METHODS OF MIND-TRAINING

CATHARINE AIKEN

METHODS OF MIND-TRAINING

CONCENTRATED ATTENTION

AND

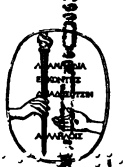
MEMORY

BY

CATHARINE AIKEN

"*Attention is the stuff that memory is made of, and memory is accumulated genius.*"

JAMES RUSSELL LOWELL



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TO

MY GIRLS

WHO THROUGH EARNESTNESS AND ATTENTION

HAVE BEEN MY INSPIRATION

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MIND-TRAINING

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INTRODUCTION

I AM often asked why I was led to change the methods of teaching which I had pursued with more or less success for thirty years.

Rather should the question be why I had adopted a method at all after so many years of teaching without any; for, in common with many others of my profession, my teaching had lacked method.

In order that the motive for adopting a different course may be better understood, it is needful to consider some of the causes which had produced in my mind serious dissatisfaction with the customary school work and its results.

Some one has written that "the

way to perfection is through a series of disgusts." To limit this assertion, and apply it to my own experience, I may say that, though far from reaching perfection, my way to a quicker and broader developing of the minds of my pupils was through a series of dissatisfactions. It had long been made plain to me that there was much in the processes of teaching and of gaining knowledge that failed of reaching successful ends.

A thorough acquaintance with the pupils of many schools showed me that a great disparity between labor and gain characterized our system of education. That the evil exists no less in the schools of Great Britain than in those of our own country is true, but with greater hope of reform, since the fact is recognized by the most eminent English educators. Says John Stuart Blackie: "In no department of human activity (as in English teaching) is there such a pretentious display of power

with such a beggarly account of results."

Mr. Gladstone, in referring to the subject, calls the results "scandalously small," and uses Goldsmith to say,

> "They learn but little here below;
> And learn that little ill."

That the teacher's task in these days of extravagant demands presents many discouragements admits of no denial. The varied and multiplied subjects which the study of the sciences includes, the practical importance which art in its different branches has assumed, the vast amount of history and literature which has accumulated, and, which is by no means least in the account, the high standard of musical attainment, render it difficult, if not hopeless, to educate a girl by the ordinary methods so that she shall be able to meet the requirements of her position with even a fair degree of intelligence and ability. Is it not plain, in order that the student

shall obtain the power and intelligence that is expected, in view of her so-called advantages, that either the years spent at school must be extended, or some more efficient aid in the acquisition of knowledge must be employed? As to the former, every teacher of private schools knows that no more time will be allowed. The years granted to the school-girl are grudgingly given, and often from these much time is pilfered by social distractions.

According to the usual plan of study, the conscientious scholar will have spent from six to eight hours each day, for at least five days in the week, for three-fourths of the year, during twelve or thirteen years, in laborious mental occupation. In pursuing the English branches alone she will have "gone through" fifty or more text-books, embracing the subjects taught generations ago, and also many new works upon modern science, art, history, political economy, literature, and philosophy,

which from time to time are lengthening the crowded lists of studies in every popular school. Add to the curriculum civil government, Latin, German, French, music, and drawing, or even one or two of these studies, and what wonder that the pressure of the demand has forced teacher and pupil to extend beyond reasonable limits the hours for school work? When we consider the depressing influence of inflexible rules and dull routine that prevails in most schools, is it strange that many an ambitious student breaks down in health under the burden of a *course of study* such as is considered the proper intellectual outfit with which the graduated girl is to enter upon the duties of life? That one of the great dissatisfactions was to be found in the prevailing lack of mental preparation grew more and more evident to me.

One reason, if not the chief reason, of this lamentable want of mental power which was evident in the graduated

girl was found in the fact that the teacher, perhaps through no fault of her own, but of that tyrant, Custom, had been bound to the task of finding out how much or how little her scholars knew, measured by the standard of the text-book. This was the school-teacher's occupation. Oh, what drudgery! Is it not true that *knowledge* is too much considered the teacher's stock in trade, and her pupils' minds but empty casks, which stand unmoved before her desk waiting to be filled? How often, when we have brought forth our treasures of knowledge, new and old, and striven assiduously to fill the emptinesses before us, we have found, alas, that the bottom had fallen out!

In former years teaching, so called, was, with few exceptions, but catechizing. The solemn teacher, with her eyes fixed upon a text-book, as she stood before her pupils, was a personified catechism, "longer" or "shorter" according as her patience and their memories

held out. It was not that school-books were not gone through and every question in the book faithfully asked and answered. Occasionally there were exceptional teachers to be met so presumptuous as to propound a question which was not in the book, or to ask for the reason of some glibly stated answer. This departure was looked upon by the ever-watchful scholar as rather an unfair proceeding, and the questions of the erratic teacher, like the too-personal interrogatories of the preacher, savored very much of taking advantage of the situation.

I remember well an incident in my early experience as a teacher which illustrates the feeling which then existed in the minds of pupils in regard to the customary methods of teaching. Among my scholars was a lad who, in common with others, had been accustomed to learn his lessons and recite them in the orthodox fashion of question and answer in their regular order. One day he

went home from school in a very angry mood. When questioned as to the cause of his unhappy state of mind, he exclaimed, with great feeling, "I never want to go to school to *her* again as long as I live! She teaches more than she knows. To-day she asked me questions that were not in the book, and I can't stand it any longer, and, what is more, I do not believe she could answer them herself!" And in this he was probably right, for even then to impart knowledge was not my only aim.

And here I may venture to assert my belief that all teachers may be divided into two classes: those who can teach more than they know, and those who cannot teach as much as they know; the former are the more successful.

By the word *teaching* as here used I do not mean merely giving instruction, but rather the asking of questions which the teacher may not be fully able to answer, but such as will awaken in the mind of the scholar a discriminating

activity, that will tend to enlarge the understanding to a greater degree than the precise question of the more learned instructor and the correct answer learned by heart and not by head.

But my greatest cause for dissatisfaction was in this: that the prevailing mode of teaching did not train the faculties of the pupil, after all. I had no special cause for complaint in that my pupils did not study diligently; but when I took account of the mental stock, not to speak of the general knowledge, which the average girl of eighteen years has laid up, with which to enter into the business of life for herself, I felt that she would either be compelled to suspend until experience came to her aid, or fail altogether. Surely there was no lack of indefatigable instructors, profound professors, and learned lecturers, while the fact remained that the girl left school without having formed habits of attention, accurate observation, and discrimination, or gained power

for logical thought and comprehensive study, and if she knew her own emptiness, might exclaim, after the manner of Paul, "And though I have all knowledge and have no mental power that I can call my own, I am nothing."

In the gloom of this conviction which constantly oppressed me, I was, at times, almost ready to cry out with the retiring pedagogue,

"Ere I would wear my soul away
In pain where each succeeding day
But beggars that before,
Wood I would hew, and water draw,
Make brick in full tale without straw,
As Israel did of yore."

It was in the endeavor to find a better way for the developing of youthful minds than the text-books afforded that my mind was continually exercised. I often asked myself, "What is wanting that teachers and text-books do not supply?"

The best answer which I have found

to this perplexing question came to me in a very peculiar and unexpected manner.

It has been said, "A child shall lead them," and in this instance it was literally true, for in more senses than one it was a child who led me to catch a glimpse of the better way for which I had sought so earnestly. Some small friends had begged me to take them to the circus which was exhibiting in the town where I had been teaching, and I consented somewhat reluctantly. While watching various acrobatic feats, my attention was particularly drawn to a Japanese lad of but a few years, who was walking a tight-rope; the rope was stretched at a height that made the feat extremely dangerous—a single misstep as he balanced himself in mid-air would have proved wellnigh fatal. Another lad also attracted my attention and filled me with amazement by his skill and agility in rapidly tossing up and catching sharp-bladed knives.

What was it which enabled each to perform his dangerous feat without faltering or mistake? The answer was to be found in the fact that fear had caused them to rivet their attention upon their tasks absolutely, so that they were utterly oblivious to all else.

This exhibition of the possibilities of concentrated attention as exemplified by the Japanese boys impressed itself upon my mind with peculiar force.

It was then I realized the value of a mental power which would aid me to train the mind to a greater degree of attention if another incentive than fear could be used. In casting about for some other urgency than that of fear, as in the case of the Japanese lads, I found that innate curiosity which is shared in a greater or less degree by all, ambition, and a desire to excel would serve to stimulate the mental activities and concentrate the attention. These emotional states and tendencies, together with association, while none or all of

them would create attention, would furnish the work of directing and holding the attention.

Thus out of an accidental discovery has grown the system which may be characterized as *means* to an *end*. This I have used with good results in my own school, and of this system I shall treat in the following pages.

It is Darwin who says, "When an animal trainer desires to select monkeys for training, he will take a number of them, range them about him, and then attempt to attract their attention by various performances. Those whose attention cannot be secured are cast out as unfit for training."

Whether it is a case of the survival of the fittest or not we do not propose to discuss, but it is true that in the system of exercises which I have formulated all of the pupils, without exception, acquire very quickly the habit of attention, a habit upon which too strong an emphasis cannot be placed.

Sometimes visitors to the school, when they have witnessed the training exercises and observed the rapt attention of my scholars, and how quickly they have perceived what was in my mind, have suggested animal magnetism, hypnotism, and other isms; but there is no mysterious or hidden influence at work between us: it is a wholly natural interaction that the pupil's mind takes on —simply a form of mental action, the natural result of being led daily in the same direction and through the same mental experience.

In closing this introduction, I wish to state that this book is not intended to be a treatise on psychology, but rather the history of a practical method of applying psychological principles, especially those which apply directly to the subjects of attention and memory.

CHAPTER I

OBJECT OF THE SYSTEM

THE ability to concentrate the attention is of inestimable value. ZEN

A great educator has said, "The power of attention constitutes a striking difference between the trained and the untrained intellect." The most superficial observer will be ready to admit that he who possesses the ability to concentrate his attention at will, whether his task be the learning of a trade or profession, the solving of a mathematical problem, the finding of a logical sequence by means of a chain of abstruse reasoning, or the tracing of effects to their causes, physical or metaphysical, will sooner and more satisfactorily reach success than he who,

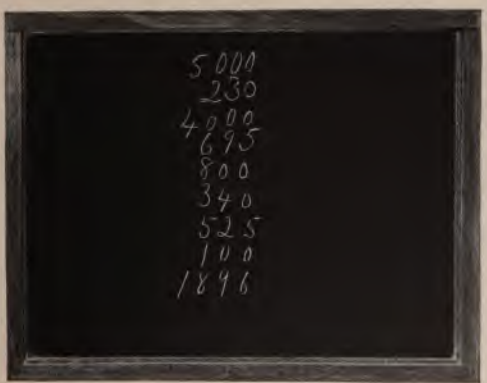
though possessed of more skill and learning, fails to fix his attention upon his subject.

