But reading is not study. Reading is getting the meaning easily and rapidly from printed material, and the content of the printed material must appeal to immediate interests. Reading is mechanically easy, and both easy and rapid, because of the presence in the reading material of interesting and appealing content.

Independent reading is varied reading. In order to appeal to the instinctive interests of the children, the reading material provided for them must be as varied as their interests. This means that the reading material must be as varied as life itself, for the reason that normal children of the intermediate grades are curious about life and nature in all their mutations and diverse conditions and aspects. Their most striking characteristic is their desire to know. Their attention is drawn to all sorts of information so long as the information is in a form that favors ready understanding and assimilation. They will turn to reading in order to satisfy their curiosity and for answers to their multitude of heterogeneous questions.

Suitable reading material for the intermediate grades is, therefore, not exclusively of romance; not altogether literary, historical, geographical, or semiscientific; it cannot possess any one special feature to the exclusion of others. To be suitable it must be varied. It must abound in fiction; in narrative poetry; in stories from history, from geography, and from nature; in stores of romance, of adventure, of animals and of people, and of discovery and invention—in short, in stories from life in all its ramifications.

Independent reading is free from external requirements. In independent reading nothing comes between the reader and the printed page. The requirement of certain facts to be learned, of certain passages to be memorized, of certain questions to be answered or problems to be solved, does not distract the reader.

The reading is done for its own sake, not to meet the requirements of future recitation or discussion. Of course it is entirely proper on certain occasions for independent reading to be followed by recitation and discussion. The point is that while the independent reading is going on no thought is given to such requirements. Immediate interest which the reading itself fosters is the motive back of the process. It is the only requirement that independent reading can possibly meet.

Furthermore, reading to be independent must be free from all machinery of form that may make itself apparent to the reader. The presence of mechanical difficulties, such as new and difficult words and unfamiliar mythological and historical allusions in too great quantities, detracts from the immediate, personal interest, slows down the reading process, renders the reading too difficult, and changes the process from one of reading to one of study. The necessity of turning aside frequently from one's reading in order to seek the meaning of unfamiliar terms in a dictionary or glossary marks the reading material as too difficult for the reader, and the reader not yet prepared to engage in independent reading of material of this sort. Such material may be quite appropriate as regards every other characteristic; the fact that it is too difficult to be interpreted except by interruption of the reading process and a turning to outside sources of information renders it inappropriate for independent reading at this particular stage in the reader's development. At some later time it can be read with ease. It will then be appropriate for independent reading.

External requirements have thus been considered (1) as requirements imposed by persons other than the reader himself and (2) as requirements imposed by the difficulties of the reading material. The presence of either class of external requirement during the reading of a selection is a means of distraction, and to the extent that the reader is distracted from the interests that inhere in the reading material itself he engages in reading that is not independent.

Summary of characteristics. The foregoing discussions have characterized independent reading in five different ways, as follows:

1. Independent reading is silent reading.
2. It is individual reading.
3. It is easy, rapid, and interesting.
4. It is varied.
5. It is free from external requirements.

We turn now to an examination of independent reading from our second point of view; namely, independent reading as a means of broadening experience.

Experience is broadened through actual experiencing. This is something more than a catch phrase; it is a fundamental principle of learning and teaching. In order to understand its significance let us return for a time to the discussion of Chapter II. The second main division of Chapter II impressed the following truths which are pertinent here: (1) Primitive man learned through personal observation and experience. He observed and experienced life in his narrow world in all its various phases and conditions. His methods of learning was *experiential*; his means were his organs of sense. (2) The method of learning at the present time can be no different from that of former times. As the savage experienced in order to learn, so must we *experience* if we would learn. (3) Our world is not narrow like that of the savage; it is as broad as life is now and as it ever was in the past. Our world includes both things of the present and things of the past. (4) Therefore the *means* of observation and experience used by the savage fail us. We can experience but few things of the present and nothing of the past by means of the organs of sense. Though the *method* of the savage cannot be improved upon, his *means* must be supplemented. (5) The means to be relied upon today in order to experience is independent reading.

We do well to return to a consideration of primitive methods and means of learning and to examine them side by side with

those that prevail at the present. The savage traveled to all parts of his narrow world and observed events and conditions and things through his eyes of sense. Experience taught him what he knew. Today it is impossible for one actually to travel to all parts of our broad world of affairs and actually to observe all phases of life through his eyes of sense. But if we would be educated, we must *travel* to all parts of our broad world of affairs, both of the present and of the past, and *observe* life in all its phases. Experience must be our teacher, as it was the teacher of the savage. Only our *means* of travel and of observation are different. Today one is permitted to travel everywhere, even back into centuries that are past, on the wings of his imagination and to observe everything that happens or has happened through the eyes of written language—through independent reading.

Independent reading is experiencing. The experiential character of independent reading has been pointed out in previous discussions. When one reads independently he is for the time carried away in fancy. He is present in imagination at every scene portrayed, he takes part in every activity, he witnesses every movement of the story, and he is embodied in every character. Their actions and words are his own, he feels as they feel, and he is influenced for the moment by the same conditions, desires, and motives as they. Independent reading is by no means word-for-word memorization; it is actual experiencing in its broadest sense. It opens the gateway to the present that is beyond our immediate environment and also to the past; it is the means by which we are permitted to broaden our experience through actual, though imagined, experiencing.

Let us proceed now to a consideration of independent reading from our third point of view; namely, independent reading as a means of education.

The pupil learns through his own self-activity. Our present interest in this principle of learning is determined by the definitions we shall accept of education and of the educated man.

Education, let us say, is the result of training, and, in another sense, the training itself; while the educated man is one who has had training and as a result is able to engage in the same activities, both physical and mental, as the ones he had to perform during the training period, and in similar activities. Education is the result, in the form of powers and abilities and capacities, of the activities of the individual himself. Whether the education is skill in performing a physical act or ability to carry forward constructive thinking, the individual must himself have performed similar activities in order to have learned; that is, to have become educated. Intelligent practice we shall consider the prerequisite of education.

Education, then, in the sense of being able to carry forward constructive thinking results from the individual's own activities in constructive thinking; that is, in drawing conclusions, in reasoning, in solving problems. It is clear that one may read and get meaning from the printed page without engaging at all in thinking that is constructive. Reading for meaning is not necessarily drawing conclusions, or reasoning, or problem-solving. Consequently, if we would look upon independent reading as a means of education, as we have set out to do, we must consider, first, the general nature of constructive mental activities and, next, how independent reading aids in encouraging and in carrying forward such performances.

Constructive thinking is initiated by individual questioning. Thus far our discussion has covered the following points: (1) that education of the mind is the result of participation in mental activities and (2) that the mental activities indulged in must be the individual's own. We now proceed to trace the connection between independent reading and the exercise and development of one's mental powers. As a first step let us consider how independent reading helps to initiate the mental activities involved in reasoning, or problem-solving.

In order to engage in the individual mental exercise of reasoning about a problem and trying to find a solution, there

must be in the individual's own mind a question to be answered or a problem to be solved. A question asked by another does not necessarily become a question for one to think about and to answer. A problem presented by another may be of no concern to one for the reason that to him it is not a problem to be solved. He is not concerned with the solution, because he fails to see and to understand the conditions which govern the problem. For example, Einstein's theory of relativity does not arouse in our minds any profound thought; we do not worry ourselves trying to arrive at an explanation of the fourth dimension; and we are not particularly concerned about the newly discovered method of measuring the angular diameter of the stars. These are questions and problems for the scientist. Not being our own problems; not having arisen in our own minds; not having occurred to us except as questions asked by others, they are not problems in so far as we are concerned, and they are not capable of fostering in us any constructive thinking. We should be perfectly clear in our own thinking, before we attempt to follow the discussion further, that in order to be able to begin the process of reasoning out an answer to a question or of seeking the solution of a problem, a person must have in his own mind a question to be answered or a problem to be solved. We should be perfectly clear on the point that the first step in constructive thinking about any subject lies in finding questions about it to be answered and in discovering problems in it to be solved.

Individual questioning is initiated by acquired information. It is the common conception that the sequence of situations that are involved in constructive thinking is, first, the problem and, next, acquiring information to be used in solving the problem. The ideas seem to prevail that the getting of information necessarily comes last, and that a problem presented by another, or a question asked, necessarily becomes a subject of inquiry in an individual's mind. The fact is, as it was pointed out in the preceding topic, that something must go on in the

individual's own mind before a problem is a problem to him. The sequence accordingly is, first, the acquired information; next, the problem; and, finally, acquiring and organizing information in solving the problem. It is always true that interest in a problem is a strong motive for seeking information about it. It is likewise true that the problem in the mind results from information already there.

Strictly speaking, therefore, problems arise out of situations which confront the individual, information about the situations being the necessary prerequisite of the problem arising; problems are discovered in situations, the point being that the individual must be engaged in contemplation of the various phases of the situation before and at the time the problem is discovered; problems are, in a word, peculiarities of situations which are to be seen only as the situations are learned about by the individual. The acquiring of information must always precede the discovery of problems. The following paragraph, which relates to the origin of problems, may be helpful:

> . . . it is desirable to get in mind the idea . . . that a problem involves both a certain intellectual and a certain emotional condition in the thinker; a problem is a question involving doubt. Consequently, for our purposes, a problem is not merely a *topic*, as it often appears to be in some courses of study, nor is it merely a question. It is a type of mental condition in the pupil, a condition in which he is possessed of a question plus doubt. The more doubtful, uncertain, and perplexed he is the more intense is his problematic frame of mind. Creating such a state of mind in the pupils, consequently, is the starting-point of problem-solving activity. Several words to describe this initial frame of mind have been brought together by Professor John Dewey, our leading authority on reflective thinking, in his excellent book entitled *How We Think*. In one place (p. 12) he says, "The origin of thinking is in some perplexity, confusion or doubt." Again (on page 74) he speaks of "something unexpected, queer, strange, funny (i.e., odd) or disconcerting" as furnishing the starting-point for reflective inquiry. Finally (on page 9) under the heading "the importance of uncertainty," he speaks of a "genuine *problem*" as existing in "whatever—no matter

how slight and commonplace in character—perplexes and challenges the mind so that it makes belief at all uncertain."[1]

It is clear that the situations that initiate thinking possess for an individual the requisite characteristics of "something unexpected, queer, strange, funny (that is, odd), or disconcerting" only to the extent that his acquired information about these situations permit him to have an insight into their "unexpected, queer, strange, funny, or disconcerting" features. It is clear that acquired information in the mind arouses in the individual the mental condition of "perplexity, confusion or doubt" which is the origin of thinking.

Independent reading is an important means of acquiring information. We set out to consider in what way independent reading is a means of education. Thus far our argument has been as follows: (1) education results from the individual's own activities in constructive thinking; (2) constructive thinking, considered up to this point as reasoning or problem-solving, is initiated by individual questioning—that is, by the discovery of problems; (3) individual questioning is initiated by acquired information—that is, problems are discovered in situations with which the individual is somewhat familiar. We have only to review the important facts which were brought out in our discussion of the nature of independent reading in order to find the answer to the question before us.

Independent reading is undertaken because of individual interest in life in all its various phases and conditions; it is easy and rapid; and it is not hindered by external or mechanical requirements. A lot of reading is done. The more the individual reads, the more he wants to read and the better prepared he is to read. Independent reading is a means of acquiring information; this leads to a broadening of personal interests, and this leads to the acquiring of more information. Experience is broadened through reading.

[1] S. C. Parker, "Problem-Solving or Practice in Thinking." Reprinted from the *Elementary School Journal*, September–December, 1920, pp. 7–8.

Our conclusion is clear. Independent reading is a means of acquiring information. This encourages a questioning attitude which leads to the discovery of problems, and this in turn initiates the educative activities of constructive thinking.

Let us consider next how independent reading aids in the educative activities of constructive thinking when thought of as the drawing of conclusions or as generalizing.

Generalization progresses as information is acquired. In order to pass in review before us the characteristic features of the process of generalizing, it will be necessary for us to think of the mind not as a mere storehouse of facts that we have learned, or of bits of information that we have acquired, but rather as a sensitive personality upon which facts and bits of information leave their impress and then go their way. The mind is to be considered not merely as a filing cabinet in which facts are stored in orderly array, nor as an encyclopedia in which bits of information are collected and annotated and made ready for instant reference; it is to be thought of rather as a plastic substance which is molded and shaped and imprinted and marked by its contacts with the conditions and situations of the outside world. We learn a thing today and we may forget it tomorrow, but forever our thinking is characterized by the extent and depth of its impression. We learn of a situation, a happening, a proposition, or an event in complete detail, and straightway we cease to remember nine tenths of the details that are involved; but the mental reaction, the feeling, the attitude of mind which results stays with us always as a conditioning factor in our future thinking. Acquiring information in the sense of memorization of facts is not learning; learning is to be thought of rather as acquiring information in the sense of examining facts for the sake of their influence on our ability to discern, to appreciate, to feel, to conclude, and to generalize.

A generalization is to be thought of as being something broader and more inclusive than a conclusion or an inference. For example, it is possible for one to arrive at a conclusion, to

draw an inference,—not always the correct one, however,—from a single fact about a situation; whereas, in order to form a generalization, or a general concept, one must have examined *all* the facts which relate to the situation. A generalization may be defined as the common element in a whole series of related facts—common to all, and, therefore, general and not particular. It is, to be sure, a conclusion, but one that has been shaped and modified and defined by the characteristics and influences and limitations, not of a single fact by itself, but of all the facts which belong to the group. Arriving at simple conclusions and drawing commonplace inferences from single facts by themselves does not require the exercise of a high type of mental activity; whereas the ability to generalize—to see the common element in a whole series of related facts—is representative of mental activity of the highest sort. It is essential to have not only familiarity with all the facts concerned but also the ability to understand the relationship between them and to see the element common to each. The former essential is a matter of acquiring information, while the latter is a matter of training and practice. For our purposes we need to bear in mind that the former essential—acquiring information—is the prerequisite of the latter.

