A complete guide to the improvement of the memory or the science of memory simplified: with practical applications to languages, history, geography, music, prose, poetry, shorthand, etc. / by J. H. Bacon.

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COMPLETE GUIDE

TO THE

IMPROVEMENT OF THE MEMORY

OR THE

SCIENCE OF MEMORY SIMPLIFIED,

WITH PRACTICAL APPLICATIONS TO LANGUAGES, HISTORY, GEOGRAPHY, MUSIC, PROSE, POETRY, SHORTHAND, ETC.

BY THE REV. J. H. BACON,

RECTOR OF GREAT GONERBY;
AUTHOR OF "HISTORY OF THE TOWN AND PORT OF GRIMSBY," ETC.

"Stultum seu stolidum immemorem esse."-Seneca.

THIRD EDITION REVISED.

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[&]quot;He that shortens the road to knowledge lengthens life."-Lacon.

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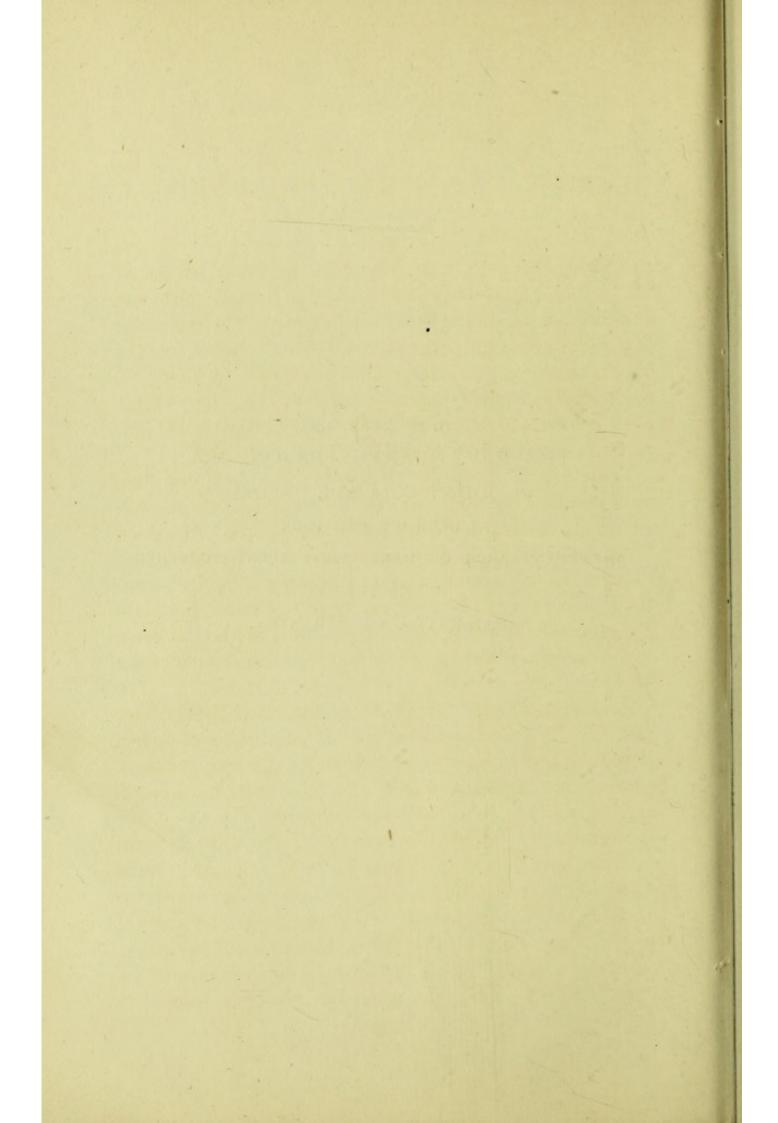
TO MY DEAR SON, THE REV. QUARTUS BACON, M.A. ST. JOHN'S COLLEGE, OXFORD,

I DEDICATE THIS BOOK

IN REMEMBRANCE OF MANY HOURS SPENT TOGETHER

IN THE

PALÆSTRA OF MEMORY.



PREFACE TO THE THIRD EDITION.

THE kindly welcome given to this work has led to the demand for a Third Edition within a very short time after the publication of the preceding one. The rapid sale of a large impression of the second edition in a few months has taken the author somewhat by surprise, and may be regarded as a gratifying testimony to the value of his work, and an evidence of the interest shown in the important subject he has treated.

The object of the author has been to explain and illustrate the Laws of the Natural Memory, and to develop and apply those true principles in accordance with which Mental Retention and Reproduction are regulated, and Remembrance becomes a logical and not a mere mechanical process. He has endeavoured to render his book one of practical utility, and to exhibit a method at once Simple, Natural, and Efficient for the improvement of the Memory.

Copious examples are given to illustrate the system, and to show how it may be applied to various branches of study; and how, without burdening the memory with useless and cumbrous details, the most difficult subjects may be easily acquired and remembered.

Many of the systems, which under the general term "Mnemonics" have from time to time appeared, have rested upon an unsound basis, and proceeded from erroneous principles. Instead of following out the natural operations of the mind in the Perception and Association of ideas, various devices of the most artificial character have been adopted. The mind has not been trained to

think, and to exercise its reflective powers so as to produce a vivid impression, and discover some natural relationship between ideas which are to be fixed in the Memory. The most ludicrous efforts of the imaginative faculty have been put forth; mental pictures of impossible scenes and improbable events have been conjured up; the most absurd and unmeaning phrases, which have no connection with the subjects to be remembered, have been strung together and made to do duty for the Rational method which Nature herself employs.

The present work proceeds upon different lines. In it are followed out the principles which regulate the Memory in its natural workings. Where Art has been resorted to, is in the most simple manner, and in reference to the more difficult subjects, as a reflection of Nature, and the appropriation of natural objects to the service of man.

The demand for the Third Edition has afforded the Author once more an opportunity of carefully revising his work, and of making a few additional observations, chiefly of an explanatory character. The benefit the student will derive from the instructions contained in this work will depend upon the thoroughness with which he attends to them. He should regard the book as a text-book, and perfectly learn and apply the principles set forth, so that they may become a part of his mental organisation. Every lesson should be thoroughly mastered before proceeding to the next. In this way he will *train* the Memory to act spontaneously, and vividly recall on the slightest effort of the will what has been committed to its keeping.

Great Gonerby Rectory, Grantham. January, 1890.

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A Complete Guide to the Improvement of the Memory.

INTRODUCTION.

SINCE the First Edition of this work was published, the Author has had ample opportunities of studying a number of new works on the subject of Memory, and also various systems which aim at the improvement of this important faculty. Further reading and reflection have, however, only tended to confirm him in the opinion that while the Memory is capable of almost indefinite improvement, the means whereby this is to be effected is by an application of those true principles which constitute Nature's own process in the Acquisition, Conservation, and Reproduction of ideas. In proportion as these principles are recognised and applied, is the Memory in its highest form improved and invigorated. Every new idea laid up in its storehouse becomes, as it were, a stepping-stone to a higher achievement, and a means for the more easy accumulation of further knowledge.

The "discovery" of the Laws of the Natural Memory does not belong to modern times. More than two thousand years ago the laws of the reproduction of ideas were reduced by Aristotle, the great master of Mental Philosophy, to four heads—viz., *Proximity*, *Similarity*, *Contrariety*, and *Co-adjacence*. Sir W. Hamilton, in later times, has slightly altered this arrangement, and designated them the laws of *Repetition* and *Redintegration*; but this is an alteration in the mode of expression, rather than in the principles themselves, for Repetition and Re-

dintegration may be taken as comprehending the laws of Mr Hume defines them as the laws of Resemblance, Contiguity, Cause and Effect. He remarks:-"That these principles serve to connect ideas will not, I believe, be doubted. A picture naturally leads our thoughts to the original; the mention of an apartment in a building naturally introduces the inquiry or discourse concerning the others; and if we think of a wound, we can scarcely forbear reflecting upon the pain it causes." The first of these illustrations is founded upon the law of Resemblance; the second, upon the law of Contiguity; and the third, upon the law of Causation. Professor Blackie observes, "Ideas are intimately related to others with which they are naturally fitted together in the mind by Contrast, or Similarity, or by the ties of Contiguity in time or place, or by the bond of Causality." The same laws respecting the reproduction of ideas have been adopted also by Dr. Pick, who states them as the laws of Analogy, Opposition, Co-existence, and Succession; and, after the example of Reventlow and Kothe, has taken them as the basis of his Mnemonic method.

The only teacher, as far as the writer is aware, who professes to have made a "discovery of new laws of Memory," is an American gentleman who a few years ago came to this country as the inventor of a system of memory, which was "destined to work as great a revolution in educational methods as Harvey's discovery of the circulation of the blood in physiology." But as the system was communicated only under the bond of secrecy, it is difficult to see how such a revolution in education could be effected. The system, which was represented as "wholly unlike Mnemonics," rejected "links" and "associations" as aids to memory. The claim to originality thus set up was not allowed to pass undisputed. It was fully dealt with in an article which appeared in the Westminster Review for August, 1888; while other writers severely criticised it. One writer observes: *- "Although the 'Loisettian' system is largely advertised as being wholly unlike Mnemonics, the more one studies the system the more re-

^{*} F. Appleby, "Loisette's Art of Never Forgetting compared with Mnemonics."

markable appears its similiarity to other well-known systems." Mr Middleton, in his "All about Mnemonics," arrives at a similar conclusion. The "New Laws of Memory" were designated "inclusion," "exclusion," and "concurrence," but these are only the old laws of Aristotle under new names. The examples given of "inclusion"— Riches...wealth; oxygen...oxen; come under the law of "Similarity;" for the first pair of words have a resemblance in meaning, and the second pair a resemblance in sound. Righteous...wicked; hot...cold; old...young; given as examples of "exclusion" belong to the law of "Contrast," which, in the first edition of this work, was illustrated by-Virtue, vice-light, darkness-old, young. So, too, "concurrence" is but a new term for the old law of "Co-existence." Though the "Professor" repudiates "links" and "associations," he employs, to a wearisome extent, "correlations"—a distinction without a difference—as may be seen by the following example:—BEE—beeswax sealing-wax-title-deeds-ATTORNEY. The purpose of these "correlations" (which most persons would term links or associations) is to connect by intermediate steps the two extremes—Bee—Attorney, which have no natural connection with each other. If the reader will compare this example with the following, given many years before by Dr. Hermann Kothe in his "Lehrbuch der Mnemonik," published in 1848,—" Wine-cellar—staircase—ladder— *Jacob*," he will be able to form his own opinion as to the value of the claim to the "discovery of New Laws of Memory which had never been suspected before." A pupil of the system writes :- "This idea, I afterwards found, had been used and recommended by Dr. Pick, and the Rev. J. H. Bacon," (and, he might have added, by Reventlow and Kothe) "years ago."

It will thus be seen that the classification of the Natural Laws of Memory, made long ages ago, has been substantially adopted by later writers; and it is mere presumption on the part of any modern teacher to represent himself as the "discoverer" of them. "These laws are as old as Aristotle, and any claim made now-a-days to the discovery of any system of Memory must be taken not with a grain,

but with a bushel, of salt."—F. Appleby.

In considering the Subject of Memory, and the means

of Improving it, three questions present themselves to the mind of the writer:—

1. What is Memory?

2. Why, or on what principles, do we Remember?

3. How can we extend and apply the true principles of

Memory so as to aid Recollection?

A satisfactory answer to these questions, in the most simple and practical manner, will, it is confidently hoped,

be found in this treatise.

In applying the principles which regulate the succession and reproduction of ideas, the Author has considered Memory as a faculty of the mind, governed by natural laws, analogous to the laws of Attraction and Repulsion which exist in the physical world; but, as in the material world art is combined with science in order to ensure the most successful results, so the Author has not hesitated to avail himself of any real assistance to Memory that could be obtained from the simple appliances of art, not indeed as substitutes for the natural memory, but as auxiliary to it.

Cicero long ago observed, "It is evident that memory has in it something of art, and that it is not wholly a natural gift." An association, though sometimes termed artificial, may yet be philosophical, as when a fact or statement on which the attention is fixed is by a mental process associated with some other fact or idea previously known. Or it may be an arbitrary association, as when two facts or ideas are connected, not by any necessary relationship between them, but only through some incidental circumstance intervening, or by the voluntary effort of the mind in the creation of a fictitious connection. These forms of association consist in establishing a connection between something we wish to remember, and something we are in no danger of forgetting; such as events in history, or the divisions of a discourse, with the various rooms of our houses. The student should, however, guard against the formation of long and cumbrous phrases which burden the memory, and are often as difficult to remember as the ideas they are intended to suggest. A short and happy phrase may sometimes be of great service in recalling a fact or idea, but care should be taken that the "carrying machinery" is not too great for the purpose. Man lives in an atmosphere of art, and employs it constantly in every department of life; he has artificial helps for eating, hearing, reading, scientific pursuits, etc., and no doubt will have further facilities, as time rolls on, to assist his natural powers. Why, then, should Memory, one of the most important faculties of man, not be further assisted by all the appliances placed within his reach? Art is Nature's

handmaid; in some cases she is Nature's mistress.