How important it is, then, that this power should be acquired when young, and that the youthful student should secure it in some degree while making his first attempts at learning.

Here, then, is the important work of the teacher. It is in the school-room that these habits of attention should be formed.

Experience has convinced me that the chief factor in the obtaining of knowledge, in school or out of school, is the ability to concentrate the attention to such a degree as to insure a retentive memory. As so many things are to be learned arbitrarily, a system which strives to secure the ability of concentrating the attention and strengthening the memory must prove invaluable.

By means of this important agency the use of the reasoning powers will be



No. 1—Exercise for quick perception and attention

greatly facilitated, because less hampered by the difficulty of acquiring and retaining the necessary technical knowledge by means of which the thinker will be enabled to hold the conditions more firmly fixed in the mind while tracing the question to its logical conclusion.

To a class which has been trained to listen with steadiness of attention, there is a large amount of information which the teacher may give either from her own resources or from books, and be able to impart a broader intelligence than the average pupil would gain by study.

If the teacher be an effective reader, a requisite not to be overlooked, she will make clear by inflection and emphasis the meaning, which might otherwise be obscure, and impress it upon the minds of her listeners, who, having attained a good degree of mental activity and the habit of attention, will be able to state clearly and accurately what they have heard, or to write an intelli-

gent synopsis of the same. The scientific studies, with their countless classifications and technical words, may be quickly learned when heard from the teacher's lips, and thus the way will be better prepared for intelligent study, at a cost of far less time and effort than when set to the task of committing to memory. Botany, Natural History, Mineralogy, Geology, and other studies drawn from the realm of nature, may be successfully taught in a class well trained to listen, with little need of text-books except for reference or for reading; teacher and pupils alike making their own researches and observations, and sharing the results with pleasure and satisfaction.

The problems of the higher Mathematics, Physics, Astronomy, and other studies, will be made easier to comprehend when the mind is able to concentrate all its powers upon the conditions of the problem, the relations of each part to the whole, and of causes to ef-

fects. The distaste for these studies so common among girls is, I believe, largely due to a lack of mental preparation.

The unsuccessful student has not been trained to hold the mind steady long enough at once to compass the conditions and meaning of the question, and therefore becomes easily discouraged because of the limitations of her untrained mind; hence, the school-girl's "I can't" is often an honest avowal of her lack of ability, and the teacher's "Try again" is of no avail. It would be thought a strangely absurd thing to expect an unskilled mechanic to produce a piece of intricate and useful workmanship without a thorough knowledge of the use of his tools and of the machinery necessary for its construction. It is true he might, after many unsuccessful attempts and much expenditure of time, discover the uses of the implements at hand, and after a long trial be able to present the completed work. More unreasonable is the exaction made

of the untrained student that she shall comprehend and learn long and difficult lessons without the best use of her mental faculties. This is often done at the expense of health, so much time being necessary to compensate, even to some small degree, for lack of concentrated attention that none remains for recreation and rest.

The question naturally arises, "What, then, are the means to be used to cultivate the habit of concentrating the attention?" In other words, "What shall be the process of training which will secure this end?"

It is the purpose of this book to answer this question so far as it has been met, in my own experience as a teacher, while striving to assist my pupils to acquire this important educative force.

The answer would undoubtedly be the means of saving the student a vast amount of mental drudgery and fatigue, and of securing much time which is too

often wasted in the miscalled study hours.

It now becomes necessary to say a few words concerning the principles of attention.

Voluntary attention, we find, is a result of the cultivation of spontaneous attention along certain prescribed lines. It is an acquired power or state of mental steadiness, usually attained by habit.

In a durable form it is a difficult state to sustain, and usually extraneous aid is needed.

It has been found that the motive necessary for the production of voluntary attention is best induced and continued by the use of certain emotional states, such as fear, innate curiosity, emulation, and desire to excel. A system which recognizes the importance of this mental training as a thing distinct from methods of teaching, and as a necessary part of the teacher's work, is the subject under consideration.

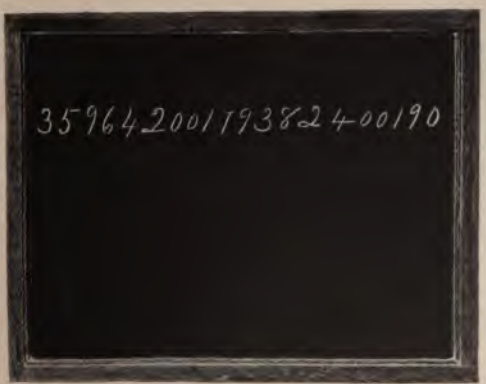
It was with a view to arousing the

mental activities, keeping the mind on the alert, and holding the attention steadily, that I formulated certain exercises which placed the mind in the same mental attitude for a short time each day. The result was that a *habit* of *voluntary attention* was formed, and thus I had secured to a considerable degree the end I had so assiduously sought.

The process of development which I marked out for my own use for quickening the mental activities was as follows:

First, to quicken the perceptive faculties; second, to cultivate the habit of accuracy in seeing and hearing; and third, to discriminate by immediately observing similarities, differences, and relations, remembering always that attention was the underlying condition for the proper development of these functions of the mind.

Quickness of perception will lead to the power of observation, so essential to the student of the sciences in collecting, sorting, arranging, and classifying.



No. 2—Exercise for rapidity and accuracy in sight-reading

This faculty of perception, when highly developed, will lead the mind to reach conclusions rapidly.

Nathaniel Bowditch said that in studying the *Mécanique Céleste* he became discouraged by the frequent recurrence of the word "obviously." The perfectly trained mind of La Place had by one great mental leap, the result of marvellously trained perceptive powers, attained the inference which cost Bowditch long hours of wearisome labor to reach.

The power to recognize in one rapid glance the familiar principle and the process by which the results are to be obtained, so that these stand out to the mind "obviously," as a basis of continuous work, is, I believe, to be secured in a very helpful degree through direct training, the distinct end of which should be the highest development of the perceptive faculty. A necessary consideration, and one to be strongly emphasized in the training of the per-

ceptive faculty, is that of insisting upon a habit of accuracy in seeing and hearing.

The usefulness of this habit is being universally recognized. I shall confine myself to its application to school-room work. I will only state, in passing, that the attainment of the habit of quick perception will make all the life occupations easier and better; the want of which is sometimes expressed as the inability to "take in" the situation. Following the training to quick perception should be the training to accurate discrimination. This is more complex in its nature, involving, as it does, thinking and remembering until clear recognition takes place. The cultivation of the power of distinct discrimination, leading the mind to notice likenesses and differences and to think, accustoms it to perceive things and their relations to each other with a full recognition.

Thus these forms of experience, as

perception, attention, discrimination, remembering, etc., while they depend upon each other as facts of psychology, may be made of inestimable value to the pupil when developed, each in turn, as a means to an end.

As I have said before, this is not a psychological treatise. It is intended to comprehend no more than the practical consideration of a few of the foundation facts which psychology studies, and which are most essential in the cultivation of the mind. The word "faculties" I have used only as some of those special modes of the mind's activities which, although complex, are capable of particular development by means of mental training.

CHAPTER II

THE SYSTEM EXPLAINED

INNATE curiosity, which, as Ribot has said, seems to be the appetite of intelligence, was the motive to which I first appealed through the sense of sight. This motive suggested the use of the swinging blackboard. At first the experiments were tested, not upon the individual mind, but upon the minds of the entire school acting together towards one end. An intensity of interest was thus secured by means of that wondrous element of success, the contagion of enthusiasm. But curiosity soon grew into interested attention. A column of figures consisting of units, tens, and hundreds was placed upon the reversed side of the blackboard, which

was quickly revolved. The figures were easily recognized in their order, as:

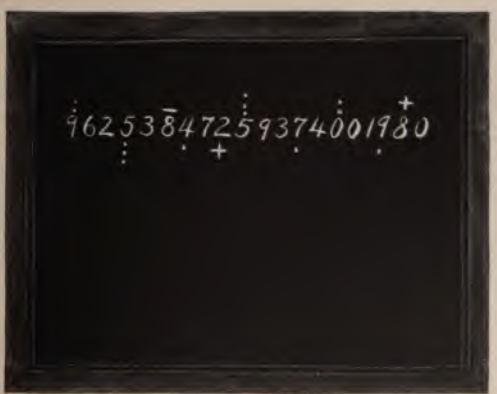
300
29
32
86
100

When the ability to recognize a few numbers at a single glance had been attained, a longer column, as shown in cut No. 1, was easily mastered. When the habit of quick perception had been in a measure secured, the same means were used to form a habit equally useful but more difficult to acquire: that of holding the mind steady while retaining these figures in their order. Pupils were required, after a single glance at the figures, to repeat the unit figures beginning at the top, then the tens, the hundreds, and so on. Individual pupils were required to give these as stated above, and to repeat the column from the bottom to the top.

A still more difficult exercise, as requiring a firmer grasp, was to repeat the contents of the column by multiplying, dividing, or extracting the square or cube root of each separate number. Thus the column

230
729
11
36
40000
16
40

was shown for three seconds only; the pupils were then asked but once to multiply the first number by two, to extract the cube root of the second, to square the third, to extract the square root of the fourth, to divide the fifth by two, to multiply the sixth by twenty-four, and to divide the seventh by four, and then to repeat the changed column, which they did as follows:



No. 3—Exercise for accuracy in discriminating

460
9
121
6
20000
384
10

Another example was given, as follows:

692
18
95
225
9000
470
6000
25

To square the second number, subtract from the fourth 200, multiply the fifth by three, and extract the square root of the last number. This was repeated, as follows:

692
324
95
25
27000
470
6000
5

Among other exercises of this kind were the following columns, which were repeated after a single glance and then erased:

54	16	48	32
100	800	1789	500
1483	1702	1452	1620
621	1815	1321	350
1635	1300	11	1400
476	600	751	290
1000	24	560	6000
27	13	1492	00
10			

The purpose of the exercise was solely to arouse an eager attention which could be shared by each individual without regard to scholarship, to quicken the activities of the mind, to fix the attention, and help to form the habit of looking at things accurately and of holding them in the mind.

There was no occasion for retaining the figures in the order of their arrangement, nor even for remembering them at all, and I was surprised

when, after some days had passed, I discovered that my pupils could recall two or three columns of figures similar to the above in their order without hesitation or error; an experience which proved to me beyond a doubt, if any proof were needed, that the mind retains the impressions made upon it in proportion to the degree of attention given at the time the impressions are received.

