

...see out...*moves the eye outwards*...face outwards...FACIAL (7th pair—motor to muscles of expression)...face...audience ...AUDITORY (8th pair, sensory for hearing and equilibration)...ear-ring...shiny...glossy...GLOSSO-PHARYNGEAL (9th pair, taste, swallow) .. congeal .. unfixed .. vague ... VAGUS (10th pair, pneumogastric)...gusty...blown back...backbone ..SPINAL ACCESSORY (11th pair, moves head) *and motor*... spines...sharp criticism...hypercritical...HYPOGLOSSAL (12th pair)...glossary...foreign tongue...*Tongue Muscles*.

PROTOPLASM.

Albumen, gluten, fibrin, syntonin, are closely allied substances known as proteids, and each is composed of carbon, hydrogen, oxygen and nitrogen.

PROTEIDS...Protector...commonwealth...for all...*albumen* ...all men...liars...fibs...*fibrin*...brindled...spotted...sin...*syntonin*...toe nails...hoofs...glue...*gluten*.

The foregoing exercises show that there are no facts of Science, &c., or in Daily Life, with which the System cannot cope—thus proving the greatest saver of Labour and Time if the pupil makes an application of it to his studies or business when once he has mastered the system.

BOOKS LEARNED IN ONE READING.

For the past ten years I have printed in my large prospectus a general view of my meaning. I will reproduce most of those views here, premising that I have never suggested that books are to be *learned by heart*, but only the *important, useful* portions of them—such as are new to the reader and which he may desire to retain.

I do not mean such books as Bradshaw's Guide, the London Post-Office Directory, or any other mere collection of names, addresses, statistics, &c., which one may have occasion to *consult*, but which it would be the mere bravado of Memory to learn by heart—though even this is possible enough to the master of my System. What is one's object in reading a book? Simply to retain the IDEAS in it that are NEW and USEFUL to him, as well as the NEW USES that are therein set forth of *old* and *familiar* ideas. If the reader is already partly acquainted with a book, there will be fewer new ideas in it than in one with which he is unacquainted. Now, what do I mean by Learning either of these books in one reading? I mean exactly what I say. All that you desire to remember shall be retained—all the leading or subordinate ideas, propositions, illustrations, facts, &c., &c.

There are only two ways of learning a book in this thorough manner :

(1) The *first* is the traditional method of learning by *rote* or endless repetition. A celebrated Coach in Anatomy says that no one can learn Anatomy until he has learned and *forgotten* it from three to seven times! In learning any book in this way, each sentence would be repeated over and over again, and then reviewed and *relearnt* and forgotten and learned again! And then at last the Pupil if he possesses a first-rate *cramming* memory might answer questions on it. In learning a book by *rote*, the number of times that each sentence and section is repeated, if actu-

ally written out and printed, would doubtless cover 5,000 to 50,000 or more pages!—and even then the Pupil passes his examination, if he really does “pass,” partly by luck and partly by merit; all his life he is constantly referring to it, and repeating it, and studying it, over and over again—showing really that he possesses little more than a Reference Memory in regard to it! But let us be candid and confess the truth; tens of thousands every year and during successive years try the various professions—law, medicine, divinity, or sciences, history, &c., &c., and utterly fail to “pass,” even respectably, because they lack the extraordinary sensuous MEMORY necessary to acquire knowledge by *rote*.

It is only the exceptionally powerful natural memories that win at exacting examinations by *rote*—even then their learning is soon forgotten, unless it is *perpetually renewed*.

(2) The other mode of learning any book in the thorough manner I have indicated, whether it be a book in which the reader finds but *few* novel ideas or where they are *all new*, as in a scientific or technical work, is by my Method. In fact, I believe no one can learn any book so thoroughly by *rote*, even if he possesses a marvellous Natural Memory and if he peruse it ever so many times, as my Pupils can by my method in a single perusal. Let the reader note that my System has two important aspects—(1) It is a Device or Method of memorising or learning any facts whatever—prose, poetry, dates, data, formulæ and facts and principles of the sciences, &c., &c., &c., or anything whatsoever to be remembered. (2) There is another equally, if not *more* important aspect of it, namely, as a *Trainer or Strengthenener of the Natural Memory* to any extent the pupil wishes to carry it. And the Natural Memory is so strengthened by the use of the System, that as a Device, the System is no longer required. You then remember from your new Memory-power without taking any pains to remember, and I am happy to add that the diligent student can derive the full benefit of the System as a Memory Trainer by learning the lessons in the way I point out.