In employing art in the association of ideas, or in localizing past events, we do but follow the practice so successfully adopted by the giant minds of antiquity. When rightly employed, this principle of locality is capable of rendering such signal service in certain branches of study, that to a limited extent it may well be adopted, especially in recalling the order of events. "It is chiefly order," says Cicero, "that gives distinctness to memory; therefore, by those who would improve this part of their understanding, certain places must be fixed upon; and of the things which they desire to keep in memory, symbols must be conceived in the mind, and ranged, as it were, in their places; thus the order of places would preserve the order of things." Some teachers reject the method of Localisation, but the Author, speaking from a long experience, prefers to retain it in the modified form in which it is employed in this work. It may, however, be passed over by any who object to what are sometimes termed "aids to memory," or by those whose idiosyncracy is so peculiar that, although they are too lame to walk, are yet unwilling to avail themselves of any assistance which art can afford. Such persons, however, should be consistent, and not employ in fact the very means which they denounce in name. Even the methods of repetition, association, and comparison are but aids to memory, and no part of memory "Association is merely the means by which what is in the Memory is recalled and brought again before consciousness."-D. Kay on "Memory."

Every effort to register or recall a past mental impression is a separate act of consciousness, which requires at first a certain portion of time for its performance; but by repeated acts, a habit is formed, until the mind perceives and recalls impressions so rapidly as not to be conscious of the operation. It is with the faculties of the mind as with the powers of the body, "acts which are executed slowly, and with full consciousness, become less and less perceptible as they gain in ease and rapidity by repetition.

till they fall below the minimum necessary for consciousness, and become unconscious."—(D. Kay.) A child first learns to read by becoming acquainted with the letters of the alphabet one by one. Then he proceeds by slow degrees, until by and bye he gains such proficiency in reading as to take in the ideas conveyed on the page of a book, without being distinctly conscious of the words and letters thereon, though they must individually have been

perceived by the mind.

What is important to the pupil is, that he should understand the True Principles by which acts of Remembrance are regulated; then he should proceed to apply them, taking the most simple subjects first, and advancing by degrees to the more difficult ones. When the "Four Rules of Remembrance," and the exercises on the Association of Connected and Unconnected ideas, are learned, the pupil should make similar exercises for himself, until he can associate ideas with facility; when he can do this he may proceed to the more advanced parts of the system exhibited in the "FURTHER APPLICATIONS." The instructions of the "GUIDE" are arranged in progressive order, and should be strictly followed. Every lesson should be learned before proceeding to the next. As a "COMPLETE GUIDE" the applications are sufficiently comprehensive to meet the requirements of most circumstances, though many will not need to apply the system to all the subjects included in this work By following step by step the instructions given, the student will not only add to his store of knowledge, but will, in a Natural and Easy way, greatly Strengthen his Memory, and improve it to a degree which shall be limited only by the measure of his own diligence and application. A writer in the Encyclopædia Britannica justly observes:—"The value of any system of Mnemonics must necessarily depend upon the extent to which it is based upon the Principles and Laws of Memory,"

MEMORY: WHAT IT IS.

MEMORY is that faculty of the mind by which we are enabled to treasure up and preserve for future use the knowledge we acquire. Dr. Johnson defines it as "the power of retaining or recalling things which are past."

In the improvement of the mind this faculty performs a most important part. We lay up in the Memory, as in a storehouse, those impressions and ideas which we have at some former period received, and preserve them for use on future occasions. By observation, reading, conversation, and reflection, we are continually accumulating new ideas, and it is the office of Memory to retain and reproduce them when required. Memory, as commonly understood, includes both remembrance and recollection; the latter being that power of mind by which we voluntarily bring back again, or recall into consciousness, some previous impression, while the former refers to that mode of consciousness by which an impression is borne in mind without any effort of the will. Dr Watts, speaking of Memory, in his work On the Improvement of the Mind, observes:—"All the other relations of the mind borrow from hence their beauty and perfection, for other capabilities of the soul are almost useless without this. what purpose are all our labors in wisdom and knowledge, if we want memory to preserve and use what we have acquired? What signify all other intellectual or spiritual improvements, if they are lost as soon as they are obtained? It is memory alone that enriches the mind by preserving what our labor and industry daily collect. Without memory the soul would be but a poor, destitute, naked being, with an everlasting blank spread over it, except the fleeting ideas of the present moment."

Since Memory is obviously the foundation of all intellectual improvement, it is no wonder that it has been so highly extolled by the wise of all ages. Among the Greeks it was exalted to the rank of a goddess, under the name of Mnemosyne, and reputed to be the daughter of heaven and earth, and the mother of the Muses, because to Me-

mory mankind were indebted for their progress in know-ledge. Plutarch calls it "the larder of the soul from which it takes its food and sustenance." John Locke, in his work On the Human Understanding, terms it "the storehouse of our ideas;" while the celebrated Robert Hall speaks of it as "the great power or master of the rolls of the soul, a power that can make amends for the speed of time, in causing him to leave behind him those things which else he would carry away as if they had not been." Lord Tennyson, in one of his beautiful odes, speaks thus in its praise:—

"Thou who stealest fire
From the fountains of the past
To glorify the present; O haste!
Visit my low desire.
Strengthen me! Enlighten me!
I faint in this obscurity,
Thou dewy dawn of Memory."

Memory is a possession which is committed to everyone to be improved; and yet the frequent "I forgot it,"
which falls as a dead weight upon our ears when offered
as an excuse for the omission of some duty, or for the
non-performance of some engagement, would lead us to
suppose that this faculty is possessed by very few. If we
could conceive of a person without memory, it is evident
that such a one would be unfit for social life, and for a place
among the busy activities of the world. "A man without
memory," says Seneca, in the Latin sentence quoted on
the title-page of this work, "is a madman or an idiot."

The variety in the power of Memory which exists in different persons has been frequently noted. "In some," observes John Locke, "the mind retains the characters drawn upon it like marble; in others like freestone, and in others little better than sand." Themistocles, a celebrated Greek general, is said to have known every citizen in Athens, and when one offered to teach him the Art of Memory, then first made public, he inquired what it would do for him: "It will enable you to remember everything," was the reply. The general rejoined "that he would rather understand the art of forgetting than of remembering," so oppressed was he with the strength of his memory. It is said of Cyrus that he knew the name of every soldier in his army. Otho, the Roman Emperor, owed in a great

measure his accession to the Empire to his prodigious memory. He had learned the name of every soldier of his army, when he was their companion as a simple officer, and used to call every one by his proper name. The soldiers, flattered by what they thought a mark of sympathy, persuaded themselves that if he were elevated to the supreme power, such an Emperor could not forget in his favors those whose names he so well remembered. They all, therefore, declared for him, and enabled him to overthrow his rival.

Cicero relates that Hortensius, the Roman orator, and his own contemporary, "had such an excellent memory as he knew in no one else; so that whatever he had composed in private, he could repeat without notes in the very words he at first employed. He used this power of recollection with such facility that he remembered, without any reference, not only what he had premeditated, or written, but everything that had been said by his opponent." As a proof of the marvelous strength of his memory, Hortensius once attended for a whole day a public sale, and at the close of it repeated with exactness, in regular order, the names of all the articles sold, and the prices realized.

Seneca, the distinguished Roman senator and philosopher, whose life was sacrificed to the jealousy of his former pupil, the Emperor Nero, speaking of Memory, says: "Age has done me many injuries, and deprived me of many things that I once had; it has dulled the sight of my eyes, blunted the sense of my hearing, and slackened my nerves. Among the rest I have mentioned is the memory, a thing that is the most tender and frail of all the parts of the soul, and which is first sensible to the assaults of age; heretofore this so flourished in me that I could repeat two thousand names in the same order as they were spoken." He further says that "he could recite more than two hundred verses, beginning at the last and going on to the first;" and he adds that "his memory was a faithful preserver of all that was entrusted to it."

Passing from ancient to modern times we find that although the cultivation of the Memory has not been so systematically studied as formerly, there have been many instances of persons who have cultivated their memories to an astonishing degree. That celebrated and accomplished scholar of the fifteenth century, Joseph Scaliger, committed to memory in the short space of twenty-one days, the whole of Homer's Iliad, and the Odyssey, in Greek. He also learned by heart, in the

short space of three months, all the Greek poets.

Muretus relates that in the year 1581 there lived at Padua a native of Corsica, a young law student, who possessed a most extraordinary memory. To put his powers to the test, Muretus invited the young man to his house, where a large party of guests were assembled to witness the proceedings. He then dictated to the student a number of words in various languages, until he wearied both himself and his friends. The Corsican alone was not tired, but continually asked for more words. Muretus declared that he should be more than satisfied if the young man could repeat half the words that had been dictated. The student, fixing his eyes on the ground for a short time, began to repeat, without the slightest hesitation, the whole list of words that had been dictated, and in the same order in which they had been named. He then commenced with the last word, and repeated the list backwards to the first. When he had accomplished this marvellous feat, he named the words alternately without the slightest mistake. Muretus relates further, that he became more intimately acquainted with this young man, and had frequent opportunities of ascertaining his power of memory -a power so great that he could recite thirty-six thousand words in the same manner. Nor was this all: Molinus, a patrician of Venice, who had a wretched memory, requested the young student to teach him the art. The student of law and the patrician set to work, and in ten days the noble pupil could repeat five hundred words in any order required. The Corsican acknowledged that he himself learned the art from a Frenchman who was his private tutor.

Bishop Jewel, of Salisbury, was blessed with a very tenacious memory, which he so greatly improved that he could readily repeat anything he had written after reading it once over. He used to say that if he were to deliver a premeditated discourse before a thousand persons, who were continually shouting all the time, they could not disarrange his ideas, nor cause him to forget any part of his discourse. He, like the young Corsican, acknowledged

his obligation to a system of Memory. This system Bishop Jewel taught to a friend, who made such progress that by its aid he committed to memory in twenty-eight days, with one hour's application daily, the twenty-eight chapters of St. Matthew's Gospel so perfectly, that when any particular verse was mentioned he could repeat the one that preceded or followed. Grotius and Pascal both said that they forgot

nothing they had ever read or thought over.

An extraordinary instance of one possessing a remarkable memory occurs in the person of Jedediah Buxton, who died in 1774. He was the son of a schoolmaster, yet was so illiterate that he could scarcely scrawl his own name. On one occasion he mentioned the quantity of ale he had drunk, free of cost, since he was twelve years old, and the names of the gentlemen who had given it to him. The whole amounted, he said, to five thousand one hundred and sixteen pints, or "winds" as he termed them, because, like the toper Bassus, he emptied his jug at one Although he had received very little instruction draught. in arithmetic, and had never been assisted in his youth beyond learning the multiplication table, yet, without the aid of pen or pencil, he could multiply five or six figures by as many, and in a much shorter time than it could be done by the most expert arithmetician. The product of the sum, which in his memory he had worked out, he would repeat, if it were required, a month afterwards. He could, moreover, leave off the operation, and, without the slightest error, resume it at the end of a week or month, or even of several months.

To pass from an uneducated man to one of the ripest scholars of his day, we may mention Richard Porson, Professor in the University of Cambridge, who was distinguished alike for his learning and his memory. When a lad at Eton, as he was going to his Latin lesson, one of the boys, wishing to play him a trick, took his Latin Horace from him, and slipped into his hand some English book. Porson, however, who had learned Horace by heart before he went to Eton, was nothing disconcerted at the trick which had been played upon him, but when called upon to begin, opened the English book that had been substituted for his Latin one, and without hesitation commenced—

and went on regularly, construing the Latin into English with the greatest ease. The tutor, perceiving some signs of astonishment as well as mirth among the boys, and suspecting that there was something uncommon in the affair, asked Porson what edition of Horace he had in his hand? "I learned the lesson from the Delphin Edition," replied the pupil, avoiding a direct answer. "That is very odd," rejoined the master, "for you seem to be reading on a different side of the page from myself; let me see your book." The truth, of course came out, and the master said that he should be most happy to find any of the other boys acquitting themselves as well under similar circumstances.

The memory of Dr Abernethy was singularly retentive. One day he invited a party of friends to do honor to his wife's birthday, when one of his guests, being of a poetical turn of mind, composed some verses complimentary to Mrs Abernethy. The doctor listened attentively to the reading of them, and then exclaimed, "Come, that is a good joke, to attempt passing off those verses as your own composition; I know them by heart." All were mute with astonishment, while Abernethy recited the verses without a single error. The "poet" was completely amazed, mystified, angry! The amused host explained, and offered to repeat any piece of the same length that any of the

company would recite.

At the time when reporting the debates in Parliament was not permitted, and there was no "Gallery' set apart for the "Fourth Estate," as the gentlemen who report for the press have been designated, the speeches, nevertheless, found their way into the public papers, much to the annoyance of some of the honorable members of the House. An inquiry was instituted, and at length it transpired that a gentleman, named Woodfall, used to go into the Gallery and continue there during the debates, and placing his head between his hands, and his elbows on his knees, actually committed to memory the speeches as they were uttered. He afterwards wrote them out for the press, and from this circumstance became known as "Memory Woodfall." Charles Dickens, after walking down a street, could tell the names of all the shopkeepers, as well as their occupations; and Lord Macaulay could repeat the whole of Milton's Paradise Lost.