Although I had placed the figures upon the board merely as an exercise in attention, my pupils, who are daily trained to habits of mental associations, showed me that nearly all of the numbers I had written had conveyed to their minds, in a single glance, one or more facts of history. For example:

100 (B.C.) Birth of Julius Cæsar.
1483 Birth of Raphael and Martin Luther; death of the little princes in the Tower.
621 Mohammed's entry into Medina.
476 Downfall of the Roman Empire.

1000 Visit of the Northmen to America.
800 Charlemagne crowned Pope.
1702 Death of William of Orange. Accession of Queen Anne.
1815 Napoleon's escape from Elba; Waterloo; Wellington's victory.
1300 Pope Boniface VIII; Dante at Rome.
600 (B.C.) Buddhism introduced into India.
1321 Death of Dante.
751 Rome founded.
1492 Castile and Aragon united; expulsion of the Moors; Columbus discovers America.

Thus some valuable suggestions were obtained by way of practice in quickly recalling what had been previously learned.

Another exercise devised for the same purpose — to cultivate habits of quick perception and concentration — was to place a number of figures in a horizontal line, as seen in cut No. 2 and also No. 3.

The figures were repeated in their order in single units, then in tens and hundreds, and from the right to the left.

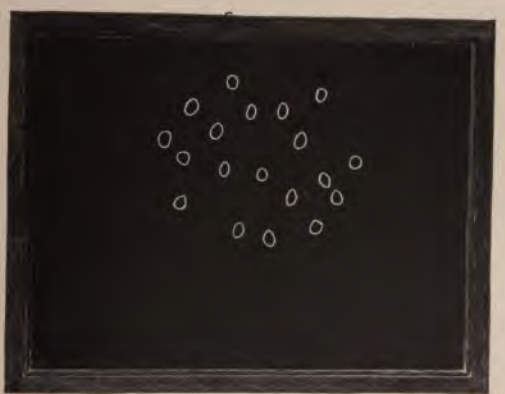
No. 3 was repeated thus: 9, two dots above; 6, 2, 5, three dots below; 3, 8, minus-sign above; 4, one dot below; 7, 2, plus-sign below; 5, three dots above; 9, 3, 7, one dot below; 4, 0, two dots above; 0, 1, 9, one dot below; 8, plus-sign above; 0.

A useful exercise in the development of quick perception and careful discrimination is that of "Unconscious Counting," or the immediate recognition of the number of objects without counting them. There are presented to the eye, for example, a number of circles placed upon the revolving board, as shown in cut No. 4, and instead of counting one, two, three, four, five, six, seven, the pupil distinguishes at a glance that the numerical value of the group is seven. The relative position of the circles should be changed, and the practice continued until the group is as quickly perceived and as certain to mean seven to the mind as a single object to mean one.

After a few weeks of practice, not exceeding five minutes each morning, my pupils were able to recognize instantly twenty objects without counting, seldom mistaking the group, of whatever kind, for any other number.

Sometimes an algebraic formula, or a collection of letters used in Roman notation, some unfamiliar words, or a part of a sentence or paragraph, were shown for a moment, then written by the pupils precisely as they had seen them during a single revolution of the blackboard.

It may be easily seen that exercises like the above, practised for a few minutes each day, would lead the mind to seize quickly upon the notes or characters used in written music. That these means have not failed of their end has been repeatedly proved. Three or four bars of music have been written on the revolving board, then turned towards the class for a few seconds, when the pupils were able to state precisely what



No. 4—Exercise for unconscious counting

was written, giving the tonality, time, name, and length of each note, rest, tie, etc.

Testimony to the value of mental training for the study of music is thus given by the instructors:

My dear Miss Aiken, — It gives me great pleasure to write to you of the results of your mind-training system upon the piano-forte pupils in your school who are studying the Synthetic Method.

The quality of work that is done by the girls is immeasurably ahead of any I have ever had from students of corresponding age outside of your school.

There is nothing in piano-forte training that requires closer concentration than transposition. Last Tuesday I gave out the first example of transposition attempted in the present class, and — without previous preparation — the example, which was difficult, was immediately played in two other keys. So difficult a test has not been made in any other class under my care.

The examinations by Mr. Albert Ross Parsons have elicited his enthusiastic commendation of the mind-training, and he has expressed his satisfaction with the intelligent, quick perception of the girls who require but one telling in order to

remember what he desires to convey in his teaching. Believe me very truly yours,

KATE S. CHITTENDEN.

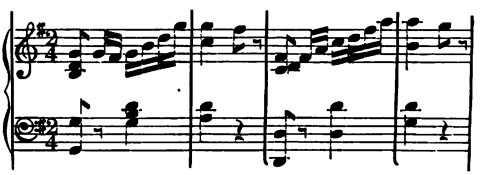
128 East Sixteenth Street, *Nov.* 23, 1892.

Prof. Albert Woeltge writes:

Quick perception is the basis of *first-sight reading*, and a quick perception of music and instantaneous adaptation of fingering for its execution is the basis of *first-sight playing*.

The mental process in either is essentially the same as taught by Miss Aiken in her principle of mind-training: an instantaneous analyzation of the component parts of a musical composition.

Having witnessed several astonishing illustrations of Miss Aiken's mind-training, and wishing to test the principle as applicable to the reading of music, I wrote on a blackboard, out of sight of the class, and without previous intimation, the following musical phrase, which, after being exposed to the view of the pupils for the short space of time of three seconds, was repeated by them from memory correctly, naming note for note in the treble and the bass, together with their value and place in the measure, the key, and time:



By specially devised exercises this faculty may be further developed, and become of practical use for *playing at first sight*, and in committing music rapidly to memory, saving much time spent in practising.

The degree of attention, as we have seen, leads the mind to observe distinctions quickly and accurately.

ALBERT WOELTGE.

It is desirable to vary the exercises, even when the end to be attained is the same. The ability to discriminate with accuracy will be gained by frequent practice in the blackboard exercises which have been already given, particularly the one designated "Unconscious Counting." It has been found, however, an interesting and valuable practice to measure upon the board various lengths, and, having fixed in the mind a standard of comparison, to be able to distinguish the exact length of the lines —2 inches from $2\frac{1}{2}$, 5 inches from $5\frac{1}{4}$, 9 inches from 10, 2 feet from 2 feet 1 inch, 2 feet 6 inches from 2 feet 7 inches, etc. These lines of measurement

have been sometimes placed together upon the board, and often in single lines.

Strict attention will fix the various lengths in the mind, and memory will enable the student to recall the standard by which he may draw with exactness the desired length.

To cultivate a memory of places and the relations of objects to each other in space, horizontal and perpendicular lines were drawn, as seen in cut No. 5.

The pupils were occasionally required to prepare their lines for themselves, and when the board, marked off in spaces filled like the above, had been seen for a few seconds only, to fill their own spaces from memory; or they were asked to place the proper figure or character, for example, on the third line, fourth space, or on the fifth line, second space, and so on, until all the required spaces were filled. They were also asked to state the relations of the contents of one space to that of others.

This work it would have been impossible for a class to do unless the mind had been trained to habits of concentration.

By means of exercises like these the scholar's mind is energized in the attempt to see things precisely as they are, and is also assisted in acquiring a habit of careful observation, so useful in every branch of study. These habits of mind are a thousand times to be preferred to the passivity and carelessness of the untrained scholar who is content with a superficial glance, and rests satisfied if the result of the observations is *almost* correct.

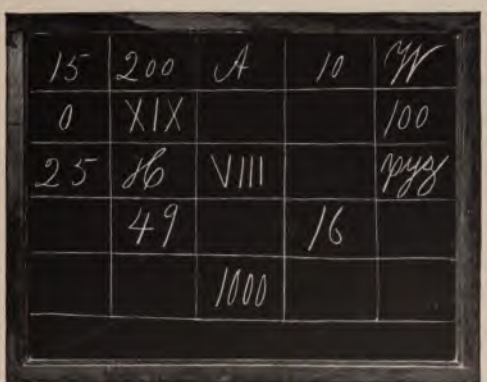
The study of drawing will be greatly facilitated when the habit of quick and accurate seeing has been acquired to any considerable degree. A model is presented for a few moments of study, and then withdrawn. It is required to reproduce it from memory. This is also a valuable practice, as preparing the mind for independent work. It has

been generally observed by the masters of those pupils who are practised in these methods of mind-training that there exists a readiness to perceive forms and their relations, and a steadiness of attention, which enables them to do excellent work in drawing, designing, moulding, etc., with ease and rapidity.

Mr. Jacobs, one of the authors of the Graphic System of drawing, has charge of the art classes in the school. He says:

Many of the methods used by Miss Aiken I have found of great value in the work of drawing. For the purpose of training the eye and hand, a great variety of exercises has been given.

Lessons from objects in outline, and in light and shade, and cast drawing, have been supplemented by work from the revolving blackboard, viz., memory drawing of objects shown the week before, sketches from the imagination, glance work from objects shown and quickly withdrawn, and rapid work from groups of objects. The practical results obtained are a quickness of perception, accurate statements of truth of form



No. 5—Exercise for accuracy in recalling objects in their places, and in their relation to other objects

and values, given in a direct manner, all pupils showing a real interest and pleasure in their work.

Cut No. 6 shows examples of the simpler exercises given. After one revolution of the board pupils made memory sketches. A few of the results are shown in cut No. 7. In cut No. 8 more elaborate tile patterns are shown, and cut No. 9 gives examples of glance work from objects shown but an instant, and two minutes only allowed for each drawing.

A few sketches from the figure, made in a more advanced class, are shown in cut No. 10. A teacher in composition and rhetoric says: 'I have been surprised at the facility of hand shown by all the pupils, and above this I place their appreciation of the value of care in all work required of them. This I trace largely to their lessons in time sketches and glance work.'

HOBART B. JACOBS.

A blackboard practice in synonyms has been found interesting and useful. A column of words not exceeding ten was written and shown for a few seconds. The class was asked to write the synonyms in the same order in which the words had been written:

Example	*Synonyms*	
Intend	expect	mean to
Contain	include	holds
Time	one day	eternity
Soon	immediately	quick
Portrait	picture	likeness
Clock	timepiece	timepiece
Landscape	scene	scene
Fortune	wealth	luck
Charity	kindness	almsgiving
Master	instructor	captain

Similar columns of words and their synonyms have been frequently written, varying in number from six to ten.