A generalization is not always a consciously formulated general conclusion. It does not appear always in a carefully formulated statement. Not infrequently it takes shape in the thinking of an individual as a general attitude or feeling or point of view which has unconsciously and progressively developed as he has gathered information. The facts one by one and the bits of information that are pertinent enter his mind, and they may leave it. They may all be forgotten in time, but the generalization remains. The details may be lost, but their common impressions have gradually grown up into the individual's attitudes and feelings and points of view.

Independent reading is a starting point in constructive thinking. Here, as in the topic just preceding, we are able to under-

stand the importance of independent reading as a means of education. Independent reading is an important activity because it is a most effective means of acquiring interesting information. Interesting information, we have seen, is useful for generalization in two ways: (1) as it is being acquired, generalization unconsciously and progressively develops; (2) when it has been acquired, conscious generalization may proceed.

Conscious generalization, problem-solving, reasoning, and conclusion-drawing are kindred activities; rather, like activities considered from different points of view. They each require a fund of information in the mind as working material and as a motive force behind the activity. Acquired information initiates constructive thinking, which is mental exercise, or mental training, and the prerequisite of education. As one of the most important means provided by the school for the acquiring of information, independent reading is to be looked upon as a means of education.

Summary. This will conclude our discussion of reading in the intermediate grades. In the preceding chapter it was pointed out that the purpose of instruction in these grades is to lead to a broadening of experience through extensive silent reading. The bearing upon improvement in ability to read was there indicated. In the first place, the reader improves in comprehension only as he gets in possession of larger and larger funds of information and experience and becomes more and more skillful in bringing these to bear upon the process of interpretation. Secondly, he improves in rate, granted that the mechanics of reading have been mastered in earlier grades, in proportion to the increase in his ability to get meaning; that is, as he becomes able to read in larger and larger meaningful phrase units. The chapter concluded with a discussion of a number of class devices that are useful in encouraging independent reading.

The theme of the present chapter has been the nature and importance of independent reading. The following points were discussed: (1) the five characteristics of independent read-

ing, (2) independent reading as a means of broadening experience, and (3) independent reading as a means of education. Throughout the discussion special stress was brought to bear upon the point that the important purpose of schooling in the intermediate grades is to fill the minds of the pupils with large amounts of useful and interesting information in order that they may be led to discover problems in the various situations of life and thus be prepared to engage in the important activities involved in constructive thinking.

READINGS

BOBBITT, FRANKLIN. The Curriculum, chap. xviii, on "Reading as a Leisure Occupation." Houghton Mifflin Company, Boston, 1918.

KERFOOT, J. B. How to Read. Houghton Mifflin Company, Boston, 1916. The point of view of the entire book is valuable here.

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CHAPTER XVI

READING IN THE UPPER GRADES

The problem of upper-grade reading is determined by the character of lower-grade instruction. By the time a pupil has completed the work in reading of the intermediate grades, as it has been outlined in the two chapters just preceding, he should be able to read with ease and a high degree of understanding any material of ordinary difficulty. Through much practice he ought by this time to have acquired definitely fixed habits of silent reading. Moreover, when he emerges from the intermediate grades, he should have a broad fund of information about the concrete experiences of life, both past and present, a discriminating taste for the best literature that is explanatory of such life experiences and suited to his age and attainment, and the ability to use books in the acquirement of any sort of information which may at any time be of interest to him or the subject of definite inquiry and discussion. In short, the pupil should enter the upper grades with a mastery, in the broadest sense of the term, of reading as a tool of learning. The extent of such mastery determines the character of the instruction in reading best suited to his needs.

The situation described in the foregoing paragraph with reference to the ability of upper-grade pupils to read is, of course, the ideal one. An approximation to this ideal, however, should be expected as the outcome of instruction in the lower grades. Each grade has a definite task to perform. Upon the successful performance of the task assigned depends the organization of the work in succeeding grades. The whole discussion of this book is based upon the belief that definite progress shall

be provided in the instruction that is planned for the various grades. For example, the purpose of the instruction in reading in the primary grades is mainly to lead the pupils to a mastery of the mechanics, and thus to enable them to make use of the art independently as a means of gathering interesting information in satisfaction of their individual desires and cravings. The supposition that this purpose will be accomplished by the end of the third year of schooling provides the basis for the organization of instruction in the intermediate grades. Likewise, the supposition that the instruction and practice provided in the intermediate grades lead to a mastery of reading as a tool of learning is the basic idea for the organization of the course of instruction in the upper grades.

That every teacher recognizes the necessity of organizing special kinds of instruction for retarded and backward pupils is an admission that not every pupil is able to complete the work of his grade on schedule time. The discussion of this special problem of the teacher—that of giving special help to backward pupils—we reserve for a later chapter. In the present chapter we shall consider the problem of organizing reading instruction for normal children of the upper grades who have already acquired a mastery of the reading process as a tool of learning.

The purpose of upper-grade reading is to improve upon the instruction of the lower grades. The concluding discussion of the preceding chapter provides the clue to the solution of our present problem. There it was pointed out that independent reading is a means of education for the reason that through its use the individual acquires a mass of interesting information which may lead to the discovery of problems and finally to the mental exercise involved in constructive thinking. The importance of constructive thinking, or the mental effort to solve a problem, as a motive for acquiring new information was mentioned in passing. Here is to be found the nib of our entire discussion of reading in the upper grades. It lies in the distinc-

tion that we should make between reading as a process merely of acquiring information before a problem is in the mind and reading as a process of collecting data in the effort to solve a problem that has entered the mind. If there exists no difference, it will be impossible to organize instruction in the upper grades that will improve upon the instruction of the lower grades; upper-grade instruction will be nothing more than a continuation of what has gone before. But if a difference can be shown, then the evidence will be at hand that will make clear the path that upper-grade instruction is to follow. A new task will be shown to be at hand for the school to undertake, a new method of instruction to be organized by the teacher, a new process to be mastered by the pupil. Accordingly, whether any difference exists between the two processes of acquiring information which involve reading and what is the extent of such difference, if any exists, become topics for our immediate consideration.

Instruction in any subject in the later grades of the school should improve upon and be in advance of the instruction that is given in earlier grades. If no new problems are at hand for the later grades to handle; if there can be no improvement or advancement made in the later-grade instruction, then in the particular subject under discussion instruction should cease in the earlier grades. Our immediate task, as indicated in the foregoing paragraph, is to consider what new problems there are to confront the upper-grade teacher of reading. In our discussion we shall refer to the process which must go on before a problem can enter the mind as "acquiring information," and to the somewhat similar process which may be carried on while a problem is being solved as "collecting data." Our effort shall be to show that the latter process involves reading that is assimilative, while the former process usually does not.

"Acquiring information" does not imply that the means are those of assimilation. A review of the characteristics of independent reading is important at this point. Independent read-

ing is interesting reading, freed of all requirements that are external, and undertaken for the sake of satisfying one's immediate personal interests and in order to gratify his curiosity. By means of independent reading a person is enabled to acquire a broad fund of interesting and useful information. Moreover, independent reading is rapid reading. The individual is carried rapidly from one point of information to another; rather, his attention is turned rapidly from one point to another for the reason that the interesting features of one bit of knowledge gained arouse a natural curiosity to find out what comes next, and so on. Interesting details are considered briefly, and dropped quickly for the consideration of others which for the time seem to be more interesting; bits of information enter the mind, leave their imprint, and go their way; attention is passive, following the pathway that is opened up by the process of reading and by the reading material; information is acquired, but not usually digested. This is the kind of reading that is valuable for practice, for the broadening of experience, and for preparation for the important process of constructive thinking. It is the kind to be emphasized in the intermediate grades and to be practiced by the individual throughout his whole lifetime. It is not the only kind, however, that is important and valuable, as we shall presently discover, for the reason that its very nature reduces to a minimum the possibility of assimilating information while it is being acquired; for the reason that it is undertaken merely in order "to believe," but not "to weigh and consider."

Of course, as the concluding discussion of our preceding chapter has made clear, an unconscious assimilation of information does take place at the time one is engaging in independent reading. This was defined as an unconscious generalization of the multitude of facts as they enter the mind through reading into attitudes and feelings and points of view. However valuable for later thinking such unconscious assimilation may be, the fact remains that it is assimilation of an elementary sort,

entirely passive in procedure, and indicative of the possibility of training the individual to engage in generalizing and assimilative reading of a higher and yet more valuable type.

"Collecting data" proceeds by means of assimilative reading. The independent reading that the pupil of the intermediate grades is encouraged to undertake leads him to the discovery of problems in history and geography, in hygiene and nature study, or, what is equally important, paves the way for the teacher of the upper grades to suggest such problems for solution. This is the theory which is gradually being adopted as the proper one for the organization of work and study in the elementary school beyond the primary grades. To state the matter in another way, the large purpose of intermediate-grade instruction is to acquaint the pupil with the concrete experiences of life in all its varying phases, to fill his mind with a multitude of interesting facts, to broaden his experience, to enlarge his interests; while the important purpose of upper-grade instruction is to enable the pupil through much practice to put together in his mind groups of facts in their proper relationships for the sake of determining the common idea that belongs to a group, which is conclusion-drawing, or problem-solving, or generalizing. Intermediate-grade reading is concerned with the task of initiating and providing the proper basis for the solution of problems. It seems that upper-grade reading should be concerned with the task of helping to carry on the problem-solving which belongs in the later grades of the school.

In the solution of a problem which has originated in his earlier reading, or which the teacher has suggested as growing out of a series of facts already in his mind, the pupil usually finds that he does not have at hand enough information on any one point to justify a conclusion. He turns to reading as the chief means of collecting the data that seem necessary to answer the question in his mind. Now, if at any time, the pupil reads with a purpose. Information that does not bear upon the topic under consideration he casts aside; but when a

fact seems to relate to the topic, he attends to it and considers it and evaluates it and examines it critically to see what influence it may have upon the question in mind. The pupil's main interest now is in the problem and its solution. He reads now for the results his reading will bring. He now not merely absorbs information; he digests it. He reads now not merely "to believe," but "to weigh and consider." His reading now is assimilative for the reason that he seeks and takes into his intellectual system those facts which provide strength for its exercise.

Reading of the sort just described differs from independent reading mainly in the matter of the requirements that are imposed. Immediate interest no longer dominates, else the reading ceases to be assimilative; on the other hand, it is conditioned at every stage of the process by the requirement of attaining an ultimate purpose, of answering a specific question, of seeking some definite information. Contrary to the conditions which prevail in independent reading which carries one away in fancy, in reading of this sort conditions are such as to make the reader the complete master of the situation. He does not passively follow the trend of thought marked out by the reading material, as in independent reading. Rather he makes use of the reading material in shaping his own trend of thought, which is at the time tentatively fixed and previously determined upon. In the one type of reading the reader permits himself passively to follow the author's thought; in the other the reader determines his own thinking, using the author's thoughts the while as the needs of the purpose in his mind seem to determine.

For example, the upper-grade pupil reads "The Log of Tom Drake" for the sake of satisfying his immediate interest in this story of adventure. As a by-product of his reading he acquires a large amount of valuable information on shipping. This information, together with similar facts in the pupil's mind, the teacher may refer to in such a way as to arouse questions rela-

tive to the probable future of the United States merchant marine. The pupil now sets to work to prepare such a topic for class discussion, or for other purposes that may be assigned. In his preparation the pupil now reads assigned articles in current periodicals, in his geographic readers, and elsewhere. He may re-read parts of "The Log of Tom Drake." Now his reading is assimilative for the reason that he reads for the purpose of collecting certain definite points of information which will enable him to answer a question or to formulate a conclusion. When he finds in his reading points of information which do not seem to bear upon the topic, he passes over them; those which seem to have a bearing he attends to by trying to determine their exact importance and precisely how they fit in with the body of facts he is building up in the elaboration of his topic.

Thus far our discussion has brought out two points that are significant: (1) that acquiring information by means of reading before a problem is in the mind proceeds by reading that is not necessarily assimilative; (2) that collecting data by means of reading in the solution of a problem proceeds by reading that is assimilative. The essential difference between the two types of activity is thus made clear. Our next task appears to be that of considering some suggestions for teaching assimilative reading in the upper grades. We now undertake that task, constantly reminding ourselves as we proceed that assimilative reading does not begin and independent reading does not end with the upper grades, but that independent reading is an important activity throughout one's lifetime and, as has been pointed out in previous discussions, assimilative reading may develop in earlier grades.

Suggestions for teaching assimilative reading. The following suggestions are included for the purpose of aiding both teacher and pupil in improving the assimilative reading which, by right, should occupy an important place in the activities of the upper grades:

1. A definite purpose should guide the reading.
2. The reader should attempt to grasp the central thought.
3. The reader should seek a bird's-eye view.
4. The reader should try to interpret.
5. The reader should judge the worth of statements.
6. The principle of selecting and using ideas should control.