These are but a few instances of persons, living in different ages, and occupying different positions in life, who were remarkable for their powers of memory. The enumeration might have been greatly enlarged. has been said, however, is sufficient to show to what extent this faculty has been exercised and improved. While it is readily admitted that a good memory is often a great natural endowment, it is also seen that it depends to a great degree upon cultivation, and in some respects, let us add, upon the appliances of art. Cicero says, "There is scarcely anyone of so strong a memory as to retain the order of his language and thoughts without a previous arrangement and observation of heads; nor is anyone of so weak a memory as not to receive assistance from the practice and exercise of art." Herodotus, long before the time of Cicero, observes: - "Those Egyptians who live in the cultivated parts of the country are, of all I have seen, the most ingenious beyond the rest of mankind, being

attentive to the improvement of the memory."

We thus see that Memory is a faculty which, by cultivation, is capable of being greatly improved, and not only so, but that the method of improving it may be imparted to others. Though we have only an outline of the plans adopted by the ancients in the cultivation of the memory, we know that the subject occupied their attention to a remarkable degree. They knew what labor it was to acquire knowledge, and how difficult it was to retain it, and keep it from slipping away. The language of one of them—plenus rimarum sum—(I am full of chinks) was applicable to many others besides the speaker. method adopted was purposely kept a secret among their own disciples, lest others should be benefited by it. They acted in the selfish spirit of Alexander, who is reported to have said to his tutor, "You have not done well to publish your books; for what is there now wherein I can surpass others, if those things in which I have been particularly instructed by you be laid open to all." They regarded their system as a means by which they might raise themselves to eminence, and spared no pains which they thought would assist them in attaining their object.

The person who is generally considered to be the inventor of a system for aiding the memory is Simonides, a

Greek poet who lived B.C. 470. The circumstances which led to the formation of his system are related by Cicero, and are as follows:—Simonides, being at a banquet, recited a poem in honour of Scopas, a victor in wrestling at the Olympic games, who gave the entertainment. Immediately afterwards Simonides was told that two young men on white horses wished to speak with him. He had scarcely got out of the house when the room in which the guests were assembled fell down. All the persons in it were killed, and their bodies were so mangled that they could not be distinguished from one another. It happened, however, that Simonides had observed the place each person had occupied, and by looking at the several places he was enabled to identify the bodies.

This circumstance led him to believe that nothing could better assist the memory than to retain in the mind certain fixed places in which, by the aid of the imagination, were located the images of living creatures, or any other objects which might easily be revived in the memory. Simonides afterwards reduced his method to a system, which he appears to have taught. This principle of *Locality* is one of the chief features in the "Art of Memory" to which Quintilian, Cicero, and so many others confess themselves

indebted.*

After the overthrow of the Roman Empire, the Mnemonic art entirely disappeared from public view. But in the obscurity of the monasteries it remained concealed until, in the thirteenth century, it was again brought into notice by Raimond Lullé, from whom it was named "Lullé's Art." About the same time Roger Bacon, an English monk, wrote a treatise on the "Art of Memory." Other writers followed, some of whom recommended certain drugs, and plaisters, and ointments, "to prevent the decay of memory;" while doctors of another school prescribed for the same complaint remedies of a more agreeable kind,

^{*} Non sum tanto ego ingenio, quanto Themistocles fuit, ut oblivionis artem, quam memoriæ, malim; gratiamque habeo Simonidi illi Ceo, quem primum ferunt artem memoriæ protulisse. Cicero de Orat., lib. ii, cap. 86. (I am not possessed of such intellectual power as Themistocles had, that I would rather know the art of forgetfulness than that of memory; and I am grateful to the famous Simonides of Ceos, who, as people say, first invented an Art of Memory). See also Quintiliani Instit. Orat., lib. xi, cap. 2.

such as "roasted fowl, small birds, young hares, and other delicacies for dinner." The patient was permitted to enjoy good red wine, but otherwise he must be sober and moderate. In the sixteenth century came Schenkel, who traveled through Germany, France, and the neighboring countries, teaching his system, which closely resembled the pictorial method of the ancients. His system was at length denounced as a work of the devil, while he himself was branded as a sorcerer, and very nearly fell a victim to the Inquisition. In the following century Winkelmann propounded, as "the most fertile secret," a new idea, which was an advance upon what had been previously done. order to assist the memory in the remembrance of figures, he gave to the letters of the alphabet a numerical value. This idea of Winkelmann was extended by Dr Grey, who in 1730 published his first edition of "Memoria Technica," a work which has gone through many editions, and was the first English book in which letters were substituted for figures for mnemonic purposes; but the combinations were

very arbitrary, and difficult to retain.

The "Memoria Technica" of Dr Grey was much modified by Gregor von Feinagle, a monk from Baden. He adopted Winkelmann's plan of substituting letters for figures, and also the method of dividing a room into squares, in each of which he placed an imaginary object. In 1811 he came to England, and was admitted to lecture at the Royal Institution; and in the following year published his system, under the title of The New Art of Memory. Since Feinagle's time numerous works, more or less in harmony with the laws of mind, have appeared. Aimé Paris in France; Carl Otto Reventlow, and Dr. Hermann Kothe in Germany; Fauvel Gouraud, and Lorenzo Johnson in America; Major Beniowski, Dr. Pick, and others in England, have all done their part to render this art one of practical utility. The present work, it is believed, will still further assist in simplifying it; and, in a practical manner, in harmony with the True Principles and Laws of Memory, will render aid in applying this valuable art to a great variety of useful studies.

PRINCIPLES OF MEMORY: WHY WE REMEMBER.

WHAT is the reason why, or how is it, that any previous idea of which we have been conscious, can be revived in the Memory? The answer to this question is, that an image of that idea was formerly impressed on the mind, and some trace of it still remains. If nothing remained of that original impression, nothing could be revived, and no recollection could take place; for recollection, which relates to memory viewed on its active side, and taken in its strict sense, is the collecting again of existing ideas which at some previous time had been impressed on the mind, and may be reproduced, either by accident or intention, according to the clearness and intensity of the primary impression, or the intervention of some suggestive idea. The mind may be compared to the sensitive plate of a photographer; so that when an external object is presented to it, if it be in a receptive condition, an impression is made which can be revived at a future time; the more striking the event, the deeper is the impression, and the more distinct the reproduction. Dr Granville, in his little book—The Secret of a good Memory—very appositely compares memory to the cylinder of the phonograph, which when in motion receives the impression of every sound that is conveyed to it, and makes an indelible record which lies dormant, or can be reproduced into an expression whenever the cylinder is set in motion under suitable conditions. He further observes :- "In the process of recollection, mental force—whatever that may be -throws the brain, like the cylinder of the phonograph, into a state of activity, probably vibratile, and the result is the reproduction of the ideas which previously impressed the brain. If the mind has intentionally considered the subject-matter of a particular set of conceptions thus recorded, this act will have created a special chain of connections, or, as it were, a train of communications, along which an effort to re-collect or re-cover the idea

will travel easily and call it back." If the mind be wholly taken up with one subject, no other impression will be made upon it; objects may pass before the eye, or sounds may fall upon the ear, and the mind be entirely unconscious of them. The memory is the magazine in which are stored up those sensations and ideas which constitute our knowledge. The crudest and most absurd opinions were formerly held respecting what has been termed the "seat of memory." By some it was supposed that knowledge was stored in compartments of the head as honey is in the various cells of the honeycomb. It was some such notion as this that gave birth to the lines—

"At length the wonder grew How one small head could carry all he knew."

The Greeks imagined that the "seat of memory" was between the eyebrows, the Romans placed it in the laps of the ears, while the Chinese suppose it to be in the larynx. Gall and Spurzheim gave to memory a local habitation in the brain, but taught that each of the numerous faculties of which the mind is constituted has a special memory appropriate to itself.

It is generally admitted now that Memory depends for its activity upon the brain, acting in connection with the nervous system and the organs of sensation. Every contact with an external object, or every thought formed within the mind, produces a mental impression which is capable of being revived at some future time. There is no one organ alone to which the term Memory can be applied; it acts in obedience to the entire organisation. There is, indeed, not one memory only, but there are many memories,* and one kind of memory is pre-eminently developed in one person; and another, in another.

It is owing to this difference of organic development that the memory is not equally retentive of all kinds of

^{* &}quot;L'histoire de la psychologie montre que la mémoire se résout en des mémoires, tout comme la vie d'un organisme se résout dans la vie des organes, des tissus, des éléments anatomiques qui le composent." Ribot, Les Maladies de la Mémoire. (The history of psychology shows that the memory may be resolved into memories, just as the life of an organism may be resolved into the lives of the organs, the tissues, the anatomical elements which compose it).

knowledge. One man may have that organ which phrenologists term "individuality" largely developed, so that he can instantly recognise a person he has previously seen, or picture him from memory; but this power of recognising individuals by no means implies that the person who possesses it is able to recollect past events equally well. The organ of "eventuality," by which we remember events may be small, though "individuality," by which we recognise persons, be large. Some can remember places, but not names; they can find their way about intricate roads; they can tell in what part of a book, or page, a certain passage occurs. "It is related of Dr Porson that on one occasion he called on a friend, whom he found reading Thucydides. His friend asked him the meaning of some word, when Porson immediately repeated the context. 'But how do you know that it was this passage,' asked his friend. 'Because,' replied Porson, 'the word occurs only twice in Thucydides, once on the right-hand page in the edition which you are using, and once on the left. I observed on which side you looked, and accordingly I knew to which passage you referred."-D. Kay.

So, again, if the organ of "tune" be large, the perception of musical sounds, and the power of remembering a tune, will be in proportion to the quality and development of this organ. But though "tune" may be largely developed, it does not follow that "time" will be equally so. A person may be a very good musician in respect of tune, though an indifferent timeist; and vice versâ. Every faculty of the mind has its own character, and its own

memory.

As the power of Memory is so largely dependent upon the various faculties of the mind, acting through the brain and the sensory nerves, it follows that, to have this power in a high state of vigour, the brain, which is the organ of mind, must be in a healthy condition. The mind must receive and register the impressions which are to be retained and reproduced. If it be enfeebled, or beclouded, if its receptive and recording faculties be weak, its power of action will be diminished, and the impressions made upon it will be faint and evanescent. This is seen in persons suffering from epilepsy, debility, or intoxication. To have a strong memory the mind should be clear, and the body healthy; for the mind is so intimately connected

with the body in which it dwells, and is so dependent upon the brain which is its highway, that if the body suffers, the mind is necessarily influenced thereby. Mens sana in corpore sano (a sound mind in a sound body) is an essential condition of a "good Memory." Whatever tends to give tone and vigour to the body, improve the general health, and fill up the glowing cup of life, tends at the same time to strengthen the retentive and reproductive faculties; while, on the other hand, whatever tends to debilitate the constitution, and diminish the amount of physical vitality and nerve-force, tends to impair the memory, and disor-

ganise the mental well-being.

The Memory is capable, by suitable training, of almost indefinite improvement. No faculty we possess is more invigorated by exercise than this one; as we trust it, so it acts. If we are conscious that some kinds of knowledge are more difficult to remember than other kinds, we should throw as much interest as possible into the subjects that present the difficulty; then, by gently exercising upon interesting subjects those faculties which are deficient in power, and in which the nerve-force is soon exhausted, we stimulate them into action in such a way as to engage the attention, and intensify the impressions; thus by degrees the faculties become more fully developed, and more capable of retaining and recalling into consciousness the desired knowledge. The improvement of the memory is within the reach of all. Correct principles clearly understood and diligently applied, a few simple and practical rules in harmony with the laws of mind, and continual exercise—these are the conditions of success. Demosthenes was ridiculed when he began to speak in public for not being able to pronounce the first letter of his art, the letter Rho; but so determined was he to overcome this difficulty, and to succeed as a Rhetorician, that he put pebbles into his mouth, and harangued the roaring waves, until at length he became the first of Greek orators. Milo carried the calf every day, and grew in strength as the calf grew, until by-and-bye he carried the bull.

"The heights which great men reached and kept,
Were not attained by sudden flight;
But they, while their companions slept,
Were toiling upwards in the night."

THE REPRODUCTION OF IDEAS.

MEMORY, we have seen, is the storehouse of those ideas which at some previous time have been impressed upon the mind; and the reason why such ideas can be recalled into consciousness is, that some trace of the primary impression still remains. All ideas may be divided into two great classes, Familiar and Unfamiliar. A familiar idea is connected in our minds with many other ideas, any one of which may tend to revive the original one; but an unfamiliar idea—one unlike anything we have seen or heard of before—suggests nothing to the mind, and recalls no associations; it therefore produces no permanent impression, and is not remembered.

The facility with which ideas are recalled depends upon our familiarity with them. It is much easier to retain a thing in the memory, and recall it to consciousness, if we are perfectly familiar with it, than it is to remember an idea that is unfamiliar and altogether strange to us. We can more easily remember the name of a beloved friend than the outlandish name of some North American Indian. The mention of our friend's name suggests many circumstances connected with him; we are familiar with his features, we remember the conversations we have had with him, and many other things besides; none of which apply in the case of a stranger.

Ideas are remembered according to the strength of the primary impression. We know by our own experience that there are some things so deeply graven on the mind that no subsequent period of time has been able to efface them. The original sensation was quite involuntary, but it was so deeply impressed on the mind at the time of the occurrence that to forget it is impossible. The slightest circumstance revives it; it springs up unbidden, and even against our will. So, too, with impressions that are made with the concurrence of the will; if the mind possesses a clear and distinct idea of the first impression, the image of that original impression is easily recalled.