ROTE LEARNING

An independent way of fixing the attention, and one which each pupil may practise alone, and find excellent for discipline and instruction, has been practised in the following manner: The pupils were asked, for example, to turn to a certain page of a book, to look at the first two lines, or more, for a single moment, then to close the book and to write the lines, every word, syllable, and letter in its place, the capitals, if any, and the punctuation-marks. Whole

paragraphs may thus be reproduced by the pupils after a single reading. They feel that they have no time to gaze about them; they are urged by the imperativeness of *the one reading*, and their attention thus stimulated, they do the work, gain the experience of writing the lines perfectly, and, better still, form the habit of observing while reading—the true way, in my opinion, to learn to spell, to punctuate, and even to construct sentences. In this will be found a vast economy of time compared to the method of committing to memory rules which the pupil may be able to recite, but seldom to apply. The teacher will be able to make explanations, and give reasons for technical peculiarities when her pupils have observed for themselves the facts, as they should be led to do. Thus the way is made ready for original, independent, and self-instructing work.

CHAPTER III

ATTENTION AND MEMORY

In order to cultivate the art of listening—a gift often more rare than fluent speech — some exercises were formulated, and practised from ten to fifteen minutes each day, with no further end in view than that of accustoming the mind to concentrate itself upon the subject, in listening to the reading of a book, or to a lecture, or to oral instruction.

The process by means of which this has been accomplished will be seen in the use of a few examples. To a class of beginners in the mind-training exercise I read *once* only, after explaining the meaning of subject, predicate, and object, the following extract from "A

Child's Dream of a Star," by Charles Dickens:

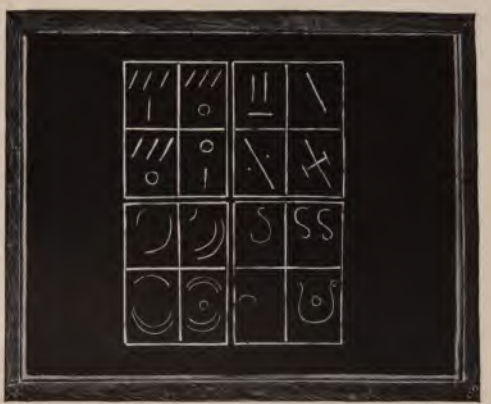
"There was once a child, and he strolled about a good deal, and thought of a number of things. He had a sister, who was a child too, and his constant companion. They wondered at the beauty of the flowers; they wondered at the height and blueness of the sky; they wondered at the depth of the water; they wondered at the goodness and power of God, who made them lovely."

The scholars were ignorant of any text-book definitions of subject, predicate, object, and subordinate and dependent words and clauses, but they were shown the principal parts of a sentence, as the words containing the main idea, and their relation to each other and to the remaining words of the sentence. When this was made clear by illustration, the class was asked to repeat the important words in the first two sentences, and then the whole paragraph, and lastly to repeat the en-

tire selection, which they did with great delight, and with few mistakes, and these they corrected after a short pause, for in no case were they prompted. They had substituted the word "color," for "blueness," and when told there was an inaccuracy, recalled the word without assistance.

Little by little they acquired a power of seizing at once upon the principal parts of a sentence, viz., the subject and predicate, and to do this in the order of their arrangement. To hold these firmly in the mind, grouping around each its dependent words, it was necessary that unswerving attention should be given to the once-heard reading. Beginners were frequently asked to state the subjects and predicates contained in the paragraph before repeating the whole.

As the pupils' power of continuous attention increased with practice, a greater number of lines of prose and poetry was read for their recalling, until they could



No. 6—Glance-work from revolving blackboard

repeat from twenty to thirty lines, and even more, of that which they had heard read but once.

As invariably the best English was selected for these exercises, they soon learned unconsciously the principles of rhetoric in the proper structure and form of sentences, as well as the use of synonyms. In order to express the meaning conveyed to the mind in the text, they frequently made use of another word than that which they had heard—a practice to be greatly encouraged, except as an exercise for the sole purpose of recalling the precise word, when it should at once be exchanged.

The following, taken from "Tom Brown at Rugby," was repeated by individual scholars, and also by the class, after one reading, at the end of seven minutes; and when some weeks had passed, the entire selection was immediately and correctly recalled. The words written below in italics were first repeated, then the entire selection:

"*Tom and his father had alighted* at the Peacock Inn, London, at about seven in the evening, and *having heard* with unfeigned joy the paternal order for supper and *seen* his father seated cosily by the bright fire in the coffee-room with the paper in his hand, *Tom had run out* to see about him, *had wondered* at all the vehicles passing and repassing, and *had fraternized* with the boots and ostler, from whom *he ascertained* that the Tally-ho coach was a tip-top goer, ten miles an hour, including stoppages, and so punctual that all the roads set their clocks by her.

"Then, *being summoned* to supper, *he had regaled* himself on beefsteak and oyster-sauce; had at first *attended* to the excellent advice his father gave him; and *then began nodding*, from the united effects of the supper, the fire, and the lecture; till the *Squire, observing* Tom's state, and *remembering* that it was nearly nine o'clock and that the Tally-ho left at three, *sent* the little fellow to bed

with a shake of the hand and a few parting words."

I would here say, in explanation of the above, that I have given to the word predicate a meaning slightly broader than that generally accepted, and have included participles under this head, as being "key words" to the meaning of the sentence, and therefore important in our plan of memorizing.

The following poems were learned in seven minutes by first repeating the subjects and predicates as italicized:

HYMN TO THE NIGHT

I heard the trailing garments of the Night
Sweep through her marble halls!
I saw her sable skirts all fringed with light
From the celestial walls!

I felt her presence, by its spell of might,
Stoop o'er me from above;
The calm, majestic presence of the Night
As of the one I love.

I heard the sounds of sorrow and delight,
The manifold, soft *chimes*,

That fill the haunted chambers of the Night,
Like some old poet's rhymes.

From the cool cisterns of the midnight air
My spirit drank repose;
The fountain of perpetual peace flows there—
From those deep cisterns *flows.*

O holy Night! from thee *I learn to bear*
What *man has borne* before!
Thou lay'st thy finger on the lips of Care,
And *they complain* no more.

Peace! Peace! Orestes-like *I breathe* this prayer
Descend with broad-winged flight,
The welcome, the thrice-prayed-for, the most fair
The best-belovèd Night!

H. W. LONGFELLOW.

BUGLE SONG

The *splendor falls* on castle walls
And snowy summits old in story;
The *long light shakes* across the lakes,
And the *wild cataract leaps* in glory.
Blow, bugle, *blow*, *set* the wild echoes *flying*,
Blow, bugle; *answer*, echoes, dying, dying, dying.

O hark! O hear! how thin and clear,
And thinner, clearer, further *going;*
O sweet and far, from cliff and scar,
The *horns* of Elfland faintly *blowing!*

Blow, let us *hear* the purple glens *replying,*
Blow, bugle ; *answer,* echoes, dying, dying, dying.

O love, *they die* in you rich sky,
They faint on hill or field or river :
Our *echoes roll* from soul to soul
And *grow* forever and forever.
Blow, bugle, *blow, set* the wild echoes *flying,*
And *answer,* echoes, *answer,* dying, dying, dying.

ALFRED TENNYSON.

After the pupils had attained a certain proficiency in the art of attentive listening, they were required to solve problems of considerable length without the aid of pencil and paper.

Thus the teacher would give a problem involving perhaps twenty mental operations, the pupils following each word closely, and at the end giving the correct answer.

The scholars were drilled in numeration, Arabic and Roman notation, addition, subtraction, multiplication, division, fractions, denominate numbers, foreign money, mensuration, percentage,

interest, squares, cubes, roots, and short methods of multiplication. Very good work could be done with ten minutes' practice each day.

The following are examples of the problems given:

1. *Addition.*—(*a*) Add IV., XII., LX., XC., CD., MM. (*b*) Cover the board with columns of figures and add in every possible way, taking all the figures as units, or giving them their true value.

2. *Subtraction.* — Subtract any number from 1000, as follows:

Use 1000 as the minuend, 498 as the subtrahend; then use the first subtrahend as the second minuend, and the first remainder as the second subtrahend, and so on. If correct, the eighth line will always be like the seventeenth.

1000
498
502
996
506
490
016
474
542
932
610

No. 7—Eight examples from second figure in No. 6

322
288
034
254
780
474

3. Example for quick work in multiplication and division:

498673 × 2
997346 × 3
2992038 × 4
11968152 × 5
59840760 × 6
359044560 × 7
2513311920 × 8
20106495360 × 9
180958458240 ÷ 2
90479229120 ÷ 3
30159743040 ÷ 4
7539935760 ÷ 5
1507987152 ÷ 6
251331192 ÷ 7
35904456 ÷ 8
4488057 ÷ 9
498673

4. Example in multiplication for drill in adding large numbers, and in concentrated attention, partial products added mentally, and work

proved by casting out the 9's. Order of work: 7×4; $7\times6+5\times4$; $7\times9+5\times6+8\times4$; etc.

$$\begin{array}{r} 87{,}964 \\ 39{,}857 \\ \hline 3{,}505{,}981{,}148 \end{array}$$

5. *Fractions.*—

$$\frac{\frac{2}{5}\times\frac{1}{4}+\frac{2}{5}\div\frac{1}{10}}{2-\frac{1}{1+1}\over 1-\frac{1}{2}} = 4\tfrac{2}{20}$$

6. *Coins.*—Value of a French franc ? a German mark ? an Italian lira ? a Russian kopeck ? a Japanese yen ? etc.

7. *Mensuration and Percentage.*—(*a*) Examples in carpeting rooms, reckoning by short methods, etc. (*b*) $\frac{1}{2}$ of anything is what per cent.? $\frac{1}{3}$? $\frac{1}{4}$? $\frac{1}{8}$? $\frac{1}{12}$?

8. Examples in multiplying numbers whose units added make ten, and whose tens are alike, or vice versa: (*a*) Multiply the tens by the next higher number, and multiply the units together: $46\times44=2024$. (*b*) Multiply the tens together, add the units' figure, and multiply the units together: $87\times27=2349$.

9. *Squares.*—(*a*) Square 45 by rule just given. (*b*) Square 84 by binomial formula. (*c*) Square 99,999,999. *Ans.* 9,999,999,800,000,001.

10. *Miscellaneous Example.*—9 times 8, multiply by 32, subtract 4, add 200, square root, divide by

5, subtract ½, square it, multiply by 4, square root, multiply by 11, subtract 9, multiply by 25, add 1400, multiply by 10, cube root, add 8, divide by 4, cube it, multiply by 2. Give answer, 3456, in Roman letters.

SPELLING

To make the art of spelling correctly easier of attainment, and to invest the tedious task of learning to spell with an interest akin to the enjoyment of the old-fashioned "spelling-match," was, I thought, a problem worthy an attempt at solution. It was not until after considerable progress had been made in concentrating attention and in improving the memory that the following plan for an agreeable spelling-lesson was devised. It will be seen that the device is in the line of our mental training.