A definite purpose should guide the reading. It has already been pointed out that assimilative reading is characterized by the fact that the reader has a purpose in his reading in the nature of a question to be answered or a problem to be solved. It has been pointed out further that the project and problem-solving work of the upper grades is especially adapted to encouraging this sort of reading activity. The content subjects of the upper grades offer numerous opportunities for the preparation of topics, for finding the answers to questions, for the solution of problems. To the means thus offered by the school for the encouragement of assimilative reading the teacher should bring supplementary assistance by way of special emphasis on the necessity for a purpose to guide the reading of the pupil.

The need for special help on the part of the teacher is clear. In the preparation of a large topic pupils are prone to let themselves be led into confusion through sheer inability to keep the large problem in mind while the details are being investigated, or through the apparent magnitude of the task which confronts them in the beginning. Frequently, too, pupils become so interested in mere details and in certain side lines of the main discussion as to forget the original large task they set out to perform. It is quite as necessary, therefore, for the sake of the topic being studied as for the quality of the assimilative reading that there be someone to act as the guiding spirit of the whole discussion. The painstaking teacher of the upper grades finds that it is necessary constantly to recall to the attention of the pupils the importance and purpose of the large topic or problem under consideration, and each day to bring before them the

purpose and bearing of the minor details that arise in the discussions. This is important for the topic itself, and it is important for the pupil's reading in the preparation of the topic. The teacher must constantly point out, or bring the matter up and have the pupils point out, the reasons why certain passages are to be read, the answers to be sought in the reading of certain selections, the purpose of turning to certain paragraphs for further information.

In addition to reminding the pupils to read with definite problems in mind, the teachers should from time to time conduct special class exercises to encourage looking for new problems and to give practice in reading carefully to solve problems. Certain paragraphs may be assigned for reading in class or in study periods for the new problems, or the new bearings on the large topic being studied, that may be found in them or suggested by them. The pupils may be directed to read with such questions in mind as: What problem or what new phase does the selection suggest? Does the selection suggest anything new about the topic? What new questions and problems are suggested? etc. Practice in reading carefully to solve certain problems already in mind is important. "Follow-up" discussions, to point out just what answers the reading gives, are necessary at times in order to encourage reading with a purpose.

The reader should attempt to grasp the central thought. For the sake of economy in one's reading for assimilation it is important that as early as possible the reader should grasp the central thought that is expressed. The reason is that the central thought of a selection governs the organization of all the ideas that are presented. The writer of a selection had a main idea to present; in his writing he ordered his entire discussion in terms of the main idea. Conversely, in assimilating the ideas that have been expressed in writing, it is necessary first of all for the reader to get a hint at least of the central thought before he can begin to comprehend the details that are presented with their arrangement and importance and bearing.

Special instruction and special drill in the methods of looking for the central thought in a selection ought to be provided by the teacher. The following suggestions on the use of the "signpost" paragraph are pertinent at this point:

. . . The paragraph that initiated this lesson is from the textbook on "Community Life," and reads as follows:

There are many different answers to these questions. (What should modern education be? What are the needs of today?) There are many people who say that the chief purpose of education should be to prepare boys and girls to support themselves; others insist that culture should be the chief goal; and a large number declare that education should be primarily for the promotion of social efficiency.

I recalled to the children the facts we had learned in a previous lesson, that the Spartans, the Indians, and the Puritans had chosen a kind of education for their youth which would prepare them for their later life, and that they had succeeded largely because they were united in opinion. I then asked them to read the first two paragraphs of the section and see if, in the author's judgment, we are united in our opinion today. They found, of course, that there are at least three different opinions. After these had been stated, I asked them what they expected the author to do in the rest of the section. They answered, "He will probably tell about each of these aims."

We then compared the purpose of this paragraph to that of a signpost, pointing the way of our journey with the author through his ideas. Next we pointed out that following the direction of a signpost brings the traveler to some destination, and I asked what was probably the destination we would reach if we followed the author's signpost. When I suggested that the destination of a *discussion* is generally a *conclusion*, or a *decision*, they saw that in this case it would be a decision as to which is the best aim of education. At this point I said: "I'll give you two minutes to find out which the author thinks is best. Where will you look?" "In the first and last sentences of the paragraphs," they answered. Inside of the two minutes they had discovered his preference for the third aim.

The next step was to see why the author expressed a preference and what were the faults of the other two aims. They pointed out the sentences which gave this information and found that social efficiency included both self-support and culture, and training in citizenship be-

sides. With these facts in mind the class was next asked to represent this signpost paragraph on the board. After a little thought they decided on a signpost with three arms, all pointing along the same road, the first arm bearing the legend "Self-support 3 miles"; the second, "Culture 5 miles"; and the third, "Social Efficiency 10 miles." The distances indicate both the order of the three topics in the chapter and the fact that the third is larger than the other two.

The striking points of the lesson were (1) the discovery by the pupils that they need read no farther than the second paragraph to know the main points of the discussion, (2) the realization that they could find quickly the conclusion drawn by the author, as the designation of the thought, and (3) the diagrammatic representation of these facts by means of the signposts.[1]

In addition to the exercises described in the foregoing quotation the following are important as means of giving practice and drill in looking for the central thought: (1) discussing the title of the selection, or topic, in order to make clear that the central thought is often hinted at in the title and that titles should be examined for clues; (2) reading carefully the introductory sentences and paragraphs; (3) carefully noting the topic sentences of the paragraphs to see how much they contribute to the main idea; (4) examining each paragraph to see if the main idea is repeated and underscoring or making a note of each repetition; (5) deciding how much each paragraph contributes to the main idea. Such exercises conducted in class will do much toward getting the pupils to approach their tasks of preparing topics through reading with the proper attitude and frame of mind for assimilation.

The reader should seek a bird's-eye view. Closely akin to the suggestion that the reader should attempt to grasp the central thought of a selection is the one that he should seek in the beginning of his reading a bird's-eye view of the ideas that the author has presented. In beginning the reading of a new book the pupil should learn to examine the title, the table of

[1] Edith Shepherd, "Some Silent-Reading Lessons in Junior High-School English," *School Review*, March, 1921, pp. 209–210.

contents, and the chief ideas of the chapters. The same activity should be performed before one undertakes the assimilative reading of any selection. Taking a few moments to glance at the topic sentences of the paragraphs and to consider their arrangement will help the reader to build up in his mind a framework upon which to arrange the details as he comes to them and considers them in his reading. From time to time class exercises may be devoted to such activities as rapidly examining selections for the outlines they suggest and setting down these outlines for further examination as to their accuracy and to the fidelity of the writer in following them. Thus pupils may be encouraged to read the selections critically with a view to judging whether the writer follows the outline he suggests, is orderly in his arrangement of details, and so on.

Getting a bird's-eye view ought not to be considered the final outcome of one's effort; it is rather only the beginning of one's effort to arrive at the thought of the writer. The idea should prevail that a bird's-eye view is important largely for the reason that it permits economical reading by encouraging the adoption of a purpose to be used as a guide and by helping to discover the central thought that the author has written down.

Thus far we have considered three suggestions for encouraging assimilative reading:

1. A definite purpose should guide the reading.
2. The reader should attempt to grasp the central thought.
3. The reader should seek a bird's-eye view.

The following quotation contains some valuable suggestions relative to all three:

Reading notes. The question of full or scanty notes arises in reading notes as in lecture notes. In general, your notes should represent a summary, in your own words, of the author's discussion, not a duplication of it. Students sometimes acquire the habit of reading single sentences at a time, then of writing them down, thinking that by making an exact copy of the book they are playing safe. This is a pernicious practice; it spoils continuity of thought and application. Furthermore,

isolated sentences mean little, and fail grossly to represent the real thought of the author. A better way is to read through an entire paragraph or section, then close the book and reproduce in your own words what you have read. Next, take your summary and compare with the original text to see that you have really grasped the point. This procedure will be beneficial in several ways. It will encourage continuous concentration of attention to an entire argument; it will help you to preserve relative emphasis of parts; it will lead you to regard thought and not words. (You are undoubtedly familiar with the state of mind wherein you find yourself reading merely words and not following the thought.) Lastly, material studied in this way is remembered longer than material read scrappily. In short, such a method of reading makes not only for good memory, but for good mental habits of all kinds. In all your reading, hold to the conception of yourself as a thinker, not a sponge. Remember, you do not need to accept unqualifiedly everything you read. A worthy ideal for every student to follow is expressed in the motto carved on the wall of the great reading-room of the Harper Memorial Library at The University of Chicago: "Read not to contradict, nor to believe, but to weigh and consider." Ibsen bluntly states the same thought:

> Don't read to swallow; read to choose, for
> 'Tis but to see what one has use for.

Ask yourself, when beginning a printed discussion, What am I looking for? What is the author going to talk about? Often this will be indicated in topical headings. Keep it in the background of your mind while reading, and search for the answer. Then, when you have read the necessary portion, close the book and summarize, to see if the author furnished what you sought. In short, always read for a purpose. Formulate problems and seek their solutions. In this way will there be direction in your reading and your thought.[1]

The reader should try to interpret. Conscious attempt on the part of the reader to grasp the meaning the writer seeks to convey is important for training in assimilative reading. In the preparation of a topic the reader seeks to collect information

[1] H. D. Kitson, How to Use Your Mind, pp. 29–31. J. B. Lippincott Company, Philadelphia, 1916.

which is pertinent; that is, he reads with a purpose of his own. In order best to fulfill his purpose it is necessary that the reader determine as nearly as possible just what the writer says and how the writer's ideas and information answer his questions and solve his problems. For example, the writer has set down a number of ideas and bits of information for the sake of developing and elaborating a particular topic, while the reader has in mind the collecting of some of the writer's ideas and information in the development and elaboration of a topic of his own, which may differ considerably from the writer's topic. Consequently it is important for the reader to approach the reading material with a critical, questioning attitude of mind such as may be represented in the following questions: What ideas and what information does the writer offer? What do these ideas and bits of information mean with respect to the writer's topic? What bearing do they have upon the central thought of the writer? Do they have a different meaning when set off by themselves? What meaning do they have, and how important are they in connection with my own topic? It is important for pupils to grasp the idea that the writer uses ideas for purposes of his own, and that in order to make use of such ideas the reader himself must have a purpose in his reading; that he must interpret the writer's ideas and understand how the writer has made use of them; and, finally, that he must translate them into ideas of his own if he would fit them into their proper places in the development of his own topic.

The reader should judge the worth of statements. Reference to this suggestion has been made from time to time in our foregoing discussion. In "collecting data" in the preparation of a topic or in order to answer a question or to solve a problem, the pupil turns to reading, not "to swallow" everything he reads, but in order "to choose" from all that he finds the information that suits his purposes. "What value do these statements have in building up my topic?" is a question the reader should always keep in the back of his mind. As foregoing paragraphs

have pointed out, the reader must first of all interpret what the writer is saying. The next task is to determine the value of the various statements so that irrelevant and unimportant statements may be cast aside and relevant and important ones retained for use.

The principle of selecting and using ideas should control. This suggestion reviews all that have preceded. It defines the activities that are performed in assimilative reading. All that one undertakes in carrying on the process of assimilation may be described by the terms "selecting ideas" and "using ideas." Assimilative reading is no more nor less than *selecting* from the mass of ideas one finds in the reading material those that suit his purposes, and *using* the ones selected according to the demands imposed by the topic to be prepared, or question to be answered, or problem to be solved. The main features of the activity have been referred to again and again, especially in the suggestions we have just been considering. In assimilative reading one seeks a bird's-eye view of the ideas that are presented and attempts to grasp the central thought; he tries to interpret the statements of the writer in terms of the use to which they are put by the writer and in terms of the possible use he himself may make of them; and, on the same bases, he judges the worth of the statements—all for the purpose of selecting and using the ideas he may find as his topic, or question, or problem may demand.

It is important for the teacher constantly to bring before his pupils suggestions relative to the process of assimilative reading and to provide training and practice in carrying out such suggestions. The following method of procedure has come within the observation of the writer and is here offered as suggestive of what may be undertaken by upper-grade teachers:

The eighth-grade teacher devoted one of his regular class periods in English each week to teaching his pupils how to read and study. This was the "reading and study period," so called in order that the pupils would come to understand as quickly as possible the general purpose of

this phase of their work in English. For subject matter and working material the teacher would select any topic from a content subject,—history, geography, agriculture, etc.,—in the preparation of which the pupils at the time were busily engaged and with which they were quite familiar. Usually the lesson for the day in the content subject was chosen as the lesson material for "reading and study." The purpose of the weekly exercise was to train the pupils in methods of preparing their lessons with the greatest economy of time and effort.

At the beginning of the period the class would review quickly the work already done in the preparation of the large topic, or project, of which the lesson for the day was a part. Next, the teacher would discuss with the class the questions and problems relating to the topic which yet remained to be answered and solved, stressing the particular questions and problems which constituted the work for the day. From these the teacher would select a perfectly definite one for special investigation and study. Practice in running down the answer, or solution, occupied the attention of the class for the remainder of the period. Such practice was secured by the class through participation in exercises like the following:

1. Determining tentatively and as quickly as possible the central thought of the reading material that had been assigned for reference.

2. Stating either orally or in writing, as the teacher may have directed, what bearing this central idea has upon the topic of the day, and to what extent it serves to answer the question or solve the problem now before the class.

3. Verifying the tentatively-determined central thought by a rapid reading of the whole selection.

4. Verifying by determining and marking the topic sentences of the paragraphs, and by a rapid continuous reading of these in order.

5. Paraphrasing the topic sentences of the paragraphs, or stating in a sentence each the meaning of each paragraph.

6. Grouping the paragraphs which appear to be very closely related.

7. Writing a topic heading for each paragraph or group of closely related paragraphs.

8. Determining what each paragraph contributes toward answering the question or solving the problem, and how much is left by each unanswered or unsolved.