Ideas are attracted to each other by virtue of a natural law—the law of Mental Affinity. This law is analogous to the law of Chemical Affinity in the physical world. If we place together two substances that have an affinity for each other, say, a lump of sugar and sulphuric acid, they will be attracted to each other, and blend into one mass. We do not make the combination; it takes place owing to the affinity in the substances brought into contact. So, too, if we place together in the mind two ideas that are closely related to each other, and observe the relation between them, they will combine, and form a blending more or less strong in proportion to the perception of the affinity there is between them. Thus we think of root and branch, mother and child, in connection with each other.

As ideas have the power of attracting each other, so they have a capability of repelling each other. If there is no affinity between them they will not combine, but the stronger will overcome the weaker, which in the struggle for pre-eminence will disappear. If we wish to banish a thought from the mind, it is not by trying to forget it that we shall succeed in doing so; for the very act of trying to forget will only deepen the impression. We must bring in a stronger and overpowering idea in order to repel the weaker one. Other ideas of a different nature and tendency from those we wish to banish must be substituted. The mind must be filled with thoughts and sensations as little related as possible to the disquieting ones, so that new ideas will force themselves upon the consciousness, and thus the old ones will be crowded out.

Two ideas that have been contemplated together combine in such a way that one has a tendency to recall the other. If we see a banner, and on it inscribed a particular design or motto, the recollection of the banner will suggest the design or motto; and vice versâ. The two Concurrent ideas, though unlike each other, being presented to the mind at the same instant of time, produce so close a connection between them, that the mention of one invariably recalls the other.

Sometimes one idea will revive in the mind another which seems to have no connection with the previous one. But the two apparently unconnected ideas are related by intermediate ones, though we may not be able to perceive

the connection. In the mind there is much of which we are unconscious, but which may be roused into consciousness by some analogous idea intervening, and coming into "In a company," contact with a long-buried thought. says Hobbes, "in which the conversation turned upon the late Civil War, what could be conceived more impertinent than for a person to ask abruptly, What was the value of a Roman denarius? On a little reflection, however, I was easily able to trace the train of thought which suggested the question; for the original subject naturally introduced the history of the King, and of the treachery of those who surrounded his person. This, again, introduced the treachery of Judas Iscariot, and the sum of money which he received for his reward. And all this train of ideas passed through the mind of the speaker in a twinkling, in consequence of the velocity of thought."

No idea can be recalled except through the medium of some other idea. If we could conceive of a solitary idea, unconnected with any other, existing in the mind, such an idea would make no permanent impression, and would leave nothing to be revived. But between the different thoughts or ideas in the mind there is a principle of connection. All our ideas are associated with others. No idea is a simple unity, it is connected with another idea. If we see or hear the word dog, immediately another idea springs up in connection with it. Besides the written or vocal sign there is a mental representation of the animal so called. These two ideas—the animal and its name blend together, and one recalls the other. But canis, the Latin word for dog, is to many a solitary and unfamiliar idea which suggests nothing to the mind—vox et præterea nihil—a mere sound and nothing more, which passes away and leaves no trace behind. An idea to be recalled into consciousness must be associated with some other idea already existing in the mind.

What we call "forgetting" implies the absence of another idea brought into connection with the one which we say we have forgotten. That such an idea has not absolutely passed out of the mind is proved from the fact that some slight circumstance may suddenly occur which will revive the original idea in all the distinctness of its first impression.

HOW TO REMEMBER.

FACILITY in recalling ideas that at some previous time have been present to the mind depends upon two things-

I. The power of Fixing the Attention, and

II. The Association of Ideas.

All our progress in learning, and the recollection of any impression or idea, must depend upon the combined action of ATTENTION and ASSOCIATION. Without Attention no permanent impression is made on the mind, and without Association no combination takes place between one idea and another.

I.—FIXING THE ATTENTION.

One reason why knowledge so soon fades from the memory is, that the original impression was but feebly made upon the mind. The attention was never roused to vigorous action, nor detained long enough for the mind to receive a clear and distinct impression. As recollection is the reviving of a previous impression made on the mind, and depends upon the intensity of that impression, it is of the highest importance to concentrate the attention upon that which we wish to remember.

Sometimes a deep, and even indelible impression is involuntarily produced on the mind; a terrible accident, if once witnessed, can never be forgotten. In such a case the attention is spontaneous, and the action automatic—a necessary condition of life in all organized animals. In ordinary cases, however, to give permanence to the impression, we must, by an act of the will, detain the attention on a particular subject, and consciously observe its special and characteristic features. When "Memory Woodfall" wished to remember the speeches he heard in the House of Commons, he buried his face in his hands, that, by concentration of thought and undistracted attention, he might the more effectually accomplish his object. It is related of Sir Isaac Newton that, on being interrogated respecting the mental qualities which formed the great peculiarity of

his character, he referred his questioner to the power he possessed of concentrating his attention upon a subject.

It is not without a show of reason that the expression "Memory box" is employed to denote the retentive faculty. It is a box into which knowledge, if carefully put, will be found when required. But the "box" must contain the treasure. A distinct impression of the idea must be made on the mind, and the attention must be detained sufficiently long to give permanence to the impression.

But how can the attention be so fixed as permanently

to impress the mind and secure remembrance?

Those ideas which come to the mind through the medium of the senses produce the most vivid impression; the mind is first roused to consciousness by sensations. Ideas which enter the mind through the eye impress deeply. We easily recall sights that we have seen. Nothing produces so clear and distinct an impression as to see a thing with the eyes. Young people, we know, are taught much more effectively, and their attention more closely secured, by the use of pictures and object-lessons than by any mere description given in a book. They may gather from the reading of a book a general idea of a ship, but if a picture of it be shown, their attention is more easily fixed, and the mind more readily impressed; but still better if a model is placed before them, and better still, if they actually see a ship upon the water.

Next to the eye, the ear is the most powerful organ for securing a deep impression. For this reason it is a good plan to pronounce aloud what we wish to remember, that by so doing the ideas may be conveyed by sound through the ear, as well as from the written page through the eye. Ideas which are derived from two or more senses are the most deeply impressed. A man has a more vivid recollection of a picture which he has not only seen, but has had its details orally explained to him, than if the idea of it had reached his mind through only one of the senses.

The power of fixing the attention in a healthy condition of the brain is under the control of the will. By a voluntary effort the attention is concentrated on the subject placed before the mind; but if the mind be jaded and the nerveforce exhausted, so that close attention cannot be given, it is not only a loss of time then to attempt to commit to

memory, but also a hardship to weary the mental powers when they require rest. When, however, the brain is in a vigorous and healthy condition, then, by repeated acts of attention, the habit of patient and exclusive concentration of thought is soon acquired. The will is the active power in recollection, the memory is passive; in it are stored our mental impressions ready to come forth when summoned by the energetic action of the will. If we wish to secure recollection, we must fix the attention on an object and determine to remember it; we must resolve not to forget it. The mind must detain the idea sufficiently long to consider it minutely, and compare its different points of relation; it must, by concentration of thought, exclude everything else that seeks to obtrude itself upon the attention. Voluntary attention is bracing and tonic in its effects; by it one can accomplish almost any task. Dr Abercrombie observes:—"The degree of attention which is required for the full remembrance of a subject is to be considered as a voluntary act on the part of the individual, but the actual exercise of it is influenced in a great degree by his previous intellectual habits. Of four individuals, for example, who are giving an account of a journey through the same district, one may describe chiefly its agricultural produce; another, its mineralogical character; a third, its picturesque beauties; while a fourth may not be able to give an account of anything except the state of the roads and the facilities for travelling. The same facts or objects must have passed before the senses of the four, but their remembrance of them depends upon the points to which their attention was directed." "Attention is to consciousness what the contraction of the pupil is to sight, or to the eye of the mind what the microscope or telescope is to the bodily eye, and it constitutes the better half of all intellectual power. Vivid consciousness, long memory; faint consciousness, short memory; no consciousness, no memory."—Sir W. Hamilton.

The first requisite to a "good Memory" is the Power of Fixing the Attention.

II.—THE ASSOCIATION OF IDEAS.

The second requisite to a "good Memory" is Facility in the Association of Ideas. In analysing our trains of

thought we find that some ideas have a natural correspondence and connection with one another, while other ideas follow in mere casual succession without any apparent relationship between them. Where there is a relation between the different ideas we wish to remember, we should trace out and compare the points of relationship. We should ask ourselves, What resemblance is there between these ideas? Wherein do they agree, or differ? What properties have they in common? What uses; and so on? And then we should place them together before the mind so that they may blend through the association of common qualities, or of necessary dependence. But where there is no necessary relationship between ideas, it will often happen that a connection may be formed owing entirely to chance, or custom, or some incidental circumstance. The term man as applied to the various figures on the chess-board has no direct resemblance, or relation, to the being from which the metaphor is derived; but as custom has denoted both by the same term, a comparison between the two ideas is easily made, and an intimate association effected. "Ideas that are not all akin," observes Mr Locke, "come to be so united in some men's minds that it is very hard to separate them. They always keep company, and the one no sooner at any time comes into the understanding but its associate appears with it, and if there are more than two which are thus united, the whole gang, always inseparable, show themselves together."

The best associations are those which are formed in the mind by the comparison of ideas that are connected by common qualities or affinities; as, snow and hail, flower and fruit. But when no such intimate relationship exists, and no direct connection can be made between two ideas, either by classified or incidental association, then the ingenuity must be exercised to find out some indirect means by which the same result may be attained. Connected ideas can be analysed, and the points of relation compared. Unconnected ideas, i.e., such as have no natural or necessary relation to each other, may, however, be so firmly associated by means of Intermediate ones, that a long series of disconnected ideas may be easily remembered. In the following pages will be shown a simple method how this

apparently difficult task can be accomplished.

LAWS OF ASSOCIATION.

IDEAS are connected in the mind in accordance with the following general principles:—

- I. CONTIGUITY OR NEARNESS IN TIME OR PLACE.
- II. SIMILARITY OR RESEMBLANCE.
- III. CONTRAST.
- IV. CAUSE AND EFFECT.

On one or other of these principles or laws of Association between different ideas depends every act of remembrance, though we may be unconscious of the operation. What the law of attraction is in the physical world, association is in the intellectual world. Two facts or ideas are contemplated as having some connection in point of time or place; as being alike or unlike; as having some relation to each other of cause or effect, or of necessary dependence of one upon another. The more closely this connection is perceived, and the more deeply it is impressed on the mind, the more easy and certain will be recollection.

I.—CONTIGUITY OR NEARNESS IN TIME OR PLACE.

An event occurring at a particular time tends to remind us of some other event that happened at the same time. The two ideas may be very dissimilar in their nature, and may not be connected by any relation of place, yet from the circumstance that they occurred about the same time, and our minds are impressed with this circumstance, they have a tendency, in proportion to our familiarity with the facts, to recall each other. The Prince of Wales was born in 1841, in the same year New Zealand was proclaimed a separate colony; the facts in themselves are very different, and occurred at opposite sides of the globe, yet owing to their association in our minds as simultaneous events, or events which we have thought of as taking

place about the same time, a relation, arising from the *Concurrence* of the events, is established, and recollection is easy. If a person dwell upon any particular period of his earlier years, a whole crowd of circumstances connected with that period immediately spring up. The closer two events are brought together in point of time the more readily they blend; and when they reach the brain without any interval of time between them, they act synchronically and attain the maximum of contiguity.

Contiguity embraces the relation of Sequence, as well as of Concurrence. "Two or more ideas," observes Dr. Carpenter, in his Mental Physiology, "habitually existing together, or in immediate succession, tend to cohere, so that the future occurrence of any one of them restores or revives the other." In repeating a number of ideas connected with each other by the order of succession, some trace or residuum of the former idea remains at the commencement of the following one; the end of one is connected in the mind with the beginning of the other: thus, we remember the words of a sentence in successive order, for the first word suggests the second, and so on to the end. But we are unable to reverse the order, because the point of contact between the different ideas is different from that with which the mind has been originally impressed; but if the order is reversed, the links of connection are severed, and the chain of Contiguity is broken. In committing to memory a series of ideas to be repeated in any order, the mind must be impressed with them in the same order as that in which they are to be recalled. The sailor who said he could "box the compass" better than the parson could say the Lord's Prayer, knew that he had been accustomed to run over the points of the compass backwards, as well as forwards, whereas the parson had been in the habit of saying the Lord's Prayer only in progressive order. The pupil, therefore, in committing to memory such lists of words as that on page 47, having proceeded from the first to the last, should invert the order and, commencing with the last, go on to the first.

Contiguity relates to *place* as well as to time. The nearer two objects or ideas are brought together in the mind, the greater will be the power of one to recall the other; and, on the other hand, the greater the distance of

space between them, the more difficult will be reproduction. The following illustration will make this clear:—Suppose, for example, we wish to associate two ideas so that the mention of one shall immediately recall the other, say, music and geology, and write on a slip of paper thus—

Music

Geology

the distance of space between these two ideas prevents the eye taking them both in at one view, and allows the possibility of another idea intervening; but if the two ideas are brought so close together that nothing can come between them, and they stand in the same field of vision, with the minimum of space between them, thus—

Music Geology

they are impressed on the mind in closest proximity, and are, therefore, more easily recalled in mutual companionship than if written at a distance from each other. The rapidity and strength of the association of ideas are in proportion to the nearness with which they approach each other.