I had observed that by far the most of the failures in spelling found in the English compositions and essays of my girls, as well as in their synopses of

lectures, written reviews of lessons, and in their letters, were made in the struggle with the double letter. The plan was to learn if possible the words in common use which contain double letters, and when these had grown familiar to the ear there would be no need to burden the mind in trying to remember the words which do not. The first experiment was made upon a spelling-class containing thirty-six scholars, the success of which depended, as do all our results in learning, upon the power of attention. Each pupil in turn was required to pronounce and spell a word which doubled, for example, the letter c. When this had been done by every member of the class, each pupil wrote as many of the words which she had just heard as she could recall. Here, then, was an opportunity to test the attention given and the power of recalling with accuracy.

After the words had been written from memory, for there had been no

No. 8—Tile patterns

dictation or giving out of words, the c's were again called for, and the words again went round the class until those containing double c's seemed nearly exhausted. The scholar who had then written the largest number of words pronounced and spelled her entire list, from which her classmates could draw to add to their own lists. Of this letter the highest number of words written thus from memory was 177.

The words were repeated until they became familiar and the meaning of the unfamiliar words was given. Fifteen minutes every day was appropriated to this exercise, and the class had reached after six months the lesson of doubling the letter s; the average number of words thus learned and written was 2055, and the highest number was 4008.

Spelling by dictation in the ordinary way is also given, and no word is repeated by the teacher. And here it must be remembered that the mind is

not mentally assisted by being prompted. On the contrary, it becomes dependent and less active; there is not the stimulus to the attention when repetition is expected.

CHAPTER IV

TO TEACHERS

More than forty years spent in earnest work in the attempt at teaching, and the varied experience gained in contact with the minds of more than two thousand scholars, together with the stimulus of an unfailing enthusiasm in my work, impressed upon me the fact that the highest success in teaching depends upon *the power of the teacher to command and hold the attention of her pupils.* Here it may be said all do not possess the power of commanding attention. This is true, alas! of teachers as of preachers, and is a vital want which neither learning nor piety can supply to the wandering mind of the languid listener.

It should be the aim of every teacher to get into close contact with the pupil's mind, and daily, for a short time, at least, to induce and direct its activity when it is free from the worry and excitement of learning and reciting a lesson; and especially should the teacher endeavor to shorten the wearisome and unprofitable hours spent over the school-books.

Can you not afford, therefore, to set apart twenty minutes every morning at the opening of school, when there shall be no attempt at learning, as such, only an effort to arouse and strengthen the mental faculties by daily exercise in the same direction, until the full use of them becomes a mental habit, which may be profitably applied in the acquiring of knowledge, whether that knowledge be of the mind's own activities or of things external to itself?

In setting aside these moments for mental training you will brighten and sharpen the instruments that are to be

used by your pupils in the day's study or work. A boy will whittle his stick so much better and easier with a sharp knife than with a dull one, and enjoy it so much more that he will not begrudge the time spent at the grindstone.

Can you not see how much time and labor is saved to the child who with sharpened faculties sits down to the task of preparing, for example, a lesson in spelling, the use of capitals, punctuation, etc., as well as to the student in his pursuit of the higher mathematics, who is enabled by his habits of alertness and concentration to seize quickly the conditions of the problems, to hold them steadily in his grasp, and by means of his well-trained memory to bring to the solution his previous experience in similar work?

In selecting material for use in the daily training, reference should be had always to the age and experience of the scholars, and care taken to choose only such passages as are within the range of their understanding.

The teacher who has charge of the earlier years of the child's school life should keep the idea of the necessity of attention constantly in her mind in all her work. Accustom the child to once hearing the word. If, for example, he is given the words cat, dog, and boy, let him write the words in the order in which they were given after being repeated but once. Or let him be given figures, as 4, 7, 3, 9, and the same process followed.

For the maturer minds there may be made selections from the best English authors, vocabularies of French and German words, sometimes the table of contents of a book about to be read or studied, or the characteristics of a certain century as a synopsis of previous study, or the classifications of some branch of natural science; making use of natural associations whenever they are seen to exist.

Nothing should be required of the attention but that which the mind is prepared to receive.

No. 9—Glance-work from objects

In considering the practicability of this method of preparing the mind for study, I would ask the teachers to remember that the actual *mind-training*, in the use of the given exercises, occupies but twenty minutes at the opening of school each morning, and must be viewed only as a *means to an end*, and not as constituting the entire work of the school. As well may the clergyman, book-keeper, seamstress, or any person of sedentary habits be considered as beating the air with dumb-bells all day long because of the use of them for a few moments before entering upon their quiet avocations, when, as a matter of fact, the well-directed exercise is simply imparting strength and vigor throughout the day.

Although this system of mind-training, as a distinct operation in school work, is still incomplete, and many of its possibilities are yet untried, it is a fact that some of the evils referred to in the beginning of this book have been

overcome, notably these: study hours have been made shorter, and the heavy tax upon mind and body has been relieved, while the same course of study has been pursued with broader comprehension and greater enjoyment.

One of the most gratifying results is that it has aroused the dull, slow-moving minds to a degree of activity which has become a new and delightful experience to the possessors.

Again, the use of the mental training has been seen in the ability to recall with accuracy after many months and often years have passed that which the pupils have read or heard of poetry or prose, facts of history, literature, art, etc. In a considerable degree the power has been acquired of shutting out from the mind extraneous and irrelevant subjects while pursuing their studies, as in the working of long and difficult examples in mental arithmetic, problems in algebra, geometry, natural philosophy, astronomy, etc.

This power of concentration has been sought for, not with the idea of making mere memorizers, but in order that they may be able to recall promptly what they have gathered from the great realm of facts and principles, so as to hold it in the mind as a basis of reasoning, and ultimately for the purpose of possessing well-disciplined and self-controlling minds.

It may be said that the process of educating the faculties as a means to the teacher's work demands great labor and strength on the part of the teacher. It is true. But it is also true that the teacher who teaches with heart as well as brain will experience a perpetual joy and satisfaction which she who only asks questions from a book and "hears lessons" knows not of. Unless the teacher is able by her personal power and the love she has for her work to inspire her pupils with the desire for knowledge and an enthusiasm in the search for it, her teaching is of little value. Said the wise philosopher and

great school-master, Plato: "Give me rather the desire after knowledge than the gift of knowledge."

The teacher who would make the training of her pupils' minds and hearts the prime factor in her work must be possessed of a sincere love for it. She must even be an enthusiast in her profession, and her whole mind and soul and spirit must be absorbed in the development of the highest possibilities in the minds and characters of her scholars while they are under her charge.

In the employment of methods as means to an end she will not find her task so easy as in that of "hearing recitations," for the activity awakened by the morning exercise must be sustained to a good degree by her own personal power and unfailing ability to hold the attention of her classes throughout the day.

It is true that the teacher is aided by the interest which attaches to the subject, and by the intelligence and

taste of her scholars; but her aptitude in making the mentality of her pupils such as to serve as the means of acquiring further knowledge will be her highest work.

I would not be understood as wanting in a just estimate of the faithfulness and devotion of teachers as a class; I believe that in no profession is so much wearying and wearing labor done with so little appreciation and so niggardly remuneration as in the vocation of the teacher. From out my more than forty years' experience in the belated art of teaching I would ask every teacher to adopt some direct method of training her scholars' minds, as a means to less laborious and more profitable teaching.

My heart is full of loving interest and kindly sympathy for the school girls and boys everywhere who are spending their young lives in the monotonous drudgery of studying to recite before they have learned to study. Little reference has their education to

their future needs and successes in life if void of right mental habits. A wise historian has written as follows of the men who framed our Constitution: "At the time of the Revolution, when the several States framed new governments, they simply put a written constitution into the position of supremacy formerly occupied by the charter. Instead of a document expressed in terms of a royal grant, they adopted a document expressed in the terms of a popular edict.

"To this the Legislature must conform; the people were already somewhat familiar with the method of testing the constitutionality of a law by getting the matter brought before the courts.

"The mental habit thus generated was probably more important than any other in enabling our Federal Union to be formed. Without it, indeed, it would have been impossible to form a durable Union."

When the truth has been fully dis-

No. 10—Time sketches

cussed and established in the minds of educators that all schools should be training-schools; when the candidate for the teacher's office is first asked to state her methods of training the mind rather than to answer, through a certificate or diploma, the all-important question, "How much do you know?" not only will the girls and boys be far better prepared for honest and systematic work in the world, but the standard of scholarship will be raised, because in the years spent in school the habit of concentrating attention will have been gained, the memory strengthened, and the reasoning faculties assisted to a broad and comprehensive development.

I again repeat the results which have been accomplished in my own school: much time has been economized, more instruction received, a clearer and broader intelligence secured by direct contact with the teacher's mind; and last, but by no means least, a truer

sympathy has existed between the teacher and scholar.

If the necessity for gaining a livelihood could be stricken out as a *prime* factor in the motive for teaching, which almost universally exists, how many of the evils which we now deplore in the prevailing system of education would be overcome!

Teaching, the most sacred of all professions—for only as preaching is teaching is it Christlike and holy—is unwillingly adopted by the young lady who suddenly finds the family fortune gone; she turns to teaching as the only employment befitting one who has "been brought up a lady." The lack of special training for the altogether new employment she soon deplores, for she finds herself not in touch with the minds of her pupils, and aimlessly, save for the obtaining of the salary, gropes her way in the dark, a blind guide.

Our hopes for the future of the art of teaching brighten with every dis-

covery of new spheres for women, and for every ingenious device which fashion, fancy, or need create for women's hands to do. May the time soon come when only those whose minds and hearts have been thoroughly trained for the work shall be called to train and to teach the youth of our country, and may the call to teach come from the heart of the teacher, and not alone for the sake of heaping up riches. To be the good teacher, in the nobler sense, demands self-sacrifice and a loving interest in those pupils who need such help and encouragement as they could not receive but for her liberality.

CONCLUSION

You will observe that I have not dwelt upon the subject of memory apart from that of attention. If I were compelled to sum up in a single word all that is embraced in the expression "a good memory" I should use the word attention. Indeed, I would define education, moral and intellectual, as attention.

"The teacher who labors to enlist the strongest and noblest feelings on the side of attention to the most important and valuable subjects will not fail to exert not only a great influence over the mental states of her pupils but upon their moral principles."

If we would cultivate in our own minds as well as in the minds of our

pupils the power of an individual attention, concentrated upon that which is highest, noblest, and best, memory would become the Recording Angel of our daily lives,

> "And not an image of the past
> Should fear that pencil's touch."