9. Stating what clues are suggested to the answers and solutions to be sought for the kindred questions and problems that are a part of the topic under discussion.

The number and order of the exercises were varied as the occasion seemed to demand. Criticism by the pupils of the worth of each exercise was encouraged and was usually free. Some would point out to the class how much help they had secured through certain of the exercises, and of how little value other exercises had been; while other pupils would offer criticisms that were radically different. Some would attempt to show the utter impossibility of understanding a certain point without the aid of such and such exercises, and others would be equally insistent that these exercises had led them to understand nothing they had not already known. Gradually, by means of such open discussion and criticism of the exercises, the pupils came to adopt the attitude that any of the exercises is valuable only according to the demands of the topic being prepared, their understanding of the question, or problem, their present familiarity with the information presented, etc., and that in the preparation of their lessons they should choose to perform only those exercises which would give them help in securing the information and ideas they may be looking for. The pupils from time to time were encouraged to offer suggestions relating to the modification and improvement of the exercises. Frequently, a part or the whole of a class period would be consumed in considering and discussing suggestions relative to the best methods of attack on the topic or lesson for the day. Interest in and familiarity with the subject matter of the topics chosen for lesson material served to prevent, or to relieve, the monotony of the practice exercises.

Assimilative reading and study are synonymous. From time to time in our preceding discussions we have pointed out the distinction between reading and study. This distinction we have preserved in our present discussion of the difference between reading to "acquire information" before a problem is formed in the mind and reading to "collect data" for the sake of solving a problem. Our discussion of assimilative reading has been a discussion of methods of study, and the suggestions that have been made for the improvement and encouragement of assimilative reading have been in reality suggestions which bear upon the problem of how to teach upper-grade pupils to study.

The independent reading taught in preceding grades is to continue. "Improvement of one's ability through much read-

ing" is the slogan for the upper grades of the school as well as for the intermediate and primary grades. If there is to be any variation in the amount of independent reading from intermediate to upper grades, the variation should be in the direction of an increase in amount rather than in the direction of a decrease, for the reason that upper-grade pupils may be presumed to be more effective and more rapid readers than the pupils of the lower grades. The reasons for much reading are the same whether the pupil is in the upper or the lower grade. Independent reading still remains an important means of broadening experience and of education.

In the present chapter nothing has been said that detracts in the slightest degree from the emphasis that preceding chapters have placed upon independent reading. The purpose of the present chapter has been rather to point out that there exists for the upper-grade teacher of reading a special mission to undertake in his instruction and a special type of reading ability to develop among his pupils.

Summary. This will conclude our discussion of reading in the upper grades. The chapter has made clear the point that there exists a special problem of reading instruction for the upper-grade teacher to undertake and endeavor to solve. While "collecting data" in the solution of a problem or in the development of a project is a task begun in the lower grades, it remains for the upper-grade teacher to devise ways and means of giving special help and instruction in the methods of carrying on such work. It has been pointed out that the primary purpose of intermediate-grade instruction is to fill the minds of the pupils with all sorts of valuable and interesting information, to broaden their experience through wide reading, and thereby to lead them to the discovery of problems, leaving to the upper grades the special task of giving pupils exercise in the solution of problems. The following suggestions were offered:

1. A definite purpose should guide the reading.
2. The reader should attempt to grasp the central thought.

3. The reader should seek a bird's-eye view.
4. The reader should try to interpret.
5. The reader should judge the worth of statements.
6. The principle of selecting and using ideas should control.

The foregoing suggestions receive valuable supplement and elaboration in the following excerpts from an article by Professor Lyman:

Silent-reading activities for one day of each week might be distributed by months, weeks, and days as follows:

SILENT-READING OBJECTIVES FOR SEVENTH GRADE

1. First month: *Speeding up silent reading.*

a. Tests to acquaint pupils with their rate of reading.

b. Attacking new words boldly (individual difficulties in word-analysis, etc.).

c. Trying to see several words at one time (grouping and phrasing for perception of thought groups).

d. Learning when to read rapidly and when to read slowly.

2. Second month: *Purpose in reading* (purposes and problems, old and new; goals).

a. Does the reader bring a problem to his reading?

b. Does the reading itself suggest a problem?

c. Reading carefully for one's problem.

d. Finding a new problem growing out of one's reading.

3. Third month: *Grasping the central thought in reading* (unity and forward movement of thought).

a. Is the master-idea in the title?

b. Finding the clue sentence and signposts.

c. Is the master-idea repeated in each paragraph?

d. Contribution of each paragraph to the master-idea.

4. Fourth month: *Getting a bird's-eye view of the reading* (comprehending the reach; recalling main heads).

a. Noting the plan of the writer.

b. Selecting the outstanding ideas.

c. Details building up each main thought.

d. Stopping to recall the main points.

5. Fifth month: *Helping the writer in reading* (the reader's active participation).

a. Two minds active in reading.
b. Reading between the lines.
c. What is the writer's message for the reader personally?
d. His different message for other people.
6. Sixth month: *Tying up what we know with our reading* (the meaning of assimilation).
a. Recalling similar experiences of one's own.
b. Recalling different experiences.
c. Asking questions of the writer.
d. Tying up one lesson with another.
7. Seventh month: *Selection in our reading* (personal preferences).
a. Discovering personal likes in reading.
b. Following the promptings of curiosity.
c. Determining the worth of a selection.
d. Passing by the unimportant.
8. Eighth month: *Judging values in our reading* (weighing the worth of statements).
a. Whose statements may one rely upon?
b. Having our own opinions when we read.
c. The difference between knowing and guessing?
d. Being perfectly sure and fair and honest.
9. Ninth month: *Making use of our reading* (active utilization of results).
a. Being alert to solve problems.
b. Storing ideas away for future use.
c. Putting information into action.
d. Various ways of using our reading.

. . . . . .

The second month's work, *purpose in reading*, strikes directly at the aimless way in which many pupils take up a book to "get their lesson," after receiving the traditional assignment, "Go as far as page 184," or "Study to the end of the chapter." Class discussion and laboratory work, embracing frequent excursions into current lessons in other classes, are based upon what the *purpose* in reading is, what the specific problems in the mind of the reader mean, how the reading itself, examined chiefly with certain objectives in mind, may still be able to suggest new problems to an alert mind. Here is abundant opportunity for developing the contrast between slow, deliberately slow, perusal of critical parts which contain the meat for a reader's primary purpose,

and rapid summary passing over of less essential matters. What is a goal in reading? What are the criteria by which side lines may be recognized?

The work of the third and fourth months has to do with the more *receptive* aspects of the reader's task. Pupils are to be taught that their first duty is finding out, understanding, and remembering exactly what the writer has to give them. The eight subheadings indicate lines of discussion which will lead to an understanding of and practice in the *overlooking* habits by which a good reader, in a detached and more or less impersonal way, gives the writer his opportunity to tell his story to a fair-minded listener.

For months five to eight inclusive are suggested laboratory activities which have been found to give seventh- and ninth-grade children much delight. They are now specifically taught to regard their reading as a process to which they are privileged to contribute. They are playing a game as active partners with the writer. Their minds are as active in the reading process, trying to help, to supplement, to inquire, and to direct, as they are in the oral composition class, when they are listening to one of their fellows. Keynotes for the successive months are Helping, Supplementing, Selecting, and Evaluating. The ninth month brings the cycle back to its starting point of months one and two, and leaves uppermost in the minds of the pupils the active utilization of results as the chief goal of reading for the purpose of study.[1]

The next chapter. In the chapters bearing on the methods and devices of instruction in reading in the various grades (Chapters XI–XVI) a course of study has been mapped out for the pupil who is able to complete the regular work of each grade on schedule time. In the chapter which immediately follows the giving of special help to retarded and backward pupils will be the subject of explicit discussion.

READINGS

KITSON, H. D. How to Use Your Mind, chap. ii, on "Note-Taking." J. B. Lippincott Company, Philadelphia, 1916.

SWAIN, G. F. How to Study. McGraw-Hill Book Company, Inc., New York, 1917. Many valuable suggestions are given in this book.

[1] R. L. Lyman, "The Teaching of Assimilative Reading in the Junior High School," *School Review*, October, 1920, pp. 605–606, 607–608.

CHAPTER XVII

SPECIAL HELP TO BACKWARD PUPILS

Backward pupils add to the complexity of the teacher's task. The discussions of the foregoing chapters on the course of study in reading have introduced us to an outline, or schedule, of progress in ability to read that is appropriate for children in successive grades from the first to the eighth. For each grade, or group of grades, a specific purpose of instruction has been advanced and a definite degree of ability has been recommended. In the first grade the problem is to train the pupil to attach meanings to the printed symbols of a stock of familiar words, to read the simple, interesting selections of his primers and first readers with a fair degree of fluency and independence, and to acquire a limited ability to recognize new words. In the second and third grades the teacher's task is to encourage the development of ability in comprehension, in rate and fluency, and in accuracy and independence, to the end that the pupil will have secured a mastery of the mechanics of reading by the time he has reached the fourth grade. In the intermediate grades the pupil broadens his experience through extensive silent reading and thus prepares himself to engage in the activities of constructive thinking and to take part in the upper grades in the exercises which give training in assimilative reading. The instruction recommended for each grade is designed to advance the ability of the pupil beyond that of the grade preceding and to prepare him to receive the full benefit of the instruction given in the next grade. The supposition prevailed that the pupil was prepared for the work of each grade by having completed on schedule time the work of preceding grades.

That there are to be found in every grade of the school many pupils who fail to make progress in ability to read in accordance with the desired and accepted schedule is a fact that is strikingly evident to elementary-school teachers. Some are temperamentally slow; others have been the victims of unsuitable methods of instruction in earlier grades; and there are others who fall behind because of poor health, or irregular attendance, or a late start to school. But whatever the cause of backwardness, the fact of consequence is that the presence of backward pupils adds to the complexity of the teacher's task.

Foregoing chapters have impressed the fact that the teacher of reading must constantly be on the alert, must improve every moment, and must take advantage of every opportunity, in order to be able to advance the pupil, who previously has been well prepared, from one grade to the next. The difficulties of such a task are apparent only to the thoroughgoing student of the reading process and to the conscientious teacher of reading. Now, when one adds to these difficulties those which are incident to the task of instructing pupils who previously have failed in necessary preparation, he begins for the first time to appreciate the magnitude of the task which confronts the busy teacher in every grade of the school. There is the ordinary amount of instruction to be carried on for the benefit of the pupils who are prepared, and, in addition, there is the special help, or the extra instruction, that must be organized and administered to those who in preceding grades have fallen by the wayside.

Backwardness is of various kinds and degrees. One of the reasons why the presence of backward pupils in the reading class adds so much to the difficulties and complexity of the teacher's task is the fact that backwardness appears in so many forms. The term is by no means specific. There are as many kinds of backwardness in reading as there are of specific abilities, and one can find among pupils the lack of specific abilities in varying degrees. Indeed, in every grade the teacher will find

as many forms of backwardness in reading as there are pupils who are backward.

In the primary grades there are pupils who are falling behind in their ability to recognize words once learned, or only partially learned; others have difficulty in learning new words and, as a consequence, are entirely dependent on the help of the teacher; some flounder in periods of confusion; others read laboriously and with an excess of analysis; some read in a manner that is lifeless in the extreme; others read with good expression, but attach to words only the reactions of pronunciation. In the grades beyond the primary, pupils are to be found who are unable to get meaning because they have never mastered the mechanics of the process, while others accomplish just as little in reading for meaning, for the reason that they have mastered mechanics for mechanics' sake alone and entirely apart from interpretation. Some are slow and laborious; others skim the pages of their reading with reckless abandon. Many pupils are retarded in silent-reading ability because of too much instruction in oral reading, and there are others who find it difficult to get meaning because of very limited reading experience. The classifications[1] of errors in oral and silent reading, shown on the following page, are suggestive of the extent and variety of the types of backwardness among children in the grades.

Deficiencies can be met through individual instruction. The fact of greatest significance to the thoroughgoing teacher of reading who would undertake the organization of remedial instruction is that remedies cannot be applied to the cases of backwardness indiscriminately. The reason is clear that the teacher would not think of giving second-grade instruction to a fourth-grade pupil or of intermingling first-grade pupils with third-grade pupils. The reason is no greater why the pupil who has difficulty in recognizing words independently and the pupil

[1] C. J. Anderson and Elda Merton, "Remedial Work in Reading," *Elementary School Journal*, May, 1920, pp. 685–686.