If we travel along a road that we once before travelled along in company with a friend, the place will tend to suggest the friend; the friend, the conversation; and thus a whole train of connected ideas will be recalled from the circumstance of our being in the same place as we were at some former period. It is related by Van Swieten that on one occasion he passed a spot where the dead body of a dog burst, and produced such an intolerable stench that it made him vomit. Happening to pass the same place some years after, the place recalled the unpleasant circumstance, and immediately he was affected with vomiting. Some places are so closely connected in our minds with the mournful past that we strive to avoid them, on account of the painful impressions they revive. Other places recall associations of the most pleasurable kind. "That man," says Dr. Johnson, "is little to be envied whose patriotism would not gain force upon the plains of Marathon, or whose piety would not grow warmer among the ruins of Iona."

II.—SIMILARITY OR RESEMBLANCE.

To this principle may be referred the tendency to connect one thing with another to which it bears some resemblance. If we look at a portrait, our thoughts naturally recur to the subject of it; a fact which Cowper touchingly illustrated in his beautiful poem On the receipt of my Mother's Picture. One object or one event will tend to remind us of another that somewhat resembles it. Paul's Cathedral in London and St. Peter's at Rome are easily associated in the mind, because of their similarity in outward form. We can scarcely read the account of Hannibal crossing the Alps with an armed force, without being reminded that Napoleon did the same. The similarity between the two acts, though separated by a long interval of time, is sufficient to produce such an impression on the mind as to cause the mention of one fact to recall the other. There may not be complete identity between two facts or ideas, but where there is a resemblance in several particulars, association takes place and reproduction is easy; and the closer the resemblance that exists between two ideas, the more readily they blend, and recall each other. We sometimes endeavor to remember a person's name by thinking of a part of it; perhaps only the first letter, or the first syllable, may be sufficient to recall the whole. One syllable may sometimes overlap another, as in chat, Chatham; Knightsbridge, Bridgenorth; and thus a component part of an idea will tend to revive the whole; but the greater the similarity in the component parts the more readily will the whole be recalled. We may think we know a person at a distance by his walk, though we may not be certain about it, but if, on nearer approach, we see that he has on a similar dress to that we are accustomed to see him in, and carries the same kind of walking stick as the one we know him to possess, we have little doubt that the form we see is that of our friend; and if we see his face, the resemblance is complete, and confirms our previous impression.

It is of the utmost importance that the mind be trained to connect events and ideas by the law of *Similarity*. It is the highest form of association. We form a judgment on things by comparing a number of similars; and in this

way we arrange and classify our ideas, and lay up in separate bundles, as it were, those that closely resemble each other, so as most readily to reproduce them when required.

Resemblance of *sound*, too, is very suggestive. The mention of a person's name tends to remind us of someone else who bears the same name. Alexander the coppersmith may remind us of Alexander the Great. The word watch may remind us of watchman, because it is a component part, both as respects the spelling and the sound. The English word mason may serve to impress upon the mind the French word maison, and the Latin ala may suggest ale. This principle of associating by resemblance in sound is especially useful in committing to memory foreign words. A very slight resemblance will often be sufficient to form an association which will so fix the word in the memory that it can be easily recalled.

It is partly owing to the resemblance of sound—"the jingling of like endings," as Milton designates it—that rhyme is so much easier to remember than prose. Dr. Watts gives it as his opinion that many a person has preserved himself from gluttony, and the pains consequent upon it, by calling to mind the following sentiments ex-

pressed in rhyme :-

"To be easy all night
Let your supper be light,
Or else you'll complain
Of a stomach in pain."

III.—CONTRAST.

Two opposite ideas, or such as may be placed in contrast, tend to recall each other. Next in importance to associating ideas by means of some mutual resemblance must be considered the principle of association by Contrast, or unlikeness. Thus, if you meet a very tall lady with a very short gentleman, the mind is at once impressed with the striking contrast, and remembrance is easy. So virtue and vice, light and darkness, old and young recall each other by contrast. In contrasted notions there is a unity of idea common to both words, one of which expresses the abundance of that quality of which the other

marks the deficiency. They belong to the same sphere, but occupy opposite positions in it; they relate to the same thing, yet one is the exclusion of the other. In the same way kings and beggars, prince and peasant, white and black, summer and winter, express ideas that suggest each other by contrast.

It is to Contrast, or the Exclusion of the opposite idea, that we are indebted for the pleasure derivable from Antithesis, and other rapid transitions of thought. The whole pathos of Milton's apostrophe to *light* lies in the

contrast of his own darkness:-

"Hail, holy light! offspring of heaven firstborn.
.... thee I revisit safe,
And feel thy sovereign, vital lamp; but thou
Revisit'st not these eyes, that roll in vain
To find thy piercing ray, and find no dawn.'

IV.—CAUSE AND EFFECT.

This principle of association dwells most strongly in men of cultivated minds, and is the source of much that is dignified in science and art. It is the mother of the most important inventions, and has led to the discovery of many of those circumstances of agreement or disagreement which we designate under the general expression— "the laws of nature." It was this principle of causation that led James Watt to see in the rising lid, caused by the boiling water in his mother's tea-kettle as it stood on the fire, the possibilities of the steam engine; it was this law that led Newton to discover the connection between the falling of an apple and the rotation of a world. If we think of a distinguished architect our minds naturally dwell upon some of his works. If, for instance, we think of Sir Christopher Wren, by an easy transition we think also of St Paul's Cathedral and the Monument, which we know were designed by him. So, if we contemplate an effect produced, the mind naturally goes back to the cause which produced it. If we gaze upon Creation with its beautiful form and order, we naturally are reminded of the Great First Cause, and thus, by a simple process of reasoning in harmony with this principle of Cause and Effect, we

"Look from nature up to nature's God."

Such, briefly, are the chief laws or principles by which ideas, that at some previous time have been impressed upon the mind, are reproduced; and in proportion as these principles are understood, and applied, is the Memory improved, and increased in tenacity and vigor. Under one or other of these four general laws may all our mental sequences be classed. There may be minor modifications of these principles by which associations are effected; a part may suggest the whole, as-lad, ladder; or the whole a part, as—Massachusetts, Massa. One thing that is primary, may suggest another that is dependent, as-fountain, stream. A sign may suggest the thing signified, as—sceptre, authority; a crown may remind us of the king who wears it—but all these differences of relation are in some measure dependent upon the general laws enunciated above, by whatever names they may be designated. It is of little consequence whether the relationship be necessary, or accidental and due to human arrangements, so long as it is obvious and clearly and definitely perceived by the mind.

Every idea that exists in the mind is intimately connected with a number of other ideas, which are capable of being analysed and resolved into their component parts. Any one of these ideas may suggest some other idea. The paper of this book may suggest the idea of whiteness, smoothness, fragility, etc.; and any one of these properties may suggest other things of which whiteness, smoothness, or fragility is a property; as-snow, polished marble, friendship. But something more is necessary in the reproduction of ideas than a tendency of one thing to suggest another. What is required of the memory is the power of promptly recalling those facts or ideas which have been entrusted to its keeping, and the assurance that such ideas will present themselves when summoned, and no others. There is a kind of preference by which ideas are reproduced in proportion to the relation of interest in which they stand to the individual mind. For instance, if a farmer be spoken to about the weather, the idea of the weather will cause him to think of his crops; a doctor may think of its effects upon the health of the community; and a sportsman may regard it only in connection with the sports of the field. We are easily reminded of things in which we are deeply interested, and the slightest suggestion may recall experiences which are of frequent occurrence. Sometimes, however, the intensity of feeling connected with an occurrence may atone for its rarity, and an event which has happened but once in our life may haunt the memory during the remainder of our days. Ideas may be *suggested* by the force of a general relationship between them, but they are *recalled* only when they

have previously been associated in the mind.

Here let me anticipate an objection which may be raised against this principle of Association by Comparison. It may be objected that as every familiar idea has many others connected with it, any one of them may occur to the mind instead of the particular one we wish to remember; thus, ink, for instance, instead of recalling blot, may suggest blackness or fluidity, or something else to which it is allied; just as the landlady who having taken a lodger into her apartments was told by him that his name was Green, "and that you may not forget my name," said he, "think of cabbage." The good lady, faithful to her commands, did think of cabbage, and when she had occasion to tell her lodger that he was wanted, she went to his door and said: "Mr Cabbage, you are wanted, sir." No doubt the woman thought her lodger's suggestion very original and amusing; the idea of cabbage secured her attention, and being the stronger idea in her mind it consequently repelled *Green*. Cabbage was the idea she had associated with the individual, and not Green, hence the ridiculous blunder. The following rules, however, will point out the method of combining ideas in such a way that those ideas which have been previously associated in the mind will be recalled, and no others.

FOUR GENERAL RULES OF REMEM-BRANCE.

HAVING explained the Natural Laws by which ideas are impressed upon the mind and recalled to consciousness, we proceed now to give the following Rules which, if carefully attended to, will greatly assist the student in the Retention and Reproduction of ideas, and enable him to advance rapidly along the path of progress in the acquisition of knowledge.

RULE I.

OBTAIN A DEEP IMPRESSION ON THE MIND OF THAT WHICH YOU WISH TO REMEMBER.

The importance of intensifying the First Impression, in order to secure the vivacity of the future memory, cannot be insisted upon too strongly. It is impossible to give the whole attention to two separate objects at the same time; the attention must be concentrated on one thing only at a time to the exclusion of everything else. The power of concentration increases in proportion to the interest taken in a subject; if a deep interest is taken, a deep impression is produced, and the mind becomes so absorbed as not to notice surrounding objects. A deep impression is secured also by thoroughness of application. Unless we comprehend a subject, and the mind has a firm hold of it, no deep impression is obtained, and recollection is difficult. If the First Impression be but feeble, we must again and again revive it, and bring it before the consciousness until a deep impression is obtained; then recollection will be easy.

RULE II.

BRING IDEAS CLOSE TOGETHER SO AS TO COMPARE THEM.

Ideas, we have seen, radiate other ideas. Around every familiar idea a number of others cluster, with their diffe-

rent properties; and these furnish points of comparison with other ideas possessing similar properties. If we look at a rose, we admire the beauty of its form, the richness of its colour, its fragrance, and other properties belonging to it; these we may compare with other objects possessing similar properties, and thus a mutual relationship is formed, which tends to connect the two objects so strongly that the mention of one will recall the other. This is the relationship of Similarity, in which there is the Co-existence, or Inclusion, of a common idea. By Comparing ideas, we perceive any points of analogy that exist between them; and the mind, impressed by the closeness of the relationship, connects them with each other, and thus an association is naturally formed. The points of comparison exist in the ideas themselves; our part is to fix the attention solely upon the relation between these different points; the ideas will then combine, and exclude extraneous ones.

RULE III.

NEVER COMPARE MORE THAN TWO IDEAS TOGETHER AT THE SAME TIME.

If you see two objects and pay equal attention to both of them, observing at the same time the analogy or relation between them, they will unite, and one will recall the other; but if you pay attention to only one of them, that one will not recall the other. There must always be two objects compared together to form a blending, but there must not be more than two compared at the same instant. If the mind be occupied with many things at the same time, the impression is weakened and recollection is difficult.

This is the experience of every person. Just as the eye cannot retain the images of a number of objects crowded upon the retina, so the mind cannot recall a number of ideas presented at the same time; but if two ideas only are compared together, they unite as links of a chain. When the first and second are united, then combine the second and third, and let the first no longer engage the attention; so with the third and fourth, and onward to the end. If care be taken to compare only two ideas together at the same time, then, no matter how long the series, one

idea will recall the next, until the whole chain of associated ideas is recalled.

In combining a number of ideas into a series, pay special attention to the first one or two of the series, so as to secure a vivid *First Impression*, and make a good start in the course; then, when the end is reached, repeat them two or three times, backwards as well as forwards; this will deepen the impression, and enable the student to recall the ideas in any order he pleases.

It often happens that we wish to remember ideas that have no apparent connection with each other. To associate *Unconnected Ideas* observe the following rule:—

RULE IV.

FIND AN INTERMEDIATE IDEA HAVING SOME RELATION TO BOTH THE IDEAS WE WISH TO COMBINE, AND BY IT ESTABLISH A CONNECTION BETWEEN THE UNCON-NECTED IDEAS.

There are some ideas which, taken singly, we know many things about, yet, considered in their relation to other ideas, the mind does not perceive any points of comparison, or any properties which they have in common. In such cases we must find an *Intermediate idea*, a friend, so to speak, in touch with the disconnected pair, and capable of so combining with both of them, as to effect a union between them. How this is to be accomplished will be hereafter explained.

PRACTICAL APPLICATIONS.

TO REMEMBER IDEAS THAT ARE CONNECTED WITH EACH OTHER.

If the pupil has followed attentively what has been said about the Laws of Association he will now be prepared to enter upon the practical application of them to

various branches of study.

Let us suppose that the student has to commit to memory the following series of Connected Ideas, which are subjects to be referred to in a speech:—Pen, ink, blot, crime, police, Sir Robert Peel, corn-laws, riots, bloodshed, war, America, Franklin, electricity, telegraph, railway, steam,

steamship, sea, storm, shipwreck, loss.