APPENDIX

BELIEVING that a few words stating more clearly the principles of psychology, upon which the system of mind-training is based, would indicate more precisely its value as a solution of some pedagogic problems, I append a few relevant quotations from Ribot.

In the following pages will also be found some suggestions for those whose powers of memory, either by neglect or otherwise, have become impaired, which will, I think, prove helpful if conscientiously followed.

NOTES FROM RIBOT

The process through which voluntary attention is formed may be reduced to the following single formula: to render attractive, by artifice, what is not so by nature; to give an artificial interest to things that have not a natural interest. I use the word "interest" in the ordinary sense, equivalent to the periphrase: anything that keeps the

mind on the alert. But the mind is only kept alert by the agreeable, disagreeable, or mixed action of objects upon it—that is, by emotional states. The whole question, accordingly, is reduced to the finding of effective motives; if the latter be wanting, voluntary attention does not appear.

The birth of voluntary attention, the power of fastening the mind upon non-attractive objects, can only be accomplished by force, under the influence of education, whether derived from men or things external. Education derived from men is, of course, the most easily demonstrable, but it is not the only kind. In this we have an instance of the genesis of voluntary attention. It was necessary to graft upon a desire natural and direct a desire artificial and indirect.

Reading is an operation that does not possess an immediate attraction, but as a means to an end it has attraction, a kind of borrowed attraction, and that is sufficient, in order to impart to the purpose in view a power of action that it naturally does not possess. I shall now indicate these periods in point of time into which voluntary attention falls.

In the first period the educator acts only upon simple feelings. He employs fear in all its forms, egotistic tendencies, the attraction of rewards, and tender and sympathetic emotions.

During the second period artificial attention is aroused and maintained by means of feelings of

secondary formation, such as love of self, emulation, ambition, and interest in a practical line, duty, etc.

The third period is that of organization; attention is aroused and sustained by habit. The pupil in the class-room, the workman in his shop, the clerk at his office, the tradesman behind his counter—all would, as a rule, prefer to be somewhere else, but egotism, ambition, and interest have created, by repetition, a fixed and lasting habit. Acquired attention has thus become a second nature, and the artificial process is complete. The mere fact of being placed in a certain attitude, amid certain surroundings, brings with it all the rest; attention is produced and sustained less through present causes than through accumulation of prior causes, habitual motives having acquired the force of natural motives. Individuals refractory to education and discipline never attain to this third period; in such people voluntary attention is seldom produced, or only intermittently, and cannot become a habit.

But, in truth, we should be destitute of all genius of observation or blinded by prejudice if we did not perceive that voluntary attention, in its durable form, is really a difficult state to sustain, and that actually many do not attain to it; therefore the teacher is needed.

Cases also occur that present an outline at least of voluntary attention, which is natural enough with those who have contracted the habit.

MEMORY SELECTIONS

The selections have been made with a view to assist those who are no longer in school. The subjects, predicates, or key-words should be selected at first from a few sentences only, and written; then read the sentences which contain these leading words once, and with these before you try to recall what you have read. When you are able to do this accurately and without hesitation, add one or two more sentences, and try to repeat them from the beginning. Make the one reading imperative, even if you can read but one sentence or one verse. The habit of concentrating the attention will grow rapidly, and you will soon find your memory greatly improved. Practise reading a column of figures once, and then reproducing them in their exact order. Listen to a number of words being read; then try to repeat them exactly, and the next day try to recall these exercises. The same process of mental work which the scholar follows at school will, if practised

every day, surely prove of the utmost benefit to those who desire to learn to concentrate attention and to possess a good memory.

Some of the following selections were made as having no interest to the student, but as disciplining the mind to such a degree as to insure a retentive memory. The shorter prose articles can be read through without pausing for the reciting of them; the longer ones should be divided into two or three readings and recitations, according to the length. They have been given as exercises in this way in my school, and the pupils have recited, often without hesitation, the entire selection after weeks and even months have elapsed.

ORANGE

The Orange Art Association opened its spring exhibition yesterday at No. 531 Main Street, East Orange. The exhibition is a creditable one, and much the best that the association has yet given. There are eighty-five pictures on the walls—oils, water-colors, black-and-whites, and architectural designs. The Exhibition Committee consists of Charles E. Moss, Chairman; Alexander Brownlie,

Miss C. K. Herrick, Mrs. George L. Kellogg, and George E. Melendy.

The annual meeting of the East Orange Republican Club was held on Thursday evening, and these officers were elected: President, Joel W. Hatt: Vice-presidents, J. H. Kattenstroth, Malcolm B. Cole; Secretary, Harry D. Miller; Treasurer, Louis T. Muller; Governors, J. H. Palmer, Eugene M. Brewster, William D. Gilbert, E. Everett Mills, and Samuel F. Varian.

MRS. LE DUC TO READ

Mrs. Janvier Le Duc will give a reading on Tuesday afternoon, at 4 o'clock, at the Home for Convalescents, No. 433 East One-hundred-and eighteenth Street. Mrs. Le Duc, who was a Miss Spencer, and is related to the Lorillard and Clinton families, is to give reminiscences of the Prince of Wales's visit to her brother's ranch. Her principal reading that afternoon, however, will be on the historic houses of Harlem, including the women who figured prominently in Harlem's social annals of the olden time. In addition to a large list of down-town patronesses, a number of women from Harlem, including Mrs. Donald MacLean, Miss Van Buren Vanderpoel, Mrs. Jordan L. Mott, Mrs. P. J. Lewis Searing, and Mrs. Charles Fraser MacLean, are interesting themselves in the reading. Miss Grace Cornell is

to give some mandolin solos, and Miss Adelaide Haight, the well-known contralto, will sing several ballads.

MOVEMENTS OF THE ROYAL FAMILY

The Princess of Wales arrived at Marlborough House on Saturday from Denmark, having been absent from England more than ten weeks. The Prince and Princess of Wales are expected next week at Sandringham, which place will be their headquarters until the middle of January. The Prince has gone to Newmarket for a few days. Prince and Princess Christian arrived at Bagshot on Friday from Darmstadt, and are staying a few days with the Duke and Duchess of Connaught before settling at Cumberland Lodge for the winter, when they are to receive a visit from their younger daughter, Princess Aribert, of Anhalt, who has been staying at Balmoral with the Queen during the last fortnight. Prince and Princess Edward, of Saxe-Weimar, who have been staying for some time at Gordon Castle with the Duke of Richmond, are to be guests of the Prince and Princess of Wales at Sandringham next month.

CONVENTION OF THE DEACONESSES

The eighth annual conference of the Deaconesses of the Methodist Episcopal Church was continued yesterday at the Central Methodist Epis-

copal Church, Seventh Avenue, near Fourteenth Street. Bishop Joyce, of Chattanooga, presided. Among those who read papers or made addresses were Miss Downing, superintendent of the Brooklyn Home, on "The Work of Deaconesses"; Miss Pierce, superintendent of the Cincinnati Home, on "The Deaconesses, Trained in Mind, Heart, and Spirit"; Miss Lann, of the New England Home, "The Spirit of the Ideal Deaconess in Missionary Work"; the Rev. H. C. Weakley, of Cincinnati, "The Deaconess Among the Sick"; the Rev. J. S. Meyer, of Chicago, "The Deaconess among Children"; the Rev. Carl Stoecker, of Amsterdam, N. Y., "The Deaconess and the Rescue Mission."

It was voted to hold the next annual conference at Boston.

WHAT IS GOING ON TO-DAY

Dr. Meyer trial, Court of General Sessions.

New York College of Music commencement, Chickering Hall, 8 P.M.

Students' Dramatic Club entertainment, Berkeley Lyceum, evening.

Keeley Institute reunion, White Plains.

Harlem Democratic Club, No. 106 West One-hundred-and-twenty-sixth Street, 8 P.M.

Board of Education, 4 P.M.

German Good Government Club organization, Harlem Opera-house, 8 P.M.

Five Points Mission farewell meeting, 1:30 P.M.

Northern Pacific Railroad investigation.

Independent Democratic County Organization meeting, Eighth Avenue and Thirty-seventh Street, evening.

Farnham Post, G.A.R., reorganization, Broadway and Forty-ninth Street, evening.

Christian Endeavor convention, Brooklyn.

Salvation Army meetings — 11 A.M., Calvary Baptist Church; 3 P.M., Association Hall; 7:45 P.M., Cooper Union. —*New York Tribune.*

My poetical temperament evinced itself at a very early period. The village church was attended every Sunday by a neighboring squire, the lord of the manor, whose park stretched quite to the village, and whose spacious country-seat seemed to take the church under its protection. Indeed, you would have thought the church had been consecrated to him instead of to the Deity. The parish clerk bowed low before him, and the vergers humbled themselves unto the dust in his presence. He always entered a little late, and with some stir: striking his cane emphatically on the ground, swaying his hat in his hand, and looking loftily to the right and left as he walked slowly up the aisle; and the parson, who always ate his Sunday dinner with him, never commenced service until he appeared. He sat with his family in a large pew, gorgeously lined, humbling himself de-

voutly on velvet cushions, and reading lessons of meekness and lowliness of spirit out of splendid gold-and-morocco prayer-books. Whenever the parson spoke of the difficulty of a rich man's entering the kingdom of heaven, the eyes of the congregation would turn towards the "grand pew," and I thought the squire seemed pleased with the application.

Our meals were solitary and unsocial. My uncle rarely spoke; he pointed to whatever he wanted, and the servant perfectly understood him. Indeed, his man John, or Iron John, as he was called in the neighborhood, was a counterpart of his master. He was a tall, bony old fellow, with a dry wig, that seemed made of cow's tail, and a face as tough as though it had been made of cow's hide. He was generally clad in a long, patched livery coat, taken out of the wardrobe of the house, and which bagged loosely about him, having evidently belonged to some corpulent predecessor, in the more plenteous days of the mansion. From long habits of taciturnity, the hinges of his jaws seemed to have grown absolutely rusty, and it cost him as much effort to set them ajar, and to let out a tolerable sentence, as it would have done to set open the iron gates of the park, and let out the old family carriage that was dropping to pieces in the coach-house. —WASHINGTON IRVING

SHE WAS A PHANTOM OF DELIGHT

She was a Phantom of delight
When first she gleamed upon my sight;
A lovely Apparition, sent
To be a moment's ornament;
Her eyes as stars of Twilight fair;
Like Twilight's, too, her dusky hair;
But all things else about her drawn
From May-time and the cheerful Dawn;
A dancing Shape, an Image gay,
To haunt, to startle, and waylay.