ERRORS BY THIRD-GRADE PUPILS IN ORAL READING

Types of Errors	*Percentage*
Repetitions	15
Insertions	14
Omissions	8
Substitutions	24
Mispronunciations	3
Accent	4
Portions omitted	7
Portions inserted	10
Omissions not changing meaning	4
Additions not changing meaning	2
Vowel sounds	2
Confusing letters not governed by rule	1
Wrong syllables	3
Repetitions to correct errors	3
Not attempted	1

TYPICAL ERRORS OF SILENT READING

Types of errors	*Percentage*
Meager-meaning vocabulary	33
Inability to find the essential idea	19
Omission of part of idea due to short unit of visual recognition	14
Giving general thought instead of specific answer, or specific instances instead of general thought (that is, inability to get definite information from material read)	13
Inaccuracy due to carelessness or haste	4
Failure to note carefully small words or key words	4
Failure to differentiate between words somewhat similar in spelling	3
Substitution of pupil's own thought for that in paragraph	4
Inability to think logically in response to question	4
Reading word for word rather than by thought groups	(Not given)
Vocalization and lip movement	(Not given)
Using finger to follow line	(Not given)
Short span of attention, resulting in loss of place, omission, and repetition of words	(Not given)
Slow rate of silent reading	(Not given)

who reads for pronunciation rather than meaning should be put together in the same class and subjected to the same remedial treatment. The teacher recognizes that the various abilities that are necessary for effective reading require for their development each a special device of instruction. It requires no different line of reasoning to reach the conclusion that the pupils of a grade who are afflicted with different kinds and degrees of backwardness need each of them a special form of help. The failure of regular instruction to meet individual needs is illustrated in the following paragraphs:

Four years ago a boy who now ranks slightly above the average of his age-group in general intelligence began his school career. He advanced regularly with his class until the autumn of 1920. At that time it became necessary for him to discontinue regular school work because he was unable to read. In class discussions, in ability to solve problems, and in all phases of school work which did not involve reading he equalled or excelled his classmates.

A careful analysis revealed the fact that the boy had never established the habit of moving his eyes regularly from left to right along a line. At times the first fixation was near the end of the line; frequently it was near the middle of the line; and sometimes it was near the beginning. The remaining fixations were irregular and followed no definite order. Drill exercises were organized which consisted of series of short words typewritten with half-inch horizontal spacing. The boy was required to read these words for five minutes each day in order to cultivate regular habits of eye-movement. That there was rapid reorganization of his method of procedure was clearly evident in his reading. After considerable progress had been made, a simple story was typewritten, again with a half-inch space between each unit. Finally, stories were read, still during the drill periods, directly from books. The facility and accuracy with which he came soon to read indicated that one of his major difficulties had been corrected. Other problems, such as increasing the span of recognition, were then attacked. At the present time the boy is making rapid progress and will doubtless be able to resume work with his class at the end of the first half-year of the school year.

This case has been cited as an illustration of the failure of regular instruction to meet individual needs. There are doubtless thousands of

boys and girls who fail each year and are unable to continue with their classmates because of peculiar defects which could be readily remedied. The results are discouragement, retardation, and elimination in far too many cases.[1]

As a necessary preliminary to the giving of special help to backward pupils the teacher must be able to recognize not only that certain pupils are backward but also in each case what particular ability each pupil lacks. The pupil who fails is easy to recognize; why he fails and at what points are problems not always easy of solution. The teacher who is not qualified to teach reading because he does not know what specific abilities ought to be developed in each grade, and the methods to be employed in developing each, will find the task of determining the causes of backwardness insurmountable. The teacher who is qualified to teach reading can determine why and at what points pupils are falling behind, because he knows and is able to recognize the abilities that are the waymarks of every stage of progress through the grades. The present chapter will be developed on the assumption that being able to recognize the presence of specific abilities is the equivalent of being able to recognize their absence.

The failure of most teachers to alleviate the difficulties incident to the task of helping their backward pupils to reach the standard set for their grade in school is due in most cases to the fact that backward pupils are considered as belonging in a class by themselves. Sometimes, of course, no effort is made to organize special help, but not infrequently it occurs that the teacher makes an honest effort to deal with the problem of backwardness and fails because the backward pupils are treated as a group rather than as individuals. The physician is successful only to the extent that his diagnosis of the ills of his patient is correct and his application of remedies specific. The

[1] W. S. Gray, "Individual Difficulties in Silent Reading in the Fourth, Fifth, and Sixth Grades," the Twentieth Yearbook of the National Society for the Study of Education, Part II, pp. 48–49.

"cure all" is anathema to the reputable physician. The successful teacher of arithmetic prescribes a special remedy for the pupil who is deficient in subtraction and one that is quite different from the one prescribed for the pupil who cannot multiply. Likewise, the teacher of reading must apply "cures" that are specifics, rather than "cure alls," if he would hope to remove the reading defects of the pupils who previously have failed to make progress.

Special help should be undertaken by the classroom teacher. The tendency of a large number of teachers of reading is to postpone the consideration of the problem of organizing special help for the backward pupils until the matter is brought to their attention by the supervisor or "special" teacher. This tendency results in most cases, not from a desire to shirk the ordinary duties of instruction, but from a natural hesitation on the part of the teacher to undertake the performance of a task for which he considers himself unprepared. It is one of the aims of the present chapter, therefore, to impress the fact that the classroom teacher has the best opportunity and is the best-equipped individual in the school system to initiate the work of helping the backward pupil, and that he is successful only to the extent of his ability to bring all his pupils up to the standard set for his grade. To this end the chapter will describe a number of specific remedial devices of instruction, such as have been tried out with success with individual cases of backwardness and are illustrative of what any well-prepared classroom teacher is able to undertake without the assistance of "special helpers," "trained supervisors," or "experts." The following excerpts from an account of how a teacher in the fourth grade gave special instruction to her backward pupils are suggestive:

> In October pupils were tested to ascertain the oral- and silent-reading rate of each individual. Five oral and five silent trials were made, and the averages obtained and used as measures of reading rate. The pupils were then asked to read as much as possible in a minute without making any mistakes. With but one exception the rapid readers made

fewer mistakes. Comprehension was tested informally. Rapidity and comprehension seemed to go together. Intensive instruction was given. Especial attention was paid to poor readers. After two weeks there was no improvement in the rate of the three poorest readers. The only noticeable improvement was made by the better readers. It was evident that the least capable were getting the least from instruction, though receiving more attention. This presented a problem. Why did they fail to improve? They were questioned. Not one of them liked to read. Not one did any reading except when forced to do it. They liked to listen to stories. How could they be reached?

. . . . . .

Ten types of instruction were planned to cover as many individual needs. The class reader was supplemented by a carefully selected list of books for extensive reading. Methods were devised whereby maximum effort would be called forth and interest sustained. Rate was found to be a measure of improvement which the children could comprehend. They were therefore made aware of their rate of reading and kept graphic records of their individual standings in monthly regrouping tests. "A" readers were those whose rate was more than thirteen lines per minute. They were given the privilege of selecting their own material from the supplementary bookshelf for silent reading. This shelf was called "Story Row." The books were arranged in groups according to content. A regular library system was used so that the teacher could ascertain at any time what each child was reading and what he had finished. The quality of the silent reading could thus be revealed by conversation with the pupil. Children who had enjoyed a book were asked to review it for others who might care to read it. Favorite chapters were illustrated. Some children chose informational material. They would recount interesting things which they had learned from their reading, and create a great demand for the book which they had read. No more than two books could be used by a pupil at one time, and *stories* had to be finished before another *story* book could be begun.

"B" readers were those whose rate was more than nine lines per minute but not more than thirteen. Pamphlets were provided for their supplementary reading. The material was easier and the content quite suited to their comprehension. Otherwise the systems used for the "B" readers was like that for the "A" groups. They had *less* time for supplementary reading, as they required more intensive work with the

teacher. Their pamphlets were very popular and were often read by "A" readers.

There was also a group called "C" readers, whose rate was between six and nine lines per minute, and another group, of "D" readers, who read even more slowly and got practically no meaning from the subject-matter. Their supplementary material consisted of separate stories. These they read with the teacher, alternating with her. They liked to have stories read to them. The teacher used her book. The group looked over her shoulder and kept the place, picking up the story and reading on when she stopped, until the end of a paragraph was reached. The meaning was then discussed and the reading continued.

Each child in the class subscribed to a little nature magazine, which was kept in the desks for reading during odd minutes. Several other magazines, an atlas, and a file containing good original stories by the children were also at their disposal for this purpose.

The regular reading instruction was the visible means by the aid of which each pupil hoped to get into a higher group than his own by the next measurement.

These groupings were based on rate and were not identical with those made for corrective teaching. The procedures just described, together with the intensive teaching in type lessons which follow, were jointly responsible for improvements in reading rate and quality. This report would therefore be incomplete if detailed descriptions of methods used to secure the interest of the individual child were omitted.

TYPES OF INDIVIDUAL INSTRUCTION

Type lesson 1. All look at the first phrase, looking up when they reach a comma or a period. When the entire group is looking at the teacher, she nods, and they repeat the phrase. She watches individuals to find their difficulties, but does not interrupt. When they have said all but the last word of the phrase, they again look down, silently getting the next phrase and looking up, holding the phrase in mind until all are ready. Again the teacher nods, and the group gives the phrase orally, looking down at the last word and continuing this procedure to the end of the paragraph or section. The intensive study calculated to improve poor readers can be made to yield a double return if, instead of selecting hard words and subjecting them to analytic study, the unit is the phrase or group of words which expresses an idea. Instead of working at a difficult word, the phrase in which it appears is studied until

mastered. Instead of working with one child at a time and giving each child only a few minutes of actual oral reading, four or five of those who have similar ability are grouped together, while other groups of poor readers follow silently. Third-grade material or very simple fourth-grade material is used for this purpose.

While other pupils are being tested, the ones who have had Type 1 answer mentally or in writing blackboard questions concerning the material of their lesson. Occasionally duplicated sheets containing uncompleted sentences or a story are used instead, the children filling in the blanks mentally or in writing.

Type lesson 2. Eye training and focus. Field of vision enlarged to include several words rather than one. First, by having the book far enough from the eyes. Secondly, by eliminating the use of a finger or other place-keeping device. Thirdly, by work with flash cards, flashing phrases, trying to get a phrase at one flash, and counting the number of flashes needed for each phrase. These phrases were cut from current printed matter and mounted on small cards. Written sentences directing children to perform certain activities were also used as flash material. The one who first read the direction carried it out. The one who had three such opportunities in succession was given a sheet with similar work for silent reading and could return to the group when finished.

Type lesson 3. Silent reading for the purpose of oral reproduction and comprehension.

Type lesson 4. Silent reading in search of a given phrase, answer, idea, or suggestion in the content of supplementary books, geography text, arithmetic text, and blackboard work.

Type lesson 5. Differentiation for pupils who confuse similar words or miscall syllables, guess at words, or omit endings. Lists like the following form the basis of such work. Lists are compiled from actual mistakes made by children.

that	then	their	women	every	ever
when	how	there	man	never	etc.
what	who	than	woman	even	

Type lesson 6. Lessons in accuracy for those who make errors, substitutions, and omissions; reading a page orally and counting errors, or reading until they make an error to see how many lines they can read perfectly.

Type lesson 7. Breathing exercises. Children taught to breathe rhythmically at ends of phrases or clauses instead of breaking the

smoothness of oral reading. Practice in breath control is thus related to the problem of meaning and interpretation. Abdominal breathing taught.

Type lesson 8. Articulation exercises for mumblers or those with other bad speech habits.

Type lesson 9. Voice work and expression. Unpleasant voice quality and monotony corrected by special practice and training. Children are taught to vary meaning by change of stress and to show relative importance of ideas similarly. Punctuation is studied for the same purpose.

Type lesson 10. Word study, with difficult words, for ready recognition, pronunciation, and comprehension. Word building and word structure studied.

. . . . . .

The types of instruction most needed by pupils, whether good or poor readers, are Types 3 and 4. Individual difficulties are very noticeable, especially in Types 6 and 7. Types 1 and 2 are evidently very essential to poor readers; Types 8 and 9 show the effect of previous training. Type 10 was needed by all but exceptionally facile readers, who, instead, kept a list of words which they wanted to look up in the dictionary and used the time given to the remainder of the class as a whole for that purpose.

. . . . . .

The study has resulted in definite conclusions which will influence the writer's method of instruction. . . . The efficiency and economy of instruction are very dependent on (1) individual diagnosis, (2) individual remedial work, (3) thorough analysis and regular measurement of individual improvement, (4) motivation, (5) provision for suitably graded extensive reading, (6) system in application of diagnostic tests and remedial work, (7) correct valuation and proportional stress on various types of reading, (8) a realization that *special* habits cannot be formed by *general* training and practice.[1]

To teachers who are prone to labor under the impression that none but the trained expert is able to diagnose individual failings of pupils, and to prescribe in each case the proper remedy, the following comment by the writer of the foregoing quoted paragraphs may contain a very valuable suggestion:

[1] Laura Zirbes, "Diagnostic Measurement as a Basis for Procedure," *Elementary School Journal*, March, 1918, pp. 506, 508–511, 514, 518–519.

This study was not conducted by a specialist, but by a grade teacher interested in the advancement of the class through methods which reach the individual members. No time was taken from other studies. In fact, a similar experiment in individual instruction was simultaneously carried on in spelling, arithmetic, and penmanship. The results were tested and are evidence that no one subject was overstressed. The time economy, resulting from scientific procedure, also made possible a fullness and breadth of teaching usually thought incompatible with standardization and educational measurement.[1]

Examples of special help to backward pupils. In the pages which immediately follow a number of typical cases of backwardness will be described and the kind of remedial instruction employed in each case will be reported. These examples are copied, with condensations, from the published reports of the remedial work in reading that has been carried on in the public schools of Stoughton, Wisconsin,[2] and in the Elementary School of The University of Chicago.[3] The topic headings and condensations are the writer's.

A FLUENT ORAL READER WHO COMPREHENDED NOTHING READ SILENTLY[4]

Description: Designated Case "A." Case "A" is that of a fourth-grade girl described by her teacher as slow and indifferent. Though somewhat below the standard for her grade in oral reading, she, nevertheless, was able to read with a fair degree of speed and fluency. In silent reading, the girl used lip movement, which showed that she read all the words. In order to test her ability to handle the reading material used in her reading class, the girl was directed to read silently a selec-

[1] Ibid. p. 522.