If these subjects had to be committed to memory in the usual way—parrot fashion—by mere repetition, the task would be difficult, and the speaker could not be certain that he would not omit one or more of them. But let him bear in mind what has been said, and place two, and only two, of these ideas before the mind at the same time, paying close attention to any relation between them, by which one may be compared with another; the whole series will then be so firmly associated, and combined in the memory, that each idea can readily be recalled in the exact order given.

The foregoing series is an example of Familiar ideas. We know many things about them, and they are so far related to each other as to possess many points of analogy or resemblance, by means of which a connection may be established between them. Among the many points of comparison, we select from each idea that particular point which seems to be most nearly allied to both the ideas we desire to connect. Take, for example, the word pen; it suggests a number of familiar notions. We may think of its shape, material, quality, use in writing, and so on. Now ake the word ink, and deal with it in the same way; it also suggests many other ideas; as, color, fluidity, name of maker, shop where bought, use in writing, and so on.

Out of the many notions that are common to the two ideas, pen and ink, we must fix the attention upon, and compare those only, which strike the mind as being most nearly related to both of them. The same points of

analogy will not occur to all persons alike; everyone should make his own comparison. *Pen* and *ink* are both used in the act of writing. If the mind fixes the attention upon this connection, to the *exclusion of every other idea*, a deep impression will be made, and a strong association formed on the principle of SIMILARITY; so that the mention of one idea will instantly recall the other, and that only.

Take the next subject, blot, and consider it in conjunction with ink. Confine the attention in the same way to these two ideas alone, observing at the same time any relation or point of comparison between them; they will mutually blend, and reproduce each other. Ink and blot are related as CAUSE and EFFECT; ink spilled causes a blot. In the same way compare blot with crime. These two ideas are also associated as Cause and Effect, for a blot is caused by *crime*. It will be noticed that in this example blot is employed in a figurative sense, whereas in association with *ink* it was used in a literal sense. This difference presents no difficulty, for the mind passes imperceptibly from the literal to the figurative; and vice versa. Crime and police are also intimately related. The point of comparison between them is close indeed, especially if they have ever been previously brought into connection with each other. These illustrations of the method to be pursued in forming Associations, between ideas that have some relation or connection, will be sufficient to enable the student to complete the list for himself.

Until proficiency in this exercise of associating ideas is gained (for in this, as in other things, it is practice that makes perfect), the student is recommended to write down the ideas in a tabular form, somewhat in the following manner; so that the eye may see them in close proximity while the mind at the same time perceives the connection

between them :-

Pen, ink ink, blot blot, crime ... crime, police police, Peel ... Peel, corn-laws corn-laws, riots riots, bloodshed ... bloodshed, war war, America ... America, Franklin Franklin, electricity electricity, telegraph telegraph, railway railway, steam steam, steamship steamship, sea sea, storm storm, shipwreck ... shipwreck, loss.

It will be seen that each idea comes before the mind twice. It has two associations (as a link between two other links of a chain); one with that which precedes, and one with that which follows. If one idea be named, it will immediately recall the second; the second idea will recall the third, and so on, with astonishing facility, in regular succession; just as the drawing of one end of a chain will draw the other also.

When the student has once gone through the series, let him invert the order and, beginning with the last idea, go back to the first. If he has followed the direction given of placing only two ideas before the mind at the same time, he will find that he can as easily recite them backwards as forwards; or, if he take as a starting point any idea that occurs in the middle of the series, he can proceed from it either upwards or downwards, as he pleases, to

the top or bottom of the list.

The process which goes on in the mind in committing to memory in this way is a perfectly natural one. By comparing points of resemblance or other relation existing in the ideas themselves, we call into exercise the rational and reflective powers, by which the mind itself becomes more vigorous, and the Natural Memory is strengthened. A habit, moreover, is formed of arranging ideas in the mental repository, according to their different properties and connections; and thus the mind becomes a classified cabinet in which are stored away, in orderly arrangement, impressions of the past, with their associated circumstances, ready to be called forth when required.

TO REMEMBER IDEAS THAT ARE UNCONNECTED WITH EACH OTHER.

Ideas which are so dissimilar and unconnected with each other that no point of analogy or relationship can be discerned between them, may yet, by means of an Intermediate idea, as explaned in Rule IV. (page 45), be so intimately associated as to form a strong blending. Suppose, for example, you wish to associate *pudding* with *drawing-room*. Place the two ideas together before the mind, and if no direct point of comparison is perceived, take an *Intermediate* idea that has some relation to the other two. *Pudding* suggests many things, and amongst

the many things it suggests is dining-room; so, too, drawing-yoom suggests many things, and amongst them is dining-room: here is an Intermediate idea related to the other two, a faithful friend coming in as mediator between the disconnected pair to bring them into good fellowship with each other. The order of connection then will be—pudding, dining-room—dining-room, drawing-room. Sometimes it may be necessary to introduce two or more intermediate ideas between those which we wish to unite. If we wished to associate pudding with music, all that would be needed would be to add another link to the chain, and instead of forming an arbitrary phrase, which might be difficult to remember, the process would be-pudding, dining-room-dining-room, drawing-room-drawing-room, music. So, again, to connect pipe with umbrella, the "Mnemonical bridge" from the first idea to the last, as exemplified by Dr. Kothe, in his "Lehrbuch der Mnemonik," is as follows:-

Pipe, smoke, cloud, rain, umbrella.

The pupil should now try the following exercise, and associate the Unconnected extremes, which are in *italics*, by means of the Intermediate ideas.

Pudding, dining-room dining-room, drawing-room drawing-room, music music, manuscript ... manuscript, paper ... paper, fragility fragility, friendship friendship, courtship courtship, wedding wedding, rice rice, slipper ... slipper, carriage carriage, journey ... journey, tour tour, trip trip, sail sail, sea ... sea, sky ... sky, stars stars, astronomy astronomy, telescope telescope, telephone telephone, telegraph telegraph, robbery robbery, thief thief, cellar cellar, cell ... cell, hole hole, black-hole black-hole, Calcutta Calcutta, India India, mutiny.

The above is an example of Unconnected ideas associated by means of an Intermediate one. When, however, no single idea sufficiently related to the extremes to make a strong connection, presents itself readily to the mind,

the pupil should employ more than one Intermediate idea, taking special care that each one he employs is closely related to the two between which it is placed, thus:—

```
... sick child
mother
          ... child
                                             .. delicate
delicate ... powerful
                          ... imposing
                                             ... noble
noble ... mean ...
                          ... hateful ...
                                            ... malicious
malicious ... male ...
                          ... male figure
                                            ... gay figure
gay figure ... figure-head
                         ... elevation
                                            ... monument
monument... caged in ... bird chirp ... song ... music
                                            ... chirp
                           ... musical friend ... neighbour
neighbour ... noisy neighbour uproar ... ... commotion
commotion... " move on " ... pathway...
                                             ... main-way
```

It will often happen that we have to combine ideas which are not merely unconnected with each other, but are so unfamiliar to us that when mentioned they at first suggest nothing to the mind. Proper names, scientific terms, foreign words and letters, are, for the most part, Unfamiliar ideas which, as such, are not capable of association with anything we know. The method of proceeding is to convert the Unfamiliar idea into a Familiar one. This may be done by finding a substitute-idea sufficiently near in its relationship to represent the original. The similarity may be in meaning, thus—social will suggest socius; or it may be only in sound, as-berry for Bury; for Greece we may substitute grease; for Vistula whistle will be found sufficiently suggestive. The Greek capital letter delta resembles a triangle in form, the Hebrew daleth may be likened to a gibbet. Italy resembles a boot, and France is like a *shirt without sleeves*. For Denmark we may substitute den (a part for the whole); for Belfast, bell; for Aberdeen, a burden; and so on. The names of persons may be treated in the same manner. Unless we can connect them with some Familiar idea, they remain unsuggestive sounds to us; but if we can associate the name with some peculiarity of the person, or with some one we know of the same name, or with some resemblance in sound, as-rake, for Raikes; goose, for Gooseman; good wine, for Jeudwine, etc., remembrance will be easy. Then, having brought the unfamiliar idea into a workable form for association, we proceed to combine it with other familiar ideas in the manner already shown.

The pupil should go over the above lists of Unconnected ideas two or three times, backwards as well as forwards;

then he should more rapidly pass over the Intermediate ideas and impress his mind only with the extremes; after this he should test his proficiency by trying to recall the extremes without the aid of the intermediates; if he can do this readily, the latter will have served their purpose, and may be allowed to disappear without receiving any further attention. When the building is completed, the scaffolding, which was necessary for its erection, may be

laid aside, and pass into oblivion.

In forming associations, the pupil should select his own points of comparison and connecting links. The mental exercise in discovering these, by the concentration of thought required, half accomplishes the desired end. Associations which have been formed in his own mind take the impress of his mind, and are more familiar to him than those which have been formed by another person. An idea which to one person appears far-fetched, to another may be full of meaning. The connection between monument and caged in, on page 50, may to a stranger in London be without significance, but to a person who has ascended the Monument, the iron cage at the top becomes powerfully suggestive as a connecting link to associate monument with bird.

Let it not be supposed that this method of associating ideas is long and tedious. It may appear so to a beginner, as every branch of study does to a novice, but after a little practice the mind passes so rapidly from one idea to another-"with the quickness of thought"-that a whole chain of ideas may be connected with the greatest ease. and without any appreciable interval of time. The utility of the method, moreover, will amply repay the learner for the pains expended in its acquisition; while its superiority over the ordinary plan of remembering (which is no method at all) will become increasingly manifest. It is desirable that the intermediate links be as few as possible, but it is immensely more important that each idea be firmly connected with its fellow by the combining force of mental association. If this be done, then, owing to the rapidity of the mind's operations, the process is not a long one.

> "How fleet is a glance of the mind; Compared with the speed of its flight, The tempest itself lags behind, And the swift-winged arrows of light."

THE STUDY OF FOREIGN LANGUAGES.

WHEN a pupil commences the learning of a foreign language he has to encounter two difficulties—he has to learn the words of the language, and the changes they undergo to express variation of meaning—a new vocabulary, and a new grammar. It is not within the scope of the present work to discuss the question whether in the case of children it is better to begin with the words, or with the grammar; but when childhood is passed, and one is no longer bound by the traditions of a school, a pupil about to commence a language would do well to adopt the method recommended by Milton and Locke, namely, to begin with the words, as children do in learning their "mother tongue." If a pupil, in commencing a foreign language, will commit to memory, by the plan about to be explained, a copia verborum, or stock of words in common use, (which he will find a pleasant occupation,) and will then take a simple elementary book, and with the aid of a literal translation proceed sentence by sentence, he will find the reading of such a book not difficult. He should repeat each sentence aloud several times, so that the ear may become accustomed to the sound of the words, and the tongue to their formation; while the mind at the same time compares any points of resemblance between his own language and the one he is learning. recommendation of M. Jacotot was, "Sachez un livre, et rapportez-y tous les autres "-Learn one book well, and refer all others to it. If the student thoroughly masters one book, he will not experience great difficulty in passing on to another. The Declensions, Conjugations, and the simpler rules of Syntax should, however, be early learned. An expeditious plan of accomplishing this task will be hereafter given. The learning of foreign vocabularies is, for the most part, the work of associating Unfamiliar ideas with Familiar ones—the foreign words with their English equivalents. The pupil commencing Latin has to remember that mensa means table; homo, man; dominus, a lord, etc. If he is studying French he has to bear in mind that plume signifies pen; fromage, cheese; arbre, tree, etc. As languages bear a family relationship, which is often very apparent, a person studying one language under the direction of a judicious teacher may be assisted to the knowledge of a large number of foreign words with scarcely any effort on the part of the pupil. If we compare our own language with the Latin or French, we find many words identical in the two languages; or so nearly identical that they are evidently the same words but slightly altered in spelling in passing from one language to another. Such words need only to be pointed out to be instantly recognised.

The following list is given merely as an example of words, commencing with the first letter of the alphabet that are practically identical in English and French:—

Abject, absurde, accent, adage, adverbe, affable, âge, agent, air, agriculture, aliment, alphabet, ample, animal, antique, ardent, argument, arrogant, artifice, artisan, article, assassin, assemblage, assistance, assurance, atlas, audience, auspice, austère, autographe.

Similar lists, commencing with the other letters of the alphabet, might be given of words identical in English and

French. Notice the following:-

ENGLISH.	F	RENCH.	ENGLISH.	FRENCH.
Ball		bal	pork	 porc
duke		duc	infant	 enfant
lake		lac	circle	 cercle
sack		sac .	civic	 civique
court		cour	colleague	 collègue

There are other words which, though not identical, or so nearly identical as those in the preceding lists, yet so closely resemble each other that it is evident they stand in the relation of mother and child, or both classes are the offspring of the same parent. To point out this relationship belongs to Etymology. Etymology discovers a community of sense existing among words of different languages, and by its aid a most powerful link is formed to make a strong connection between them. Etymology, by showing the close relation between two languages, casts light upon both at once, so that by it the task of remembering becomes easy; for the understanding concurs with the memory, and at the same time that we acquire a knowledge of the foreign tongue, we gain also a more perfect acquaintance with our own. The following is an example of words connected by means of the ETYMOLOGICAL LINK.