I saw her upon nearer view,
A Spirit, yet a Woman, too!
Her household motions light and free,
And steps of virgin liberty;
A countenance in which did meet
Sweet records, promises as sweet;
A Creature, not too bright or good
For human nature's Daily food;
For transient sorrows, simple wiles,
Praise, blame, love, kisses, tears, and smiles.

And now I see with eye serene
The very pulse of the machine;
A Being breathing thoughtful breath,
A Traveller between life and death;
The reason firm, the temperate will,
Endurance, foresight, strength, and skill;

A perfect Woman, nobly planned,
To warn, to comfort, and command;
And yet a Spirit still, and bright
With something of an angel light.

—WORDSWORTH.

WOLSEY'S SPEECH

Farewell, a long farewell, to all my greatness!
This is the state of man: To-day he puts forth
The tender leaves of hope; to-morrow blossoms,
And bears his blushing honors thick upon him;
The third day comes a frost, a killing frost,
And—when he thinks, good easy man, full surely
His greatness is a-ripening—nips his root,
And then he falls, as I do. I have ventured
Like little wanton boys that swim on bladders,
This many Summers in a sea of glory;
But far beyond my depth: my high-blown pride
At length broke under me; and now has left me,
Weary and old with service, to the mercy
Of a rude stream, that must forever hide me.
Vain pomp and glory of this world, I hate ye:
I feel my heart new open'd. O how wretched
Is that poor man that hangs on princes' favors!
There is, betwixt that smile we would aspire to,
That sweet aspect of princes, and their ruin,
More pangs and fears than wars or women have;
And when he falls, he falls like Lucifer,
Never to hope again.

—SHAKESPEARE.

MARJORIE FLEMING

One November afternoon in 1810—the year in which *Waverley* was resumed and laid aside again, to be finished off, its last ten volumes in three weeks, and made immortal in 1814, and when its author, by the death of Lord Melville, narrowly escaped getting a civil appointment in India—three men, evidently lawyers, might have been seen escaping like school-boys from the Parliament House, and speeding arm-in-arm down Bank Street and the Mound, in the teeth of a surly blast of sleet.

The three friends sought the *bield* of the low wall old Edinburgh boys remember well, and sometimes miss now as they struggle with the stout west wind.

The three were curiously unlike each other. One, "a little man of feeble make, who would be unhappy if his pony got beyond a foot's pace," slight, with "small, elegant features, hectic cheek, and soft, hazel eyes, the index of the quick, sensitive spirit within, as if he had the warm heart of a woman, her genuine enthusiasm, and some of her weaknesses." Another, as unlike a woman as a man can be; homely, almost common in look and figure; his hat and coat and, indeed, his entire covering worn to the quick, but all of the best material. What redeemed him from vulgarity and meanness were his eyes, deep-set, heavily thatched, keen, hungry, shrewd, with

a slumbering glow far in, as if they could be dangerous; a man to care nothing for at first glance, but somehow to give a second and not forgetting look at. The third was the biggest of the three, and though lame, nimble and all rough and alive with power; had you met him anywhere else, you would say he was a Liddesdale store-farmer come of gentle blood; "a stout, blunt carle," as he says of himself, with the swing and stride and the eye of a man of the hills — a large, sunny, out-of-door air all about him. On his broad and somewhat stooping shoulders was set that head which, with Shakespeare's and Bonaparte's, is the best known in the world. He was in high spirits, keeping his companions and himself in roars of laughter, and every now and then seizing them, and stopping, that they might take their fill of the fun; there they stood shaking with laughter, "not an inch of their body free" from its grip. At George Street they parted, one to Rose Court, behind St. Andrew's Church, one to Albany Street, the other, our big and limping friend, to Castle Street.

We need hardly give their names. The first was William Eskine, afterwards Lord Kinedder, chased out of the world by a calumny, killed by its foul breath—

"And at the touch of wrong without a strife
Slipped in a moment out of life."

There is nothing in literature more beautiful or more pathethic than Scott's love and sorrow for this friend of his youth. The second was William Clerk, the Darsie Latimer of Redgauntlet; "a man," as Scott says, "of the most acute intellect and powerful apprehension," but of more powerful indolence, so as to leave the world with little more than a report of what he might have been—a humorist as genuine, though not quite so savagely Swiftian as his brother, Lord Eldin, neither of whom had much of that commonest and best of humors called good. The third we all know. What has he not done for every one of us? Who else ever, except Shakespeare, so diverted mankind, entertained and entertains a world so liberally, so wholesomely? We are fain to say not even Shakespeare, for his is something deeper than diversion, something higher than pleasure, and yet who would care to split this hair? —Dr. JOHN BROWN.

TOUSSAINT L'OUVERTURE

If I were to tell you the story of Napoleon, I should take it from the lips of Frenchmen, who find no language rich enough to paint the great captain of the nineteenth century. Were I to tell you the story of Washington, I should take it from your hearts—you who think no marble white enough on which to carve the name of the father of his country. But I am to tell you

the story of a negro, Toussaint l'Ouverture, who has hardly left one written line. I am to glean it from the reluctant testimony of his enemies, men who despised him because he was a negro and a slave, hated him because he had beaten them in battle.

Cromwell manufactured his own army. Napoleon, at the age of twenty-seven, was placed at the head of the best troops Europe ever saw. Cromwell never saw an army till he was forty; this man never saw a soldier till he was fifty.

Cromwell manufactured his own army—out of what? Englishmen—the best blood in Europe. Out of the middle class of Englishmen—the best blood of the island. And with it he conquered what? Englishmen—their equals. This man manufactured his army out of what? Out of what you call the despicable race of negroes—debased, demoralized by two hundred years of slavery, one hundred thousand of them imported into the island within four years, unable to speak a dialect intelligible even to each other. Yet out of this mixed and, as you say, despicable mass, he forged a thunderbolt and hurled it at what? At the proudest blood in Europe, the Spaniard, and sent him home conquered; at the most warlike blood in Europe, the French, and put them under his feet; at the pluckiest blood in Europe, the English, and they skulked home to Jamaica. Now if Cromwell was a general, at least this man was a soldier.

Now, blue-eyed Saxon, proud of your race, go back with me to the commencement of the century, and select what statesman you please. Let him be either American or European; let him have a brain the result of six generations of culture; let him have the ripest training of university routine; let him add to it the better education of practical life; crown his temples with the silvery locks of seventy years, and show me the man of Saxon lineage for whom his most sanguine admirer will wreathe a laurel rich as imbittered foes have placed on the brow of this negro — rare military skill, profound knowledge of human nature, content to blot out all party distinctions, and trust a State to the blood of its sons—anticipating Sir Robert Peel fifty years, and taking his station by the side of Roger Williams before any Englishman or American had won the right; and yet this is the record which the history of rival States makes up for this inspired black of St. Domingo.

Some doubt the courage of the negro. Go to Hayti, and stand on those fifty thousand graves of the best soldiers France ever had, and ask them what they think of the negro's sword.

I would call him Napoleon, but Napoleon made his way to empire over broken oaths and through a sea of blood. This man never broke his word. I would call him Cromwell, but Cromwell was only a soldier, and the State he founded went down with him into his grave. I

would call him Washington, but the great Virginian held slaves. This man risked his empire rather than permit the slave-trade in the humblest village of his dominions.

You think me a fanatic, for you read history not with your eyes, but with your prejudices. But fifty years hence, when Truth gets a hearing, the Muse of history will put Phocion for the Greek, Brutus for the Roman, Hampden for England, Fayette for France, choose Washington as the bright, consummate flower of our earlier civilization; then dipping her penin the sunlight will write, in the clear blue above them all, the name of the soldier, the statesman, the martyr —Toussaint l'Ouverture.—WENDELL PHILLIPS.

GOOD PRICES FOR FIRST EDITIONS

The Johnson book sale, which has been going on for the last three days at Bangs & Co.'s auction rooms, has been a most important sale of first editions. After the first day good prices were paid. The following are the best figures of the sale yesterday: A set of Ainsworth, 68 volumes, $170; Charlotte and Emily Bronte's works, first edition, 20 volumes, $125; Dickens's *The Village Coquettes*, 1836, $105; Maria Edgeworth's *Tales and Novels*, bound by Tout, $112.50; *Beauty and the Beast*, only three copies of which are known in this edition, $162.50; Charles Lever, in 39 volumes, $325; nine volumes of Ruskin, $324;

Shelley's *Queen Mab*, published by the author, with an autograph letter of Shelley's, $150.

—*New York Tribune.*

TO DAFFODILS.

O yellow flowers that Herrick sung!
O yellow flowers that danced and swung
In Wordsworth's verse, and now to me,
Unworthy, from this "pleasant lea,"
Laugh back, unchanged, and ever young;

Ah! what a text to us o'erstrung,
O'erwrought, o'erreaching, hoarse of lung,
You teach by that immortal glee,
O yellow flowers!

We, by the Age's œstrus stung,
Still hunt the New with eager tongue,
Vexed ever by the Old; but ye,
What ye have been ye still shall be
When we are dust the dust among,
O yellow flowers!

—Austin Dobson.

HOUSEHOLD ART

"Mine be a cot" for the hours of play,
Of the kind that is built by Miss Greenaway;
Where the walls are low, and the roofs are red,
And the birds are gay in the blue o'erhead;
And dear little figures, in frocks and frills,
Go roaming about at their own sweet wills,

And play with the pups, and reprove the calves,
And do naught in the world (but Work) by halves,
From "Hunt the Slipper" and "Riddle-me-ree"
To watching the cat in the apple-tree.

O Art of the Household! Men may prate
Of their ways "intense" and Italianate—
They may soar on their wings of sense, and float
To the audelà and the dim remote—
Till the last sun sink in the last-lit west,
'Tis the Art at the Door that will please the best;
To the end of Time 'twill be still the same,
For the Earth first laughed when the children came!

—AUSTIN DOBSON.

THE CURÉ'S PROGRESS

Monsieur the Curé down the street
Comes with his kind old face—
With his coat worn bare, and his straggling hair,
And his green umbrella-case.

You may see him pass by the little "Grande Place,"
And the tiny "Hôtel de Ville."
He smiles, as he goes, to the fleuriste Rose,
And the pompier Théophile.

He turns, as a rule, through the "Marché" cool,
Where the noisy fish-wives call;

And his compliment pays to the "belle Thérèse,"
As she knits in her dusky stall.

There's a letter to drop at the locksmith's shop,
And Toto, the locksmith's niece,
Has jubilant hopes, for the Curé gropes
In his tails for a pain d'épice.

There's a little dispute with a merchant of fruit,
Who is said to be heterodox,
That will ended be with a "Ma foi, oui!"
And a pinch from the Curé's box.