[2] C. J. Anderson and Elda Merton, "Remedial Work in Reading," *Elementary School Journal*, May and June, 1920, pp. 685–701, 772–791.

[3] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, pp. 82–118. The University of Chicago Press, Chicago, 1918.

[4] C. J. Anderson and Elda Merton, "Remedial Work in Reading," *Elementary School Journal*, May, 1920, pp. 687–692.

tion for the purpose of getting the thought well enough to reproduce it later. The material was chosen from page 57 of the Merrill Fourth Reader. She read the selection with a marked degree of lip movement at the rate of 1.05 words per second. She was able to reproduce practically nothing of what she had read.

To discover if mechanics of reading was causing the difficulty, she was asked to read the same material orally. She read fluently and with expression at the rate of 1.01 words per second, making only five errors.

Diagnosis and problem. The diagnosis of the case was as follows: Knowledge of the rudimentary mechanics permitted her to read far beyond her comprehension. She read words as names and not as symbols of ideas. The problem was plainly that of training her to read for content.

Remedial lessons. Remedial lessons consisted of the silent reading of paragraphs cut from second- and third-grade readers. One thirty-five-minute lesson a week was given for six weeks. Seven lessons were given during this time inasmuch as two were given during the first week in April. From five to seven paragraphs were used in each lesson. The first paragraph read was very short, containing few separate thoughts. Each succeeding paragraph, being slightly longer, provided for gradual growth in the ability to get meanings from the page.

Meanings of words rather than the way they were pronounced and phrases as thought units rather than words were emphasized. Nothing was said of lip movement or rate. The purpose of the reading was to secure an understanding of the content of the paragraph.

After she had given a reproduction of the "story" and had answered a number of specific questions about it, she was asked to reread the selection in search of any thoughts she had overlooked during the first reading. She then gave a second reproduction. This last reproduction was, no doubt, largely a result of the specific questions. Nevertheless, it was valuable in training the pupil to see the richness of content in the selection.

The material increased in difficulty as the lessons went on, involving more and more difficult words and more complicated phrasing. A complete record was kept of the work accomplished in each lesson.

Results. That there resulted a decided growth in quality of silent reading is evidenced by the fact that in March, Case "A" was reading short selections of from 17 to 40 words each in a second-grade reader with difficulty, while in May she was reading selections of over 150 words in length from a fourth-grade reader and was reproducing the

thought with a high degree of accuracy. During this period no mention was made of lip movement. The girl evidently discovered for herself that lip movement interfered with ability to read in thought units, for, after April 29, her record shows a complete elimination of it. In December, Case "A" was unable to reproduce a single thought or to answer a single question when subjected to a standardized silent-reading test. In May, she was fairly efficient in reproduction ability.

A SECOND-GRADE CHILD WHO COULD NOT READ PRIMER MATERIAL[1]

Description: Designated Case "B." Case "B" is that of a second-grade boy who started work in the third grade this fall but was sent back to the second grade in all subjects but arithmetic shortly after school opened. He has intelligent American foster parents and his home environment is good. He is exceedingly active on the playground and talks intelligently when asked questions.

His teachers' records show the following estimates: (*a*) health, excellent; (*b*) conduct, good; (*c*) disposition, bright. His last teacher, however, described him as inattentive. He has never been strong in any subject and has been weakest in reading and spelling. This boy was eight years and four months of age when selected for special training February 12, 1919. He had taken the various standardized tests given to his grade during the year and he proved to be the slowest, most inefficient reader in his class.

Diagnosis. This case was diagnosed as follows: The boy's difficulties in reading were due to a lack of familiarity with printed words and an utter lack of phonetic power.

Remedial lessons. In an effort to help him overcome this handicap, instruction was confined to phonics for one month, and from that time on consisted of a combination of phonics, oral reading and silent reading for rate and quality with the emphasis placed upon oral reading for quality. By quality is meant accuracy. The lessons averaged twenty-five to thirty minutes in length.

a. Phonics (10 lessons). The phonograms taught were presented in this way. A familiar word or some word of special interest to the boy was used as a key word. Without separating the words, as "r-ace," the

[1] C. J. Anderson and Elda Merton, "Remedial Work in Reading," *Elementary School Journal*, May, 1920, pp. 692–701.

phonogram, or "helper," as he called it, was found and circled; in the case of "race" the letters "ace" were circled. As many words containing this "helper" as could be thought of by both the boy and the instructor were built up. Each day a record was kept of the words reviewed and the number of errors made. During this time (one month), 368 words were built up involving 19 phonograms.

Results. This instruction carried on for a period of one month enabled the pupil in an oral-reading test involving the reading of standardized paragraphs of increasing difficulty (Gray's Oral-Reading Test) to improve his standing from 0 in the first test to a score of $4\frac{1}{2}$ points above the standard for his grade in the final test.

b. Reading (26 lessons). Each of the twenty-six lessons given from March 14 to May 15 included four distinct kinds of work, with emphasis placed upon oral reading for quality and content, namely, word recognition, oral reading for quality and content, silent reading for rate and quality, and oral reading for rate.

1. *Word recognition.* This drill, given at the beginning of each lesson, included (*a*) words missed in previous lessons; (*b*) words to be met in the advanced reading lesson. Both new and review words were written upon the board. As a word was pronounced correctly, the boy erased it. In this way, only the difficult words remained on the board and were given special attention. They were not erased until they could be given correctly. These words were listed and became the review words of the succeeding lesson.

2. *Oral reading for quality and content.* By quality is meant the number of errors rather than pitch, expression, articulation, etc. No attention was called to the latter; however, the improvement was marked. At the close of the story, parts of special interest were discussed and characters compared. A careful record was kept of the number and kinds of errors made each day.

Results. There was a very material decrease in the four most common errors of this pupil, namely, repetitions of words and phrases, repetitions to correct errors, omissions, and substitutions. For example, in reading the primer at the beginning of the training period the pupil omitted one word in every 396; in reading a second-grade reader toward the close of the period but one word in every 1285 was omitted.

3. *Silent reading for rate and quality.* Pages cut from old primers containing interesting passages averaging about seventy words in length were used for this work. The child was given the sheet wrong side up and instructed to turn over the page and read silently for content at the

signal "Turn." During the reading both lip movement and the number of seconds required to read the selection were noted and recorded. The child was next given practice in reproducing the thought of the selection and in answering specific questions upon it. A written record of the reproduction and answers to specific questions was kept for purposes of comparison.

4. *Oral reading for rate.* At the close of each lesson the paragraph used for silent reading was read orally.

Results. In silent reading, improvement was as follows: (1) rate almost doubled; (2) quality more than doubled and four points above the standard for his grade; (3) lip movement eliminated.

In oral reading, improvement, as revealed by testing with the Gray Oral-Reading Test, is indicated in the following scores: pupil's score at the beginning of the training period, 0; at end of period, 50; standard score for first grade, 31; standard for second grade, 43.

A CHILD WHO REPEATED IN ORAL READING[1]

Description: Designated Case "D." Case "D" is that of a fourth-grade boy who was nine years and eleven months of age when training was begun in February, 1918. He has been weak in reading since he entered the first grade. Tested in oral and silent reading, his scores were far below the standard for his grade. His oral reading was especially poor, due to a great number of repetitions and substitutions. He made an average of one repetition for every thirty-four words read and one substitution for every eighteen words read.

Diagnosis. The diagnosis of this case was as follows: From the large number of repetitions in his oral reading it was evident that part of this boy's trouble in both oral- and silent-reading was due to the fact that he could not phrase properly. Getting no meaning from the sentence as he phrased it, he repeated in an attempt to get something from the sentence by means of a second reading. It was also evident that substitutions were destroying meaning both in his oral and silent reading.

Remedial lessons. Remedial instruction consisted entirely of practice in phrasing. It began with sentences written upon the blackboard. The boy marked off the phrasing that he considered correct with short vertical lines which he drew at the close of each phrase, as in the sentence, "One morning when he went out very early he saw tracks on the

[1] C. J. Anderson and Elda Merton, "Remedial Work in Reading," *Elementary School Journal*, June, 1920, pp. 778–782.

snow." His first attempt resulted in this division, "One morning | when he went out | very early he saw | tracks on the snow." After a question from the instructor he decided to change the phrasing. The following change was made: "One morning | when he went out very early | he saw tracks | on the snow." After he had become accustomed to this new way of reading, work was begun in third-grade readers.

In the first lesson the boy read the selection through once without help of any kind. As he read, a record was kept of all errors made. He was then given a small white card 4 inches by 1½ inches, which was to take the place of the vertical lines used in the blackboard exercises. He then re-read the selection, using the card as he read. He placed it at the close of the first phrase. After reading this phrase he raised the card and placed it at the close of the next, and so on, until he had finished the selection. This proved to be very slow and difficult work in the beginning. Many times the card was placed after the wrong word, and it needed skillful questioning to lead him to see his error. After reading the selection two or three times in this way, he was asked to read it without the card. The result was a remarkable change in this boy's reading. Errors were practically eliminated, phrasing was almost perfect, and expression greatly improved. A record was kept, also, of the errors made in this last reading of the selection.

After the second lesson each special help period consisted of four phases:

1. A review of the selection studied in the previous lesson, a record being kept of all errors made. This record was used as a check on the records made in the last reading at the close of the previous lesson, since it was difficult to say how much of the latter was due to memory work.

2. The reading of the new selection for the first time without help of any kind. The record of the errors made in this reading was the one watched most closely, since the improvement in the boy's reading of material at sight was to be the true test of the success or failure of the training given.

3. Two or three careful readings of the selection with the help of the card. No record of errors was kept during this practice period, entire attention being given to phrasing.

4. A final reading of the selection without the card. A record of errors was kept during this reading to show the boy as well as the instructor the effect of the practice upon his reading.

Results. In thirty lessons, which extended over a period of less than three months, the number of repetitions decreased as follows: first 10

lessons, one repetition in every 59 words read; second 10 lessons, one in 282 words read; third 10 lessons, 0 in 3045 words read. Improvement in general reading ability is indicated in the amount read during each series of 10 lessons; first 10 lessons, 1892 words read; second 10 lessons, 1696 words read; third 10 lessons, 3045 words read.

A FOREIGN CHILD WHO WAS HANDICAPPED IN HIS THIRD-GRADE READING BECAUSE OF MEAGER VOCABULARY[1]

Description: Designated Case "E." Case "E" is that of a foreign child with a meager background for reading. Polish is spoken entirely in the home and mail-order catalogs are the only reading materials found there. The boy entered the first grade in 1916 at the age of eight years and eleven months. His teacher immediately transferred him to the second grade because of his age and size, overlooking his incompetence for the work. He entered the third grade the next fall, where he remained the next two years. At the time special training was begun the boy was eleven years of age with a background hardly that of an ordinary first-grade child.

Diagnosis. In the reading of three test paragraphs, fourteen substitutions were made. These were of such a nature as to do away entirely with meaning. This showed clearly that reading to this child was mere word calling and that any word would serve the purpose.

Remedial lessons. Immediate training was given in word analysis. The most common phonograms and a few phonetic rules were taught. Oral reading in the Free and Treadwell *Primer* was begun. This material was suited to his ability, but not to his interests. Oral reading from books was discontinued for a time and conversation lessons about things in which he was interested were substituted. Topics relating to the making of a kite, fishing, etc., were discussed. At the close of a period the discussion was summed up in a few sentences which the teacher wrote upon the board as the boy gave them. This was made the story for oral reading in that lesson.

Later the boy was supplied with advertisements from magazines. These were selected because of the larger-sized print. A booklet $6\frac{1}{2}$ by $9\frac{1}{2}$ inches was made for the boy. An attractive picture was pasted on the cover and under it was printed, "Words That I Know." The in-

[1] C. J. Anderson and Elda Merton, "Remedial Work in Reading," *Elementary School Journal*, June, 1920, pp. 783–785.

side leaves were cut in along the right-hand margin and alphabetically indexed. All words which the boy was able to pronounce and define or use in sentences were cut out and pasted in his "dictionary." The meager vocabulary of words he could define when the work was begun is illustrated by the use of some of the words which he was able to pronounce:

thick The clock *thicks*. (ticks)
win The *win* is blowing. (wind)
right Apples are *right*. (ripe)
sand We *sand* for suits. (send)

This work was carried on together with training in word analysis during ten lessons.

Results. At the end of ten lessons the following had been accomplished:

1. His book contained 315 words.
2. He had grown in his power to attack new words.
3. His dislike for printed symbols had changed to a desire for, and a pride in, word mastery of both form and meaning.
4. Unconsciously he had been acquiring some dictionary knowledge through the use of the alphabetical arrangement of his book and the idea of meanings for words.

The next five lessons were confined to oral reading of stories of boys' experiences and of animals found in the Elson *First Reader* and the Beacon introductory *Second Reader*. Each lesson showed a slow but gradual growth in reading power. The descriptive paragraphs in these selections were read silently and reproduced by the pupil.

At this point the family left the city. Although the experiment is incomplete, the case illustrates the results which can be accomplished after a child once has the right start in the necessary mechanics of reading and the interpretation of printed symbols into meanings.

A FIFTH-GRADE PUPIL WHO READ SLOWLY BECAUSE HE RECOGNIZED IN VERY SMALL UNITS OF FIXATION[1]

Description. Frequent tests and observations revealed the fact that this pupil read very slowly.

[1] W. S. Gray, "Individual Difficulties in Silent Reading in the Fourth, Fifth, and Sixth Grades," the Twentieth Yearbook of the National Society for the Study of Education, Part II, pp. 48–49.