Now, those who have thus derived the *full benefit* of the System, both as a Device for memorising and also as a Memory Trainer, *are the persons who can learn a book in one*

reading. “Reading” is used by Coaches in a technical sense; that is, synonymous with “thorough study.” By a “single” or “one reading,” I mean a single careful perusal *in conformity to the requirements of my System*. I do not mean that they can do this and doze during the process.

I now reproduce most of the plan always adopted in dealing with books whose contents, or the unfamiliar portions of them are to be mastered.

(1) You will not read the book with the *rapidity* with which some young ladies are said to devour the latest novel. They are often suspected of skipping pages at a time in order to discover the different stages of a plot, until a thoroughly aroused curiosity compels them to hasten at once to the last chapter to fall upon the denouement. This is not the style of perusal I contemplate.

(2) Nor is it to be supposed because you understand the method that it will therefore work itself. It has to be *applied* carefully and methodically *at least once*. This necessarily demands *time*, especially at first. Those who possess good health and good continuity, and a mastery of the System, accomplish the retention of a work in vastly less time than would be possible for them without the System, and the study is a pleasure instead of a task. On the other hand, those who are in the possession of poor health or of weak concentration, or who are overburdened with business anxieties, domestic cares or competitive worries, would very seldom, if ever, master any book in the ordinary way by *mere repetition*. These persons are extremely unfavourably situated to do justice to the System, and it costs them more time and trouble to master a book than the former class. A student admitted that he had carefully read a manual of English History completely through *sixteen* times, and then failed in the examination. To have obtained a lasting knowledge of this History by my method would probably have occupied him as long as he was formerly engaged in *two or three* of the sixteen fruitless perusals of it. There is, however, only one difference between this unfortunate student and the great majority of those who succeed in the examinations through *cramming*. He forgot all his historical knowledge *before* the examination—they usually for-

get theirs shortly *after*. In fact, a student or a man in advanced years who has really mastered any book so that he never has to refer to it again is a wonder. Take the memories of members of the learned professions—they are usually only REFERENCE memories. They know where to *find* the coveted knowledge, but they do not *possess* it or *retain* it in their minds. On the other hand, the student who masters a book by my method *really knows* the contents of it, and he is thus enabled to devote to other purposes *an enormous amount of time in the future* that other people have to spend in *perpetually refreshing* their superficial acquirements. Moreover, the average student who has carried out *all* my instructions can even *now* learn as much by my Method in any stated time as he could learn without my Method, and *with equal thoroughness* in many, many times as long a period! And if any one who has been pressed for time, or who has been in a panic about an impending examination, or who has been too much troubled with Discontinuity, too ill in general health, or too idle, to do more than superficially glance at my lessons—if any such person doubts his competency to accomplish as much as the diligent student of average ability has done, then let him turn back and really and truly MASTER my System [for he does not even know what my System is until he has faithfully carried out to the very letter all my instructions, unless he has been a pupil of my oral lectures], and then and not before he will probably find that the achievements of the average diligent student of my System are quite within the easy range and scope of his own powers.

(3) In regard to the *subject matter* of the book, you do not care to occupy yourself with what you are *already familiar* with, and in most books there are a great many things that you already know. In many works, too, there is a great deal of padding-matter inserted to increase the bulk of the book, and possessing no permanent interest. The expositions and explanations which enable you to *understand* the new matter usually take up a large part of the book, and sometimes much the largest part of it, and are not to be memorised, but only understood with a sole view to appreciate the valuable and important parts

of the book—these expositions can be learned if desired—but they usually serve only a preliminary purpose. There is also very much *repetition*—the same matter in new dress, is reintroduced for sake of additional comments or applications. You do not trouble yourself with these iterations. The contents of a book which demand your attention are the IDEAS which are NEW to you, or the NEW USES made of familiar ideas.