ENGLISH.	FRENCH.	LATIN.
Liberty	 liberté	 libertas
	 clémence	 clementia
Victory	 victoire	 victoria
Reign	 règne	 regnum
Chain	 chaine	 catena
Three	 trois	 tres
Charity	 charité	 caritas
Salmon .	 saumon	 salmo
Herbage .	 herbe	 herba
Time .	 temps	 tempus
Peace .	 paix	 pax
Nine .	 neuf	 novem

When we cannot connect words by means of the Etymological link, we can adopt another method of forming an association, namely, one based upon a community of sound: this is the PHONETIC LINK. By means of the Phonetic link a connection is formed between a foreign word and an English one, owing to some similarity in sound between them.

When the sight of the word suggests nothing to the mind, and etymology renders no assistance in forming a connecting link, the pupil should pronounce the word distinctly to ascertain if its sound will furnish a clue by which an association may be effected. Take the French word blé, which signifies corn; pronounce this word aloud, and ask yourself, What does it sound like? does the sound suggest any English word? The French word blé sounds like the beginning of the English word blade, and blade is easily associated with corn. Take another word frais, expenses. Frais somewhat resembles in sound the English word fray, which is closely allied to expenses. So, too, the Greek word skēnē (σκηνή) suggests skin; and akon (ἄκων) a cone. In this way, by means of the Phonetic link, a strong blending may be formed between foreign words and the English equivalents; thus—

ἄκων	 a cone	 point	 javelin
σκηνή	 skin	 covering	tent
πληγή	 plague	 calamity	 blow
ΰλη	 holly	 tree	 wood

The pupil must exercise thought to discover points of resemblance or comparison between the words he wishes to associate. He must not do, as is too often done, keep on saying, after the manner of a parrot, "arbre, tree; arbre, tree; arbre, tree;" hoping that sooner or later the word will find a lodgment in his memory; as after a time probably it will, until it is jostled out again by some intruder, which in turn is supplanted by another: but he must ask himself, Does this word arbre suggest anything to my mind, by its resemblance to an English word, by its sight, or by its sound? O yes, it resembles the word arbour. I know many things about an arbour; there is one in the garden, and it is shaded by an over-spreading tree. Here, then, an Unfamiliar idea, arbre, has been changed into a Familiar one, arbour, which is to be associated with tree. If these two closely-related ideas are placed simultaneously before the mind, they will combine, and one will recall the other.

Take another word, maison. It is somewhat similar in form, and in sound too, to our word mason: its meaning is house. Maison suggests mason, and a connection between mason and house is easily established. If these two ideas be placed together before the mind, and the relation between them perceived, they will adhere as firmly as the stones do that are used by the mason in building a house.

Again, the word fromage signifies cheese. How shall we associate these two ideas—the Unfamiliar French word fromage and the common English one cheese? The sound of the foreign word may suggest nothing to the mind of the pupil, but he looks steadily at the word, and sees that he can divide it into two parts—from age; by this simple expedient he converts an unfamiliar foreign word fromage into a familiar idea—from age, which he can easily associate with cheese.

By thus breaking up a word into its component parts, we shall often discover a clue that is not observed when the word is regarded as a whole. *Dotheboys* Hall, of Charles Dickens, is an unfamiliar-looking name, but when analysed, and reduced to an elementary form—*Do the boys Hall*, a new complexion is given to it, and we at once perceive the appropriateness of the term to designate the Yorkshire academy where Mr Squeers used to *do the boys*. So, too, Mr Knockemorff is resolved into *Knock'em off*, a medical practitioner so called in compliment to the usual success that attended the treatment of his patients.

Take now the Latin word fames, hunger: fames sounds

like fame, which is easily associated with hunger. Follis, a bag, suggests folly; and nubo, I marry, sounds like new beau.

This, then, is a rapid, easy, and certain method of committing to memory the words of a language, and words are the body of a language, as the idioms are the soul of it. The foreign unfamiliar word must be changed, by one or other of the methods given, into a familiar idea which can be associated with the English word. By this means a large vocabulary may soon be learned, and committed to the keeping of a retentive and faithful memory.

EXAMPLES FOR PRACTICE.

THE words in the second column are *Intermediate ideas* suggested by the words in the first; the last column shows the English meaning. The pupil should now test his proficiency in forming associations and committing the lists to memory. He need not take the intermediate ideas which are here given; it is much better for everyone to find his own; for the mental exercise in doing so deepens the impression. Those here given are intended merely as examples; yet, if no better intermediate ideas arise in the mind of the student, these may be accepted. The tables furnish illustrations of the different modes of connecting ideas.

LATIN VOCABULARY.

Acer	acid		sour
ædes	edifice		temple
æquus	equal		just
ager	acre		field
hamus	ham		hook
aqua	aquatic		water
pater	paternal		father
domus	domicile		house
fœdus	fetid		filthy
caput	cap out		head
macellum	may sell 'em		market
stilla	still	distil	drop
ala	ale	flightiness	wing
cœlum	ceiling	sky	heaven
navus	navvy	hard-work	diligent
amicio	a mere show		to clothe
anguis	anguish	sting	snake

FRENCH VOCABULARY.

Blé	blade		corn
avare	avarice		miser
roi	royal		king
an	annum		. year
cœur	courting		. heart
côté	coast		. side
église	ecclesiastic		
faillite	failure		. bankruptcy
frais	fray		ovnoncoc
laisser	lazy		. to let
prochain	approaching		. next
salir	sully		to soil
pierre	pier		stone .
crépuscule	creep to sch	ool	. twilight
bras	brass	bracket	arm
tête	tight	hat	head
	The state of the s		

In the above examples the foreign words are reduced to sounds; then an English word, which most nearly approaches the sound of the foreign word, is taken as an Intermediate idea; and this English idea is associated with the foreign word on the one hand and with the English on the other; thus—blé, blade, corn; or with two intermediate ideas, as—navus, navvy, hard-work, diligent. This is the Phonetic Link. The word aqua occurs in the English word aquatic; this is the ETYMOLOGICAL LINK.

In the learning of languages it is sometimes important to know the letters or words which form a rule in grammar, or some exception to a rule. As the order is unimportant, the student should arrange such letters or words in that order in which they will most readily combine. If, for example, he wishes to remember the letters that are *silent* at the end of French words, he should seek out those that are pronounced, as they are fewer in number, viz., c, f, l, r, and change the order thus—c, r, f, l, then, by means of vowels, the unconnected letters will form a familiar idea which the CAREFUL student will at once perceive.

In the Latin Grammar he is told that nouns of the Third Declension ending in a, c, e, l, n, t are of the Neuter Gender. Here are two things to be remembered, viz., the letters themselves, and the fact that they are Terminations of Neuter Nouns of the Third Declension. The order in which the letters are committed to memory is immaterial, and may be changed to suit the convenience of the pupil, thus—L, E, A, N C, A, T,—a thing of no worth, or Neuter.

THE REMEMBRANCE OF NUMBERS.

GREAT difficulty is experienced by many persons in remembering dates and numbers. Figures are *Unfamiliar* ideas, which suggest to the mind no associations. If they possessed a dependence upon, or relation to, each other, they would easily combine, and the mention of one would recall another with which it had been previously associated. But this is not the case; hence the difficulty of remembering figures, especially when formed into high numbers.

Some dates we are well acquainted with. Here is ground to work upon: we can proceed from the known to the unknown. If we can establish a connection between a well-known date and some other we wish to remember, the recollection of the latter will be easy. Persons sometimes recollect their ages from the remembrance that they were born in the same year as some important event happened, or they remember the year in which the event took place, because it coincides with the year of their birth.

The student should have his mind stored with the dates of the principal events in History. These will be as landmarks to him, and serve as points of comparison with other dates. If we know that the *Revolution in England* took place in 1688, it will be easy to remember that the *Destruction of the Spanish Armada* was just a century before, *i.e.*, in 1588. So, too, we can remember the date of the *Great Fire of London* in 1666, by observing the concurrence of the three sixes; and this date helps us to remember that of the *Great Plague in London* in 1665, the year preceding.

If we know that the Restoration of Charles II. was in 1660, this date will serve as a point of comparison by which to remember 1560, in which year the Civil war in France commenced, and Presbyterianism was established in Scotland. With 1660 we can compare still later dates; for just a century after, in 1760, George III. began his reign. With the 60—the last two figures included in this date—we can compare the number of years George III. reigned, viz., 60 years; and knowing this, we have the date of the Accession of George IV., in 1820.

Sometimes we can compare similar periods. The War of the Roses lasted 30 years; compare with this period another war of the same duration, viz., that of The Great Reformation. So, again, King Saul reigned 40 years; his successor, David reigned 40 years; and Solomon, his son, reigned also 40 years. The remembrance of the duration of one reign will thus enable us to remember the duration of the other two.

The above are illustrations of what may be effected by the Natural Memory alone. But however beautiful and potent the operations of nature are in themselves, they often receive fresh lustre, and are rendered more efficient

when judiciously assisted by art.

When dates or numbers cannot, as in the foregoing instances, be compared with others, we must follow Cicero's advice, and have recourse to Art. The Unfamiliar figures must be converted into Familiar ideas. This is readily effected by substituting for the figures letters which can be formed into familiar words, and associated with the fact to be recalled. The practice of employing letters to represent numerical value is very ancient. Among the Hebrews and Greeks it universally prevailed, and the Roman numerals are still in use among us. We have seen that Winkelmann's "most fertile secret" lay in the substitution of letters for figures—a plan that has been adopted in every system of Memory since his time The numerals are represented by letters according to the following—

ALPHABET OF FIGURES.

0	1	2	3	4	5	6	7	8	9
s	t	n	m	r	1	b	f		q k
Z	d	ng con	mp (final.)	h	У	p	v	sh	g (hard.)
	th	con	com				w	j	(nard.)

This "ALPHABET OF FIGURES" must be perfectly committed to memory; but the task will be easy if the following observations be attended to:—

s is the first sound in the word cypher, it therefore fitly

represents 0; z is the initial letter of zero, i.e., U.

t represents 1, because it contains one downstroke : d

and th are produced by the same organs of speech as t, they therefore go with it.

n contains two downstrokes, and so stands for 2; ng is

the nasal sound of n; the prefix con terminates in n.

m, which contains three downstrokes, stands for 3; mp

final, also the prefix com, represents the same figure.

r is the last letter of the word four, which contains four letters; h is also employed for 4 to give a larger vocabulary in forming combinations.

1 is the Roman numeral for 50 (five tens), reject the

"0," and l=5; y also is used for the same figure.

b is somewhat similar in shape to 6; p is the lighter sound of b.

f, in writing, somewhat resembles 7; v is the cognate of

f, and w is like two v's joined together.

ch stands for 8, sh also ends in h, and j is the heavy sound of ch.

q is like 9 in shape, k is the first articulation in q;

and g hard (as in good), is the cognate of k.

Two or three repetitions with the associations, will so imprint this "ALPHABET OF FIGURES" upon the memory, that when a figure is given the equivalent letter will spring up in the mind, and vice versa; and then, by way of clenching the nail, and fixing these letters in the Memory, remember this phrase:—

A SToNe May RoLl ABoVe a JoKe.

To apply this "Alphabet of Figures" as a powerful instrument for remembering dates, etc., the student will observe the following rules:—

1. Consonants only are employed; vowels have no numerical value, and are used merely to form words; as,

earl(r-1) = 45; cheese (ch-s) = 80.

2. Words are spelt phonetically, or, as they are sounded. Consonants that are not pronounced have no value attached to them, e.g., light (l-t) = 51; knew (n) = 2; Persia (p-r-sh) = 648; pleasure (p-l-zh-r) = 6584; coquette (k-k-t) = 991.

3. Double letters are treated as single ones; matter (m-t-r) = 314; rabbit (r-b-t) = 461; but if the double consonants have distinct articulations, then each letter has its own numerical value; thus, accept (k-s-p-t) = 9061;

book-keeper (b-k-k-p-r) = 69964; anger (ng-g-r) = 294. The prefixes con and com always represent 2 and 3 respectively, whatever letters may follow; thus commotion (comm-sh-n) = 3382.

4. As the cypher never begins a whole number, s, which represents the cypher, may be prefixed to any other letter at the *beginning* of a single word, or of the *first* word in a memorial sentence; thus, stone(t-n) = 12; snow(n) = 2;

soda jars (d-j-r-s) = 1840.

The pupil having thoroughly committed to memory the "Alphabet of Figures" should practise the translation of figures into words, and words into figures, going by the sound alone, and omitting all vowels.

Exercise.

Manner, 324; ocean, 82; Russia, 48; shoe, 8; stone, 12; decease, 100; finger, 7294; danger, 1284; hanger, 424; maxim, 3903; scissors, 40; nigher, 24; William, 753; yule, 55; contest, 2101; connect, 2291; comedy, 31; common, 332.

In Chronology, and some other kinds of studies, it will generally be sufficient to employ only three consonants; by so doing, a larger number of words will be available for forming suitable associations. In applying this Rule, let the following observations be attended to:—

I. If the memorial word contains more than three consonants, the *first three only* are employed; thus, **D**elegate (d-l-g) will represent 159; the t, being the fourth conso-

nant, is disregarded.

2. If two words are employed to represent three figures, take the *first two* consonants of the first word, and the *first* consonant of the second; all the other consonants are of no value; thus, **Loose King** (l-s-k) will represent 509.

3. If more than two words are employed, take the *first* consonant of each word; thus, **Th**ird **S**ore **P**ersecution (th-s-p) will stand for 106.

SERIES OF FIGURES.

Long series of figures, which in the usual way of committing to memory would present a formidable task, may

in a few minutes be so perfectly learned that the whole can, without the slightest hesitation, be repeated either forwards or backwards.