Diagnosis. An analysis of his difficulties showed clearly that he did not recognize words in groups or thought units.

Remedial lessons. In order to provide training in the rapid recognition of groups of words, eight phrase books were prepared in which a phrase was pasted on each page. The first book contained ten very simple phrases cut from a primer. Each succeeding book in the series contained a similar number of longer and more difficult phrases. The eighth book contained phrases from a sixth reader. In conducting drill exercises the teacher flashed each page so quickly that the pupil had time for only one fixation. As soon as a phrase had been exposed, the pupil immediately told what he had seen. A grade of ten was given for each entirely correct response. Since each book contained ten phrases, the scoring was very simple.

A record was kept of the progress through six books in fourteen lessons. As a rule thirty phrases were presented each day; occasionally, the drill was limited to twenty; sometimes it included forty. A given book of phrases was not discontinued until the boy had scored 100 in two successive lessons. For example, a score of 100 was made the second time the phrases of Book I were presented. Drill was discontinued until the next day. On repeating the exercise a score of 100 was again made. Book II was then begun, and the exercise was repeated seven times before a perfect score was made. At the conclusion of an exercise the pupil was shown his score.

Results. At the close of each lesson the boy was given a selection from his reader and allowed to read for one minute. His rate for each lesson is shown in the accompanying table. The entries in the table

PROGRESS IN RATE OF READING[1]

Lesson	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Words per Minute	60	69	70	79	80	86	86	70	80	95	90	98	100	105

indicate clearly that the drill exercises proved effective in increasing his rate of reading.

[1] This report is from a record supplied by Miss Elda Merton, Stoughton, Wisconsin, from the progress book of Miss Edna Burull, teacher of fifth and sixth grades, Central School.

A FIFTH-GRADE PUPIL WHO READ SLOWLY BECAUSE OF WORD DIFFICULTIES[1]

Description: Designated Case "G." Case "G" is that of a girl in the lower fifth grade, age 10 years and 11 months when selected for special training in November, 1916. She was rated by her teachers as a good student in subjects other than reading. Reading seemed to be her greatest weakness. Her fourth-grade teacher reported her as "a slow reader who reads hesitatingly and haltingly, repeating words and phrases. Her breathing is very shallow, often causing her to pause for breath in the middle of a word or phrase. Her voice is thick, heavy, and unpleasantly nasal. Silent reading is particularly distasteful to her. She always settles down to it reluctantly and tardily."

From the home comes much the same story. "She has never read a story to herself, though she has several attractively illustrated children's books. She frequently, however, after eagerly studying the illustrations in a new book, begs to have the story read to her, saying, 'You read it, mother. I can't understand it very well when I read it myself.' "

In an oral-reading test, her pronunciation of unfamiliar words seemed most difficult. She usually hesitated a moment before attacking a new word and then whispered to herself the spelling of the word letter by letter. The repetitions all occurred in phrases containing a difficult word. The omissions were almost entirely the small words: "his," "the," "and," etc. Her score in oral reading was considerably below the standard for her grade.

Her rate in a silent-reading test shows an unusual condition. It is practically .6 of a word slower than the oral rate. This fact taken in connection with her score for comprehension shows clearly what the child had discovered for herself, namely, that she does not understand much of the "story" when she reads silently.

Observations made during the silent-reading tests showed that there was much vocalization. The reading was done in a low whisper, and difficult words, as stated above, were spelled out letter by letter. She followed the line with her finger. In one of the early practice periods, when urged to read more rapidly, she remonstrated, saying that she could not hear the words so well if she did.

[1] C. H. Judd, Reading: its Nature and Development, Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, pp. 82–91. The University of Chicago Press, Chicago, 1918.

Diagnosis. The difficulties of Case "G" were due to a lack of familiarity with printed words and a lack of method of working out new or unknown word forms.

Remedial lessons. In an effort to help her overcome this handicap she was given various types of training during eighteen weeks. The first six weeks were devoted to a great deal of oral reading. The second six weeks were spent on drills in phonics and in word analysis. During the last six weeks she was given a great deal of silent reading. While each period of six weeks thus stressed some one phase of reading, all three types of work were carried along throughout the eighteen weeks. For example, oral reading was continued with less emphasis during the last twelve weeks.

The selections for oral reading were made along the line of the pupil's school interests in history and geography. These included Baldwin's *Fifty Famous Stories* and *Thirty More Famous Stories*, Harding's *Story of Europe*, Allen's *Industrial Europe*, Carpenter's *Europe*, "Our European Cousins Series," the Merrill and the Horace Mann *Third* and *Fourth Readers*, Tappan's *Old World Heroes*, Terry's *The New Liberty*, and Brown's *English History Stories*.

Phonics and word analysis were emphasized during the second six weeks. Various systems of phonics, with some modifications to suit the particular needs, were used. Words mispronounced in oral-reading lessons were worked out phonetically, and lists of words similarly pronounced were built up and reviewed from time to time. There seemed to be a gradual growth in ability to attack an unfamiliar word. In the earlier period the pupil frequently looked at the word helplessly or pronounced a known syllable but was unable to attack it at all phonetically. She usually asked the instructor to pronounce it. Later she began immediately to sound the new word phonetically, and, though sometimes making a mistake in the length of the vowel or in the position of the accent, her manner of attack indicated that she had confidence in her own ability to work it out.

Silent reading was emphasized during the last six weeks after some training in silent reading had been given throughout the first twelve weeks. For special training paragraphs or selections dealing with topics of particular interest to the pupil were used. In many instances the original selections were edited, and the words which had been used in the phonic exercises were woven into the text. Frequently before the silent reading began a question was raised the answer to which was to be found in the text. Oral or written reproduction or a discussion of the

thought of the selection usually followed the reading. It is interesting to note in passing that though no effort was made to reduce the vocalization so perceptible at first it entirely disappeared except when an unusually difficult passage was encountered.

Results. In the silent- and oral-reading tests given at the close of the training period, the pupil showed by her whole manner that she felt competent to do the task. She wrote with a precision and directness not at all characteristic of her earlier tests. The tests in oral reading also showed a gain in rate and a reduction in the number of errors.

Her teachers report that Case "G" reads with much greater ease and fluency of expression. The quality of her voice has improved, and the nasal tones have almost entirely disappeared. She seems to enjoy reading silently much more than before training. Frequently she expresses a preference for reading a passage silently, saying, "I can do it faster." Her oral reproductions contain many more of the expressions found in the original passage than formerly. When told that her written work does not include many new words, she said, "Well, I remember them, but I am not always absolutely sure of the spelling, so I use a word that means the same." She now ranks among the upper third of her class in ability to read rapidly when reading for the purpose of reproducing the thought.

A SEVENTH-GRADE PUPIL WHO RANKED LOW IN COMPREHENSION BECAUSE OF A SMALL VOCABULARY OF MEANINGS[1]

Description: Designated Case "E." Case "E" is that of a seventh-grade boy, age 14 years and 10 months when special training began. In general school standing he is rated as a poor student, although he is given a grade of good (B) in the manual arts, music, and physical training. In all other subjects he is poor, taking no part voluntarily in class discussions. He reads in a dull, monotonous tone, slurring words and phrases, and making no attempt to group words into thought units. When asked to tell what he has read, he reproduces a few ideas in short, scrappy sentences, for apparently he makes few associations as he reads. His

[1] C. H. Judd, "Reading: its Nature and Development," Supplementary Educational Monographs of the *School Review* and the *Elementary School Journal*, Vol. II, No. 4, pp. 106–118. The University of Chicago Press, Chicago, 1918.

teachers in history and geography explain his poor standing in their subjects as attributable to an inability to get ideas from the text. He apparently reads as rapidly silently as any in the class but gets and retains less of the thought.

In an oral-reading test he read fairly rapidly, pronouncing the words mechanically and enunciating poorly. Several periods were eliminated, and two adjoining sentences were read as single thoughts. The results of a silent-reading test showed that he ranked in comprehension at a lower level than the poorest readers in the two preceding grades. This result verified the estimates of his teachers of history and geography.

Diagnosis and problem. Case "E" had acquired a mastery of the rudimentary mechanics of word recognition but lagged far behind in the mastery of word meaning. He read words as mere names and not as symbols of ideas. How to build up a background of meaning that would form a basis for his reading was and still is an urgent and difficult problem.

Remedial lessons. Because of his interest in animal stories and tales of camp and pioneer life, emphasis was laid throughout the eighteen weeks of special training on literature dealing with these topics. *The Boy Scouts' Manual*, Custer's *Boots and Saddles*, Roosevelt's *Winning of the West*, Southworth's *Builders of Our Country*, Book II, the Merrill and the Horace Mann *Fourth* and *Fifth Readers*, Burroughs's *Stickeen*, Coffin's *Boys of '76*, the Thompson Seton and Kipling stories and similar literature was drawn upon freely. Silent reading was continued throughout the eighteen weeks, but was especially emphasized during the first six weeks and again during the last six weeks. After reading a selection the pupil reproduced it orally or in writing. These reproductions at first were so meager and inadequate that he frequently had to re-read several times before he could answer the questions raised. Many selections were read in this way, paragraph by paragraph, and the main points jotted down to assist in the organization of the thought.

Before the work had progressed very far it became apparent that definite word study was necessary in order to build up a background of meaning. Words were studied in the context for meaning, and certain ones were chosen for detailed analysis of prefix, suffix, and stem. A stem word analyzed in this manner became the nucleus for grouping together other closely related words more or less familiar to the student. The word "traction" encountered in an article on the "Lincoln Highway" brought out a discussion of traction engines, their use in plowing, road-building, and trench warfare, why so called, etc. This centered

attention upon the stem "tract." As its meaning became clear the following list was elaborated:

subtract	distract	attraction
contract	extract	distraction
detract	retract	subtraction
attract	contraction	extraction

A study of the prefixes in these words gave a point of leverage for attacking the meaning of words containing them. In this type of prefix study only those words were listed whose stems were familiar to the pupil, as, for example:

recall	rebound	retake
reclaim	retain	reinforce
rearrange	reform	return
regain	remake	reframe, etc.

In a similar manner an acquaintance was made with the most common suffixes.

The meaning of some words was approached by the study of synonyms and equivalent idiomatic phrases. These were, as far as possible, studied in the context and discussed at length to bring out shades of difference in meaning. "An indomitable hero" met in the pioneer tales brought forth the following synonyms and idiomatic phrases:

indomitable	fearless	stout-hearted
brave	heroic	intrepid
courageous	bold	audacious
resolute	daring	defiant
manly	plucky	undismayed

to look danger in the face
to screw one's courage to the sticking-point
to take the bull by the horns
to beard the lion in his den
to put on a bold front

This type of intensive word study was continued throughout the first six weeks but was supplemented by incidental word study during the remaining twelve weeks.

Oral reading was given special attention during the second six weeks and continued during the following six weeks. The literature was of the

same general type as that used in silent reading. The purpose was to improve, if possible, enunciation and expression. Special drills in the enunciation of vowels and of the terminal and initial consonants were a part of each reading lesson. Many of these drills were taken from reading books. Selections were studied silently before being read aloud nd the meaning discussed. The various thought units were marked off nd the whole selection was then read aloud. Before the close of each son the pupil read a selection at sight, unaided by this kind of paration.

esults. Reading tests given at the close of the training period ed that the training of this pupil had apparently affected the anical side of his reading very little. His improvement had been er in the comprehension of what he reads. It seems proper to infer ng in the upper grades, at least training of the type given in this likely to be effective in changing the mechanical habits of pupils.

mmary of examples. The foregoing pages have reported me length a number of examples of the application of edial devices of instruction to special cases of backward-s. The special cases referred to follow:

1. A fluent oral reader who comprehended nothing read ilently.
2. A second-grade child who could not read primer material.
3. A child who repeated in oral reading.
4. A foreign child who was handicapped in his third-grade reading because of meager vocabulary.
5. A fifth-grade pupil who read slowly because he recognized in very small units of fixation.
6. A fifth-grade pupil who read slowly because of word difficulties.
7. A seventh-grade pupil who ranked low in comprehension because of a small vocabulary of meanings.

The value of organizing special forms of help to meet individual needs impresses itself upon the reader of the foregoing illustrations. The readiness of the response of the backward pupil when he is given the kind of help he needs characterizes the results in every case. The progress noted is the most strik-

ing feature of each report. The reports are intended to demonstrate the need of special help for backward pupils, the means of diagnosis, the methods of remedial instruction, and the results one may expect when remedial instruction is thoughtfully organized and wisely administered.

Sometimes special instruction must introduce regular instruction. There is another reason for including in our discussion a number of reports of successful efforts to alleviate the difficulties of pupils in a variety of cases. It is not infrequently the circumstance in the various grades of a school that the backward pupil is the rule and not the exception. Instead of two or three pupils of a grade being unable to respond to the regular course of instruction, it sometimes happens that the whole grade is backward and the entire school is running behind schedule. The writer recalls a four-room school in which he gave tests to determine the silent-reading abilities of the pupils. He found the pupils of the fifth grade to be just as *good* silent readers as the pupils of the sixth and seventh grades; or, to use language that is more exact, he found the sixth-grade and seventh-grade pupils to be just as *poor* silent readers as the pupils of the fifth grade. That is to say, no advancement in ability to get meaning from print had been made from the fifth to the seventh grade. The writer, in May, 1921, tested the silent-reading ability of fifty-one "graduates" of the eighth grade who had assembled from a number of schools. These pupils were "prepared," as indicated by their "graduation" from the eighth grade, to enter the freshman class of the high school. Their median score was slightly below the standard score for sixth-grade pupils. Too often pupils—not individually, but in groups—enter the second and third grades unable to read primer material; whole classes are moved ahead into the intermediate grades without having mastered the difficulties of the mechanics; they enter the upper grades, even the high school, without ever having had an opportunity to broaden their experience through extensive silent reading.