Students who have not learned to exercise any independent thought often confess that in reading any book they are always in a maze. One thing seems just as important as another. To them the wheat looks exactly like the chaff. As an illustration that the power of Analysis is entirely wanting in many cases, I may mention that I once received a letter in which the writer had literally copied one of my column advertisements, and then added, "Please send me what relates to the above!" A modicum of mental training would have led him to say, "Kindly send me your Prospectus."

LEARN FIRST TO MAKE ABSTRACTS OF WHAT IS NEW TO YOU.

A great authority on education says: "Any work that deserves thorough study, deserves the labor of making an Abstract, *without which, indeed, the study is not thorough.*"

A work which deserves thorough study is obviously one full of IDEAS, new to the reader, such as the student must master.

If you are thinking of making an Abstract of a particular book, awaken the utmost interest in regard to it before you begin. Are you sure that it is worthy of thorough study? Is it the last or best work on the subject? And if you advance, note in a separate memorandum book your criticisms on the author's method and the soundness of his views. These criticisms will help keep up your interest in the Abstract, and at the close enable you to suggest modifications, additions, excisions, or a refutation.

Three things are required: (1) To learn **how** to abstract; (2) To **make** one, at least, such abstract; and (3) To **learn** it when made.

HOW TO MAKE ABSTRACTS.

Let the ambitious student make an Abstract of any chapter of John Stuart Mill's Logic, and then compare his work with the Analysis of this same chapter by the Rev. A. H. Killick (published by Longmans), and he will at once see the enormous difference between the essentials and the non-essentials—the difference between the subject of discussion and the *explanation* or *exposition* of it. The student's abstract, if printed, would extend over twenty to thirty pages. Mr. Killick's only occupies two to five pages. But do not reverse the process and read Mr. Killick's Analysis first and then make your Abstract. The latter, however, is *the easier, the usual, and the useless* method. Let the student continue this comparison till he attains very nearly the brevity and discrimination displayed by Mr. Killick. Or, if he prefers History, let him write a summary of any chapter of Green's "Short History of the English People," and then compare his digest with Mr. C. W. A. Tait's Analysis of the same chapter (now bound up with Green's History, as lately published in England). It would be a capital training for the student to abstract the whole of Green's work and compare his abridgment of each chapter with that of Mr. Tait. After considerable practice in this way in making Abstracts and *comparing his work with that of such Masterly Abstractors* as Dr. Killick and Mr. Tait, the student who needs this training is prepared to make abstracts of his own text-books.

Any other work of which an Abstract is published will serve the student as well as the above. There were formerly published Abstracts of several law books. And there may be other works whose abstracts are available to the ambitious student.

Abstracts would be very amusing if they did not indicate

an almost total failure of educational training in the matter of *thinking for one's self*. Recently a Pupil brought me a work on Physiology, written for general readers, and pointing to a paragraph in it that occupied nearly a whole page, exclaimed, "The only way I can make an abstract of that paragraph is to *learn it by heart!*" A glance at it showed me that I could express the gist and pith of it in the following sentence:—"The pulse beats 81 times per minute when you are standing, 71 times when sitting, and 66 times when lying down." After a re-perusal of the paragraph he remarked, "You are right. That is all one cares to remember in that long passage." To his request for me to memorise the Abstract, I replied by asking what is the "Best Known" in it. Why, "pulse," of course. It is merely occupied with the *number of times* the pulse beats per minute in different positions of the body. Now correlate (memorising your correlations as you proceed) "pulse" to "standing," and "standing" to a word expressing 81 (*feet*); "sitting" to a word that translates 71 (*caught*); and "lying down" to a word that spells in figures 66 (*judge*). The bodily positions being exhaustively enumerated need not be correlated together. Pulse . . . beating . . . fighting . . . stand-up fight . . . STANDING . . . stand . . . small table . . . table legs . . . FEET. SITTING . . . rest . . . arrest . . . CAUGHT. LYING DOWN . . . lies . . . perjury . . . trial . . . JUDGE.