There is also a word that no one heard
To the furrier's daughter Lou;
And a pale cheek fed with a flickering red,
And a "Bon Dieu, garde m'sieu!"

But a grander way for the Sous-Préfet,
And a bow for Ma'am'selle Anne;
And a mock "off-hat" to the Notary's cat,
And a nod to the Sacristan;

For ever through life the Curé goes
With a smile on his kind old face—
With his coat worn bare, and his straggling hair,
And his green umbrella-case.

—Austin Dobson.

FROM "ARETHUSA"

Then Alpheus bold,
On his glacier cold,

With his trident the mountains struck;
And opened a chasm
In the rocks; with the spasm
All Erymanthus shook.
And the black south wind
It concealed behind
The urns of silent snow,
And earthquake and thunder
Did rend in sunder
The bars of the springs below.
The beard and the hair
Of the River-god were
Seen through the torrent's sweep,
As he followed the light
Of the fleet nymph's flight
To the brink of the Dorian deep.

PHILIP, MY KING

"Who bears upon his baby brow the round and top of sovereignty."

Look at me with thy large brown eyes,
Philip, my king!
For round thee the purple shadow lies
Of babyhood's royal dignities.
Lay on my neck thy tiny hand
With Love's invisible sceptre laden;
I am thine Esther, to command
Till thou shalt find thy queen-handmaiden,
Philip, my king!

Oh, the day when thou goest a-wooing,
Philip, my king!

When those beautiful lips 'gin suing,
And, some gentle heart's bars undoing,
Thou dost enter, love-crowned, and there
  Sittest love glorified! Rule kindly,
Tenderly over thy kingdom fair;
  For we that love, ah! we love so blindly,
    Philip, my king!

I gaze from thy sweet mouth up to thy brow,
    Philip, my king!
The spirit that there lies sleeping now
May rise like a giant, and make men bow
As to one Heaven-chosen amongst his peers,
  My Saul, than thy brethren higher and fairer,
Let me behold thee in future years!
  Yet thy head needeth a circlet rarer,
    Philip, my king—

A wreath, not of gold, but palm. One day,
    Philip, my king!
Thou, too, must tread, as we trod, a way
Thorny and cruel and cold and gray;
Rebels within thee and foes without
  Will snatch at thy crown. But march on, glorious
Martyr, yet monarch! till angels shout,
  As thou sitt'st at the feet of God victorious,
    "Philip, the king!"

—D. M. Mulock.

Mr. Charles Dudley Warner, in the Editor's Study of HARPER'S MAGAZINE *for March, 1895, writes as follows in regard to the author's method:*

Still speaking of our systematical education, it is more and more evident, as we are feeding more and more into it to be ground out in knowledge for the individual, that the scheme does not adequately provide for the training of the organ that is to acquire and assimilate the knowledge. Students are set to tasks, and the burden increases with every discovery of science and with our enlarged conception of the world of thought, quite beyond their mental power to manage. The result is intellectual confusion, and often a physical break-down. That which we call the mind is hardly ever trained to do that which is required of it. We treat it as if it were a receptacle which could be stuffed with ideas, instead of a living means of mastering and assimilating ideas. And the distaste for study and the inability to carry on an ordinary school course are commonly due to lack of mental training. The mind is the tool with which the student has to work, and if it is dull and he does not know how to handle it, it is impossible for him to do the work required of him. As well expect an artist or a craftsman to succeed if he has not mastered the means of expressing his thought.

Of course we know that memory is essential in any study ; that is, the power of recalling for use an impression. We also know that this power of recalling an impression depends much upon the vividness with which it is made, the accuracy of it ; and that depends upon our closeness of observation and our fixed attention at the moment. We therefore say that to cultivate the power of accurate observation and fixed attention is the first requisite of mental discipline. This power of fixing the attention—it must be a habit constantly exercised on anything brought under observation if it is to be valuable—is not merely, however, for strengthening the memory, it is an essential mental training for investigation and for clarity of thought and expression every hour. Undeniably our common habit in this respect is bad and slovenly. We do not commonly fix the attention enough to listen intelligently. Take an ordinary conversation at a dinner-table, or between a group of friends, or in a committee meeting, and notice how few accurately hear what is said, or comprehend, or keep to the point. This is commonly not from lack of intelligence, but from lack of attention. This slovenly habit not only deprives us of one of the keenest pleasures of life, but it is fatal to intellectual integrity, it is demoralizing to the mental power. The majority of people read with the same feeble attention, and sit out a lecture, or address, or a sermon, in the same inattentive wool-gathering state of mind.

It is easy to test this. Mingle with any dispersing lecture audience, and see how few have intelligently followed the lecturer, or comprehended his argument and purpose, or taken his emphatic points, or can give anything like an analysis or a coherent statement of what has been said in their hearing. It has, as we say, gone into one ear and out at the other; probably very little of it has passed through the head even in that way. And the damage to the auditor is not in what he has missed—for the lecture or sermon may be valueless—but in the mental demoralization the process causes him. He is confirming a habit of inattention that is disadvantageous to him in anything he may attempt. It may not be important that he should go to any lecture, but if he does go it is all-important to his mind that he should give his fixed and best attention to it, irrespective of its quality; that he listen to it with an absorption that would enable him not only to follow it step by step, but to reproduce a complete analysis of it when he gets home. One great cause of the mental demoralization of the majority of people is the way they hear sermons and lectures. They hear without hearing, they do not fix their attention, their minds are not active on the thing in hand, and the result is cultivation of lack of mental power. I mean, of course, half-listening, the listless attitude, which catches now and then a sentence or an illustration, but mingles what is said with a confused muddle of its own wander-

ing thoughts. The person who goes to sleep at church, or who never pretends to hear a word from the pulpit, but follows out a train of consecutive thought of his own, will sustain no damage. People sometimes have odd ideas of worship. Their attention, or lack of attention, to the sermon has no relation to worship, but it does concern the power of the mind.

I have said that memory, as well as mental vigor for investigation, depends upon this power of attention. But we have to recognize personal differences in memory. No matter what the training is, some memories are much more retentive than others, and this difference does not depend upon the ease or the difficulty with which the impression is made. With some the single reading of a poem enables them to recall it for an indefinite time; with others, the utmost labor of memorizing will only enable them to recall it for a little while. But with all, the power of attention will greatly improve the working quality of the memory.

Can this power of attention be taught, and is it essential in our increasingly widening system of education?

In this connection it seems a public service to give the widest publicity to a method of mind-training, or "concentrated attention," practised by Miss Catharine Aiken in her girl's school in Stamford, Connecticut. The training there, which occupies not more than twenty minutes a day, is

distinctly a means to an end. It is well known that most students are at a disadvantage in attacking any subject, because their minds are untrained. To fix the attention is necessary in any occupation. Can the power of doing so be cultivated? Is there any means of cultivating the habit of concentrating the attention? If there is, then it is evident that the student will be saved a vast amount of mental drudgery, and will economize time which is so often wasted in study hours.

The means in use at Stamford are very simple.

There is used a variety of exercises with the sole object of concentrating the attention. Others are practised upon individual pupils. In all cases the inspiration of the moment urges the pupil to concentrated attention. Cognate to this is the cultivation of the art of listening. As this power of continuous attention increased with practice, the pupils could repeat long passages of prose and poetry heard but once. Incidentally, of course, were taught by this exercise the principles of rhetoric in the proper structure and forms of sentences.

I am able to add some testimony as to the value of this method. A lecturer recently read a somewhat technical paper to this school on English language. The girls listened intently. The following week, at the occasion of the next lecture, he was shown the reports of the first. Most of these reports astonished him: they were so supe-

rior to any other reporters' work that he had seen that he was certain they were accomplished by the use of stenography. They were a complete analysis of the whole lecture, the substance and form, and to a surprising extent the phraseology —as he said, "Why, they had the whole thing." There had been, however, no stenography, nor any extended note taking. The work was the result of the cultivation of the art of listening and of concentrated attention.

Owing to the popular notion that anybody can teach, and that teaching must be cheap, we have had cheap teaching in this country, especially in the lower schools, where untrained girls have been paid all they were worth. The Study has had something to say about the employment of incompetent teachers, the majority of them being women. It now desires to call attention to the fact that in the recent educational awakening, and the training of girls for their profession, two of the most important contributions to the science of education in our schools have been made by women: Miss Mary Burt's method of beginning with literature in the education of the very young, and Miss Catharine Aiken's method of mind-training or concentrated attention.

The author has received numerous letters in regard to the success of her method of mental training, from which the following are selected:

VASSAR COLLEGE, POUGHKEEPSIE, N. Y.,
May 10, 1889,

DEAR MADAM,—I am glad to read your little book on mind-training. You will, perhaps, remember my call at your school. I was deeply impressed by the results you had gained, and have repeatedly spoken of them to others. I do not think you can tell the half; the work must be *seen in its progress* to be fully appreciated. The results of your plan seemed to me *remarkable.* With kind regards, I am, very truly yours,

J. M. TAYLOR.

CLARK UNIVERSITY, WORCESTER, MASS.,
Sept. 13, 1895.

DEAR MISS AIKEN,—The exercises which I saw in your school interested me greatly. I should not have thought such rapidity and certainty possible had I not seen it. The value of such work, as one factor of mental training, I should certainly think was very great, and I am glad there is some prospect of your methods being published, so that we can know more of them. I am, very sincerely yours,

G. STANLEY HALL.

New York, *Sept.* 19, 1895.

My dear Miss Aiken, — Though we had planned to send our daughter elsewhere before seeing the results of your method, we have decided to give her the benefit of your superior training for a year.

I was much impressed by what I saw and heard of your commencement exercises, and since then have described to many your method of fixing attention and of cultivating the memory.

If I could have had that training when a boy I should have put forty years into the last twenty.

I greatly regret that our son and our oldest daughter cannot have the benefit of it. Yours, with great esteem,

Josiah Strong.

I have been an unhappy witness of Miss Aikin's methods of memory training on more than one occasion; unhappy because the young people present so easily distanced me in every test to which she put them. I would give much to possess the alertness, accuracy, and concentration which she develops in her pupils by means of her interesting exercises.

Kate Douglas Wiggin.

106 East 74th Street, New York,
November 4th, 1895.

My dear Miss Aiken, — It gives me great pleasure to tell you of the success I have had

with your exercises for concentration. They have been particularly satisfactory with my piano pupils in memorizing their pieces. In several instances the results have been remarkable. In every case I have observed an awakening of all the faculties.

I am very glad that you propose publishing a text-book upon the subject, for I am convinced that the system applied by a judicious teacher will go far to revolutionize old methods. Very truly yours,

MARY H. BURNHAM.

THE END

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