How shall the reading teacher, trained in the methods suited to pupils at their various stages of progress through the grades, seek to administer the course of study in reading as outlined in Chapters XI–XVI when confronted by a roomful of backward pupils? The answer is clear. The teacher must of necessity delay the regular instruction until the pupils have been prepared, through various types of special instruction, to profit by it. His task is, first, to move the pupils forward in the direction of the standard abilities set for their grades; next, to attempt only such regular instruction as the developing abilities of the pupils will permit them to receive. To this end the foregoing examples of the administration of remedial instruction to special cases of backwardness offer a number of valuable suggestions, as follows: (1) the abilities of the pupils should be measured; (2) their individual points of difficulty and of failure should be discovered and classified; (3) their various types of backwardness should be diagnosed; (4) special forms of remedial instruction should be planned for each type; (5) the pupils should be grouped into special classes and instructed according to the special needs of each group; and (6) their progress should be tested from time to time. Let us consider how the teacher may follow these suggestions.

Suggestion I: The abilities of the pupils should be measured. Upon taking charge of the instruction in reading of a grade or group of grades, the teacher should proceed immediately to the task of determining the standing of each pupil in the subject. The teacher should know first of all how well each pupil can read orally and how well silently. The reading periods of the first week of school may very well be spent in giving tests in the two kinds of reading, though the pupils do not need to be made aware of the fact that they are being "tested." The work of testing may proceed as follows:

In oral reading: For the pupils of each grade choose three paragraphs for oral reading—one from their reader of two years ago, one from last year's reader, and one from their reader of

this year. The first paragraph should be very easy; the second, easy; and the third, of average difficulty. Test the pupils individually in a quiet place where they will be free from distraction and where the remainder of the pupils to be tested will not hear the reading. When everything is in readiness show the first paragraph to the pupil and say: "I should like you to read this paragraph for me. If you should find some hard words, read them as best you can without help and continue reading. Begin when I say 'Begin.'" Hand him the book and say "Begin." When the pupil has finished show him the next paragraph, and so on. Keep a record of the time taken to read each paragraph and of the number and kinds of errors, as indicated:

NAME _____ GRADE _____

	First Paragraph	Second Paragraph	Third Paragraph
Time (in seconds) . .			
Mispronunciations .			
Omissions			
Substitutions			
Repetition			

In silent reading (for pupils in the third grade and beyond): For the pupils of each grade choose a short, interesting, but unfamiliar story from their text or from a supplementary reader. Prepare ten questions which seem to you to bring out the essential points in the story. Prepare questions that can be answered by "Yes" or "No" or by definite words in the selection. When everything is in readiness give the pupils the following directions: "Turn to the story on page—. Keep the place with your fingers and close books. This story is called ———. When I give the signal open books and read the story silently. Read the story through without stopping to repeat any

of it. Read the story rapidly but carefully. Do not stop to ask questions. Be prepared to tell the story when you are through. Open books. Begin." At the end of one minute say: "Stop; mark with your pencil the word last read. Read on till you have finished the story." When the pupils have finished have them write answers to the ten questions which you have placed upon the board and kept covered until now.

After the questions are answered have the pupils count the words they read in the first minute, exchange books, and verify each other's counts.

Repeat the exercise two or three times, each time with a *different* story and with *different* questions. The results obtained at the third or fourth trial will be more reliable than those obtained at the first for the reason that the children will understand better what you desire them to do.

Score the answers to the ten questions, marking each entirely right or entirely wrong, and tabulate the results obtained in both speed and comprehension. The following form is suggested:

Pupils' Names	Rate in Words per Minute	Questions Answered Per Cent

Suggestion II: Points of difficulty and of failure should be discovered and classified. The teacher now, at the close of the first week of school, has a measure of each pupil's ability in both oral and silent reading. For convenience all scores should be tabulated on one sheet:

Name	Oral Reading					Silent Reading		Special Difficulties	Diagnosis
	Mispronounced	Omitted	Substituted	Repeated	Rate	Rate	Content		

Under the heading "Special Difficulties" the teacher should summarize into a single statement the special weaknesses of each pupil; for example: "Good in oral—poor in silent"; "Slow silent reader—mispronounces"; "Rapid—neglects thought"; etc. In a discussion of the use of tests in silent reading, Bolenius offers some suggestions that are pertinent:

A great range of individual variation at the end of the year would be a sign of inefficient teaching, because it would show that the teacher did not correct the deficiencies in the class. At the beginning of the year, however, it would serve to diagnose the weaknesses of the class.

A test shows who need the drill work, and therefore limits drill for a definite purpose. When a pupil is up to the standard there is no reason for requiring this drill work of him; the time should be put on something more valuable for him. Concentrate on the ones who need the drill. The tests will show you which pupils need to work for speed and which need training in grasping the content (or ideas), because they are superficial readers. If a child reads fast at the sacrifice of ideas, he must be "slowed up" and by questioning be taught to get the ideas.

The teacher should average the individual scores and ascertain the class score in speed to see whether it is up to the standard.

Intelligent use of tests will usually break a class into three groups: (1) slow readers who need to be speeded up; (2) superficial readers who need training in digging out the thought; and (3) normal readers, excused from these drills and privileged to take up profitable and enjoyable outside reading. This last group should be made the nucleus of a classroom Reading Club, to which those in the other groups are eligible as soon as they come up to the standard.[1]

The following standards for silent reading are suggested:

	Rate	Content
Grade IV	160 words a minute	
Grade V	180 words a minute	50 per cent of the
Grade VI	220 words a minute	ideas in a 400-word
Grade VII	250 words a minute	passage [2]
Grade VIII	280 words a minute	

[1] E. M. Bolenius, Teachers' Manual of Silent and Oral Reading, pp. xxii-xxiii. Houghton Mifflin Company, Boston, 1919.

[2] Ibid. p. xxii.

The pupils who have made the most mistakes in the oral-reading tests and those who rank lowest in the silent-reading tests should be placed in a group by themselves for special attention.

Suggestion III: Various types of backwardness should be diagnosed. Under the heading "Diagnosis," in the foregoing table, the teacher should state for each backward pupil his particular cause of failure. These statements should result from a close, individual examination and study of each case of backwardness. For example, if a pupil is a slow reader, the teacher should discover whether he is slow because he has difficulty in recognizing words, or because he recognizes in too small units of fixation, or merely because he is slow by temperament. If a pupil has trouble in getting meaning, is the fault due to the lack of mastery of mechanics or to the lack of a sufficient vocabulary of meanings? It may be due to the fact that the pupil merely lacks practice in reading for meaning, or it may be due to the fact that the pupil reads words as names and not as symbols of ideas. The teacher should seek out the cause. Why does the pupil repeat? because he fails to get a satisfactory amount of meaning at the first reading or because he is not sure of the words when he reads?

When such a study has been made of each case of backwardness, and the diagnosis recorded, the teacher's record under the headings "Special Difficulties" and "Diagnosis" would read somewhat as follows:

Special Difficulties	Diagnosis
Slow silent reader	Small unit of fixation
Poor in thought-getting	Merely pronounces the words
Poor in thought-getting	Small vocabulary of meanings
Very slow	Many word difficulties
Repeats—gets no meaning	Does not phrase properly
Reads haltingly, etc.	No knowledge of how to attack new words, etc.

Suggestion IV: Remedial instruction should be planned for each type of backwardness. A review of the examples in the early part of this chapter of the application of remedial devices of instruction to special cases of backwardness will indicate the procedure to be followed in carrying out this suggestion. This suggestion follows in the natural course the three which precede. When the teacher has measured the abilities of his pupils, discovered their special weaknesses and failings, and has diagnosed each case to determine the cause of backwardness, his next task is to plan the sort of remedial instruction which in each case will remove the cause of failure.

Suggestion V: The pupils should be grouped into special classes and instructed according to the needs of each group. The teacher is now ready to proceed to the organization of his special classes. Pupils A, B, C, and D are placed in Class I for special instruction in "reading for content"; E and F are assigned to Class II for special instruction in "word recognition, word analysis, phonics"; Class III, in "phrasing of sentences," is organized for A, C, G, and H; Class IV is organized to give pupils G, I, and J special drill in "phrase recognition"; and Class V, in "meanings of words," is started to accommodate pupils K, L, M, and N. A place in the program is made for the special classes, and each class is scheduled to meet on its designated day once each week. Thus the regularly organized classes in reading are permitted to proceed each day without interruption, while extra instruction for five special types of backwardness is provided for fourteen pupils. The foregoing plan is suggestive of the scope and variety special instruction may take without serious hindrance to the smooth running of the regular school program. Indeed, the special instruction may rightly be considered a part of the regular program.

Suggestion VI: The progress of the pupils should be tested from time to time. The importance of this suggestion is to be noted in the following discussion by Bolenius on the service of tests in "appealing to class pride":

The children will be interested in checking up their own scores to see how they are improving. Urge them to "beat" their own records. Let them know exactly what the standard for speed is for their grade, and let them know that to get all the thoughts of a selection it is necessary to read the selection several times. The questions given for the formal tests deal with very patent things in the selection, things that belong to the 50 per cent of the ideas that should be grasped at first reading.

Let committees of children ascertain the class average and post it prominently, month by month, in the classroom. Thus the monthly record will loom large as a class achievement. It is well for classes of the same grade to compare scores.

Special groups that are drilling for speed or content should be put through five-minute drills daily and a close watch kept on their improvement. Great zeal may be developed if the teacher is wise enough to take the children into her confidence and let them know what they are trying to do. A boy can be made to see, therefore, in concrete terms, that the careful analytical discussion of short passages is improving his ability to grasp the thought, for his improvement in scores from 200/D to 170/B shows that his superficiality in reading is giving way to thoughtfulness, even if the reading is a little slower.[1]

Informal testing, such as described under Suggestion I, should be carried on throughout the year. By such means a motive is given the pupils for their class work, greater effort is thus encouraged through the appeal of objective scores that the pupils can understand, and the teacher is thereby enabled to judge of the effectiveness of his instruction and to modify it from time to time to accord with the changing needs of his pupils. The need of continued diagnosis and the importance of informal testing as a means of diagnosis can hardly be overstated.

Many teachers make use of formal, *standardized* tests for purposes of diagnosis and of measuring the progress of pupils. Such tests offer the advantage of more accurate results than those to be secured by informal tests, and the disadvantage of being limited in usefulness, for the reason that once given they are of no value as testing material until the pupils have for-

[1] E. M. Bolenius, Teachers' Manual of Silent and Oral Reading, pp. xxv–xxvi. Houghton Mifflin Company, Boston, 1919.

gotten their contents. The following standard tests are recommended for the teacher's use in the measurement of various phases of reading ability:

1. *To measure word recognition:*

a. Haggerty's "Visual Vocabulary Test." Northwestern School Supply Company, Minneapolis, Minnesota.

b. Thorndike's "Improved Scales for Visual Vocabulary." Bureau of Publications, Teachers College, Columbia University, New York City.

2. *To measure oral reading ability:*

a. Gray's "Oral-Reading Test." Public School Publishing Company, Bloomington, Illinois.

3. *To measure the understanding of sentences:*

a. Thorndike's "Improved Scale for Measuring the Understanding of Sentences." Bureau of Publications, Teachers College, Columbia University, New York City.

4. *To measure rate and quality of silent reading:*

a. Gray's "Silent Reading Tests." Public School Publishing Company, Bloomington, Illinois.

b. Courtis's "Silent Reading Test No. 2." Public School Publishing Company, Bloomington, Illinois.

5. *To measure silent-reading ability:*

a. Monroe's "Standardized Silent Reading Tests." Public School Publishing Company, Bloomington, Illinois.

b. Burgess's "Scales for Measuring Ability in Silent Reading." Publication Department, Russell Sage Foundation, New York City.

Printed directions for giving the test, scoring the papers, and tabulating the results accompany each set of testing material. Before deciding to give one of the tests the teacher should secure from the publisher a sample copy of the testing material and of the printed directions, record sheets, etc. The study of a good general discussion of reading tests is to be recommended. Many helpful suggestions may be found in such books as the following:

Educational Tests and Measurements, by W. S. Monroe, J. C. De Voss, and F. J. Kelly. Houghton Mifflin Company, Boston, 1917.

Measuring the Results of Teaching, by W. S. Monroe. Houghton Mifflin Company, Boston, 1918.

How to Measure, by G. M. Wilson and K. J. Hoke. The Macmillan Company, New York, 1920.

Summary. The chapter opens with a discussion of the importance of organizing remedial forms of instruction for pupils who are backward in reading. The fact that the remedy for each case of backwardness should be devised and administered according to the special individual needs that exist was selected as a topic for explicit consideration and emphasis. For this purpose some typical examples of the application of remedial devices of instruction to special cases of backwardness were reported at length. The chapter closed with a summary of suggestions for the organization of special help. These are:

1. The abilities of the pupils should be measured.
2. Points of difficulty and of failure should be discovered and classified.
3. Various types of backwardness should be diagnosed.
4. Remedial instruction should be planned for each type of backwardness.
5. The pupils should be grouped into special classes and instructed according to the needs of each group.
6. The progress of the pupils should be tested from time to time.

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