These efforts in abstracting will qualify the young student to distinguish the main ideas from the subordinate ones, and he will then know when reading a book what to attend to and what to reject. Try a short essay first, then a longer one; and at last, when you are familiar with the method, attack any book, and you will cope with it successfully. Not much practice in this way will be required to enable you to know, from a glance at the *table of contents*, just what to assail and what to disregard. And in all your *first* attempts in reading a technical work, make out an Abstract of each chapter in writing, and then deal only with this Abstract. Whenever the Subject is not treated in a desultory manner, but with logical precision, you will soon be able to find Suggestive or Prompting Words in the Sequence of Ideas and in the successive Links in the Chain

of Thought that runs through the exposition. If there is no such Sequence of Ideas or Chain of Thought running through it, it may serve as an amusement, but is little likely to command serious study. *In a short time* you will be able, in the language of Dr. Johnson, "to tear out the heart of any book." Hazlitt said that Coleridge rarely read a book through, "but would plunge into the marrow of a new volume and feed on all the nutritious matter with surprising rapidity, grasping the thought of the author and following out his reasonings to consequences of which he never dreamt." Such a result is rarely attained even by the ablest of men—but it is the ultimate goal at which every student should aim—an aim in which he will be largely assisted by the ART OF ASSIMILATIVE MEMORY.

There are four methods of learning abstracts : one is by Synthesis ; the other is by the Analytic-Synthetic Method, the third is mostly by Assimilative Analysis, and the fourth method is by the memory developed and trained by the System, but which is not consciously used.

(1) It is the novelties of Fact, Opinion, Illustration, &c., set forth in your Abstract that you correlate together, thus : You correlate the Title of the First Chapter to the Title of the Book ; next, the Titles of the Chapters to each other ; and then you correlate, in each chapter, the first leading idea or proposition to the title of the chapter, the second leading idea to the first, &c., &c. In this way you will proceed until you have absorbed all the *new ideas, facts, statistics* or *illustrations*, or whatever you wish to retain. You can then test yourself on the work by calling to mind whatever you have thus cemented together. If this is well done you will never have to do it again.

(2) We have already seen how to apply the Analytic-Synthetic Method in learning by heart selections in Prose or Poetry, and same method can be used in memorising an Abstract of such parts of a book as are new to the reader. This method, too, once used in addition to what has been done by the pupil, will make a further resort to it unnecessary.

(3) And the same remark applies to the third method.

(4) The fourth method is the pupil's final method.

The foregoing exhaustive methods of dealing with a book are recommended to those only whose natural memories are not yet made powerfully retentive by the System as a Memory-TRAINER. If, however, a Pupil possesses a good natural memory and a mastery of the System as a Device for memorising, and he has also greatly added to the power of his Concentration as well as his memory by doing all the exercises, he *will not use my System, even in the reading of the first book, except now and then—certainly not constantly, but only occasionally.* Although not necessary in case of memories made strong by the System, yet I do most earnestly recommend the most gifted and highly endowed to deal with *one* book in the above thorough-going manner. As for instance, Herbert Spencer's little work on Education [four short essays]. Dr. Charles Mercier, who next to Herbert Spencer is the most original and clear sighted Psychologist in England, presents, in a work entitled "Sanity and Insanity," a scarcely equalled example of lucid exposition and logical development. Whichever one is selected it should be fairly and honestly handled by my method. The gain to Intellectual Comprehension from having carefully abstracted one book, and the gain to the memory from having made and memorised the Abstract, will produce results that will last through life, and make all subsequent acquisitions more easy and delightful, and make all further abstracts probably unnecessary.

HOW TO LEARN A LONG SERIES OF UNCONNECTED FACTS IN THE SCIENCES OR EVENTS IN HISTORY, CHAPTERS IN BOOKS, OR THE CONTENTS OF BOOKS.

1. It is useless for the pupil to attempt to learn the exercise here given unless he has carefully studied the Building, Ice, Presidential, and English Sovereign Series. The *meaning* of In., Ex., and Con. can be understood in application to the facts of life, the events of History and the principles and details of the Arts and Sciences, only by a complete mastery of all that precedes this exercise.

2. Let the pupil learn only *ten* facts, propositions or statements at each of the first few sittings, and then, as he

adds ten more, let him recite from memory all that he has previously learned of this exercise. The *cementing relations* of In., Ex., and Con., which bind the events together, must in each case be first found by the student himself, and afterwards, and not before, let him glance at my analysis which follows this series.

3. The lawyer, in selecting 100 or 1,000 events of the Victorian Era, would doubtless make a list interesting to lawyers, the physician would make one of interest mostly or mainly to doctors, and similarly with educators, statesmen, editors, &c., &c. But I have selected events with a view to find the most difficult cases to deal with and with no other view, and if the pupil masters these, all other work hereafter will be easy to him.

4. This method can be promptly used, provided the pupil does not attempt to engorge or cloy his mind by undertaking too much at a time at first. Practice will soon make longer exercises easy. Each of the following six Exercises is enough for any one session or sitting.

5. Between a pair of *words* it may be difficult sometimes to find either the relation of In., Ex., or Con.; but in the case of sentences, propositions or descriptions, it is always easy to find one or other of the cementing relations. Relations which to me are strong, may seem weak to some pupils. No two persons would find the same relation in some cases, but, however different the solutions may be, they must always verify In., Ex., or Con.

6. The Int. Analysis, the Analytic-Synthetic, or the mere Analytic method, will enable the pupil to memorise the statement or sentence which describes the fact whenever any aid is necessary.

7. This Method can be readily applied to events in ancient or modern times, or to an accumulation of facts in the sciences, &c.

8. If we were to express only the year the formula would in most cases be different. To indicate the month and the day of the month, a consistent phrase must be used.

ONE HUNDRED EVENTS OF THE VICTORIAN ERA, LEARNED BY ONE CAREFUL READING OR STUDY.

FIRST EXERCISE.

1—The Victoria era begins.....	June 20, 1837
2—Abolition of death penalty for forgery and some other crimes.....	July 17, 1837
3—Question of Trades Unionism brought before the House of Commons by Mr. Wakley and Mr. Daniel O'Connell.....	Feb. 13, 1838
4—First steam voyage across the Atlantic Ocean completed in 15 days by the <i>Great Western</i>	June 17, 1838
5—International Copyright Act passed.....	July 31, 1838
6—Chartist Meetings proclaimed illegal.....	Dec. 12, 1838
7—Anti-corn Law League formed.....	Dec. 19, 1838
8—Penny Postage Act passed.....	Aug. 17, 1839
9—Marriage of Queen Victoria and Prince Albert at the Chapel Royal, St. James's, by the Archbishop of Canterbury.....	Feb. 10, 1840
10—Birth of Princess Royal.....	Nov. 21, 1840

SECOND EXERCISE.

11—Birth of Prince of Wales.....	Nov. 9, 1841
12—Earl of Munster's suicide.....	Mar. 20, 1842
13—Monster Chartist Petition, borne by 16 men and containing 3,317,702 names, denied a hearing before the bar of the House of Commons.....	May 2, 1842
14—Defeat of Boers at Natal by the British troops...	May 26, 1842
15—Treaty with the United States of America on North-West Boundary, Slave Trade and Extradition.....	Aug. 9, 1842
16—Defeat of Ameers at Meanee by Sir Charles Napier. Loss 10,000.....	Jan. 16, 1843
17—Birth of Princess Maud Mary Alice.....	April 25, 1843
18—Arkwright's son leaves his heirs £8,000,000.....	May 24, 1843
19—Birth of Prince Alfred Ernest Albert, Duke of Edinburgh and of Saxe-Coburg-Gotha.....	Aug. 6, 1844
20—Imprisonment for debt under £20 abolished.....	Aug. 10, 1844

THIRD EXERCISE.

21—Maynooth College Endowment Bill passed by House of Lords by 131 majority.....	May 16, 1845
22—Faraday announces discovery tending to show that <i>light, heat, and electricity</i> are but different manifestations of one great universal principle.....	Nov. 5, 1845
23—Birth of Princess Helena.....	May 25, 1846