The following thirty figures form part of the Ratio of the Circumference of a Circle to its Diameter:—

3.14159265358979323846264338327

Divide the series into groups of three figures each, and translate the figures into a number of familiar ideas to be connected by association.

Mother	delicate	265 noble	malicious	979 gay figure
323	846	264	338	327
monument	chirp	n eigh b ou r	commotion	main-way.

If the student discerns any direct points of comparison between these different ideas, he will associate the ideas without any Intermediates; but if he does not readily observe some relation or analogy between them, he will treat them as *Unconnected* ideas, and associate them according to the method previously explained. It is quite immaterial how long the series is, provided that one link of the chain of ideas be firmly secured to the next. The pupil should refer to page 50 to see how this can be easily accomplished.

POPULATIONS.

When the population is given in round numbers, it will generally be sufficient to take only three figures, though

more may be taken if required.

EUROPE contains 246,000,000. Take the letters n-r-p, which represent 246, and with the aid of vowels combine them thus:—in Europe; this gives the population in millions.

ASIA, the largest division of the world, contains

648,000,000...Persia (p-r-sh) gives this.

AFRICA, 125,000,000...Down low (very appropriate for poor down-trodden Africa.)

AMERICA, 74,200,000...Franklin. We cannot mistake

f-r-n for millions, for that would be a population larger than that of Asia, which is the largest division of the world. It must therefore be 74,200,000. The pupil should, of course, exercise his reflective powers.

RUSSIA, 56,500,000...Lapland. AUSTRIA, 36,400,000...Empire.

GREAT BRITAIN AND IRELAND, 37,600,000 Moving Power.

CHRONOLOGY.

In dates since the year 1000 we may drop the first figure, and take only the remaining three, as no student could mistake a date to the extent of a thousand years.

Conversion of St. Paul, A.D., 34 ... MiRacle.
Accession of Constantine, 313 ... MighTy EMperor
Downfall of Paganism in the Roman
Empire, 384 IMaGes Reel.
Printing invented, 1436 ... Re-iMPression.
Barometer invented, 1643 ... BaRoMeter.

In dates belonging to the last and present centuries, two figures only need be expressed.

Pitt died, 1761 ... Pitt Died.

Napoleon born, 1769 ... Bonaparte a Corsican.

Napoleon died, 1821 ... Napoleon Died.

The Queen born, 1819 ... The Queen.

Corn laws repealed, 1846 ... Robert Peel.

By observing the three rules on page 61, the student will very often be able to form some excellent combinations. The adoption of the method recommended there will immensely enlarge the vocabulary of useful words.

THE SOVEREIGNS OF ENGLAND, WITH THE DATES OF THEIR ACCESSION.

I	William I	 	SuBdued Britain.	1066
2	William II	 	Second CHief Follows.	1087
3	Henry I	 	(a) DiStressed Sire.	IIOO

⁽a) Henry I. lost a favorite son at sea, and was never seen to smile afterwards.

							*	
4	Stephen				(6)	Tul	IuLt.	1135
	Henry II				(0)			
	Richard I			he CH				
	John				The Co			
	Henry III				(d) A			
	Edward I				ew W			
	Edward II				Ma Ssiv			
	Edward III.				g) Ma			
	Richard II			(4)	A Mo	Ving	Fend	T277
	Henry IV				IV			
14	Henry V				(i)			
15	Henry VI				(j) 1			
16	Edward IV.				(k			
	Edward V			(1) WF				
	Richard III.		•••		CHe			
	Henry VII	•••	•••		i) RiC			
20	Henry VIII.				L			
21	Edward VI	•••	•••		AI			
	Mary		•••		Llard			
22	Elizabeth							
	James I	•••	•••		Loy			
	Charles I	•••		Proud			_	
		•••	•••	And the second second	···			
	Charles II	•••	•••		otecto			
	Charles II	•••		(n) Pu				
	James II	•••			ected A			
29	William and Mary	•••	•••	•••	PaTi	ent Co	oupie.	1089

(b) There were continual tumults in this reign, between Matilda, daughter of the late king, and Stephen, his nephew; both of whom sought the crown.

(c) Henry dispensed various charters, which were the groundwork of English liberty. He was, therefore, the dispenser or outlayer of English liberty.

(d) Henry III. showed his antipathy to the Magna Charta by continually violating it.

(e) In this reign Wales was conquered and annexed to England. (f) Edward II. was the first Prince of Wales. The Prince of Wales's feathers are massive feathers.

(g) It was during this reign that many great battles with the French were fought.

(h) The insurrection, or feud, of Wat Tyler occurred in this reign.

(i) The battle of Agincourt was fought in this reign.

(j) Henry VI. was deposed, and this to him was ruin near.
 (k) Edward IV. robbed the last king of his crown.

(1) Edward V. was wretchedly murdered in the Tower of London by his uncle, the Duke of Gloucester, who became Richard III.

(m) He built, at great expense, in Westminster Abbey, Henry the Seventh's Chapel, which he left as a rich legacy.

(n) His restoration brought about public satisfaction.

30	Anne	 	 Sweet ANne.	1702
31	George I.	 	 (0) THe Root.	1714
32	George II.	 •••	 (p) Noble Wife.	1727
	George III.		 Prolonged Sire.	1760
	George IV.		 Naughty Sovereign.	
-	William IV		 Merry Sailor.	The second second second
36	Victoria	 	 Mild Victoria.	1837

(o) George I. was the first of the House of Brunswick, the Root from which our beloved Queen came.

(p) The king's noble wife had great influence over him, and governed the country during the king's frequent visits to Hanover.

The rules for forming the memorial-words are given on pages 60, 61, to which the pupil should refer. In the above list it will be perceived that the associating idea is closely connected with some leading event in the reign of the sovereign. This is always desirable, for in this way the memory is impressed with dates and facts that have a direct relation to each other, and the date is then learned in the history itself. If, moreover, the dates of various important events be firmly impressed on the memory, the mind easily recalls the whole train of circumstances connected with those events, and thus an extensive store of historical knowledge is laid up for future use.

It will sometimes happen, however, that the pupil is not sufficiently acquainted with the history of the period as to be able readily to find a necessary connection between the name of the sovereign and the memorial words which contain the date. He may know enough of history to see a connection between William I. and Subdued Britain, or between Charles I. and the *Penalty* which he suffered: but he may not see the connection between Henry I. and Distressed Sire, or between Stephen and Tumult. Unless the names themselves suggest some ideas to the mind so connected with the dates as to be capable of being closely associated with them, such names are mere sounds which call up no familiar ideas. If, however, these names be converted into suggestive ideas, then, in accordance with the principles already so fully explained, they can be conpared and associated with other ideas so as to make a strong blending. If, for instance, the pupil knows nothing about Stephen, or his reign, the name itself will suggest no idea that can be associated with Tumult; but if for Stephen be substituted the familiar idea Staff, which resembles the king's name sufficiently near to represent it, he can then by means of intermediate and analogous ideas form a close connection between the name of the king and the date of his accession; thus—

STEPHEN: -Staff...truncheon... Tumult.

Tumult gives the date 1135; while the connecting link truncheon, which is related to both the extremes—staff

and tumult—closely unites them.

In cases where several kings bear the same name, all that is necessary to distinguish one from the other is to represent the name of the person by the first consonant, as W for William, H for Henry, D for Edward (as the initial letter is a vowel), and so on; and let I, II, III, etc., be represented by their proper letters, according to the "Alphabet of Figures," to indicate the order of succession; thus—H-d will stand for Henry I. (d being the equivalent for I); H-n, for Henry II., H-m, for Henry III., etc. These letters, with vowels inserted, will form familiar ideas, which by means of intermediate ones will combine so as to make a strong connection between the names of the sovereigns and the dates of their accession. The following examples will be sufficient to explain the method, which is but another application of the principle of associating unconnected ideas by means of intermediate ones:-

HEN. I .- Head, King, Sire, Distressed Sire.

HEN. II.—Hen, egg-layer, Outlayer.

HEN. III.—Home, Home Rule, Irish party, Antipathy.

CH. II.—Change, improvement, satisfaction, Public Satisfaction.

ED. V.-Doll, lifeless, murder, Wretched Murder.

In the same way may associations be formed between any proper names or dates, when the names and dates are not sufficiently suggestive of each other to form a direct connection between them.

THE PRINCIPLE OF LOCALITY.

CONTIGUITY or Nearness in Place, we have seen is one of the laws or principles in accordance with which ideas are associated in the mind. Many of our recollections are connected with place. If the name of a place with which we are familiar be mentioned, the mind instantly reverts to it, and recalls some incident connected with that place; and if the incident made a deep impression at the time of its occurrence, the recollection will be vivid and complete. The circumstance related by Van Swieten (page 37) is only one out of many instances that might be adduced to show that association with place is most powerful and lasting. It often happens that we are assisted in remembering some passage we have read in a book by calling to mind the particular part of the page where such passage occurs. This is an application of the principle of LOCALITY; a principle acted upon by all persons to a greater or less degree, though often unconsciously, as an aid to memory. If, then, that which assists our recollection be serviceable to us when employed only incidentally, how much more serviceable would such a practice be if reduced to a system, and made the special subject of attention! LOCALITY, which is the faculty by which we perceive the relative position of objects, is too valuable an auxiliary in the improvement of the Memory to be disregarded.

It was this principle of Locality applied by Simonides, as has been already stated, that first suggested the idea of a *system* for aiding the memory; and this principle was generally adopted by the ancients, who cultivated their

memories to a remarkable degree.

The practice of their orators was to fix in the mind a series of material objects, such as the furniture of a house, and with these to associate a division of the oration, by thinking of it in connection with the objects; then, as the order of the "localities" was well known, the speaker had only to direct his mind to any of the compartments, to remember that part of his discourse which was associated with the material object located there. He could then pass mentally from one "locality" to another in consecutive order, and thus remember the different ideas he had associated with the different places.

The principle of Locality thus adopted by the ancients, is supposed to have given rise to various expressions in common use, such as, "in the first place," "in the second place," "in the last place." The word topic, which is derived from the Greek word topos, a place, bears witness to this ancient method of localising the heads or topics of a discourse. Locality is that law of the mind which enables us to remember place, and assigns what we read, or hear, or think about, to some one or other place. Locality enables us to remember places; Association enables us to recall what is connected with those places.

If it be objected that this method burdens the memory, and prevents its exercise in a natural way, the objection has long ago been anticipated and answered by the greatest orator of his time.* A writer in the "Monthly Magazine" for September, 1807, who signs himself "Common Sense," makes the following observations upon the principle of Locality:—"Any person who wishes to try an experiment on the power of Association, need only to make use of the succession of rooms, and other spots, and divisions of his own house, with all the parts of which he may be supposed to be very familiar. Let him apply any word, or any idea, to the several parts of his house in any determined order of their succession, and he will find it almost impossible, in recalling the same order of the parts of the house, not to associate the idea or word which he had previously annexed to each part. Thus, for example, a person may learn the succession of the Kings of England in ten minutes, by annexing the names of the successive monarchs to the successive rooms and principal parts of his own house." The same writer further observes:- "If I do not hazard a charge of egotism, I shall mention, as illustrative facts, that by this new art I once committed to memory, in a single morning, the whole of the propositions contained in the first three books of Euclid, and with such perfection, that I could for years afterwards specify the number of the book on hearing the proposition named,

^{* &}quot;Neque verum est, quod ab inertibus dicitur, opprimi memoriam imaginum pondere, et obscurari etiam id, quod per se natura tenere potiusset."—Cicero de Orat. lib. ii. c. 88. Nor is that true which is said by people ignorant of the method, that the memory is oppressed by the weight of these representations, and even that is obscured which unassisted nature might have clearly kept in view.)

and could recite the proposition on hearing the number of the book. . . . I may also add, to prove the simplicity of the plan, that I taught two of my own children to repeat fifty unconnected words in a first lesson, of not more than half an hour's continuance.

"Locality," says Gregor von Feinagle, " is the most efficacious medium of recollection, and that system of memory will be most serviceable which brings this principle into

most extensive operation."

The principle of Locality, then, enables us to remember not only events, but it also enables us to remember their order; so that a person who has mastered this principle can recite in any order he pleases, either forwards or backwards, those events which he has localised; or, if a particular event be named, he can say at once what place it occupies in the series. A valuable acquirement is this for the student in those branches of science where the order is important.

APPLICATION OF THE PRINCIPLE OF LOCALITY.

To commit to memory on the principle of Locality, the student should mentally divide a room of his own house into a number of compartments. He will find ten sufficient for each room. The floor, which generally has the greatest number of objects upon it, should be divided into nine compartments, by mentally drawing lines across, as in the subjoined diagram. The tenth division will be the ceiling over the fifth place in the middle of the room.

		**
I	2	3
4	5	6
7 Door	8	9

10 (on the Ceiling, over No. 5)

Each one of these divisions is called a "place," as the first place, second place, third place, etc. The first "place" is always the left-hand corner of the room opposite to the door, the other places are numbered from left to right in the usual way. The figures within the divisions of the above diagram represent the order of the "places." The door of the room is in this case supposed to be at No. 7; the tenth "place" is, as we have said, on the ceiling over

No. 5.

To make this still clearer, let us suppose that the pupil takes as his first room the drawing-room of his own house. In the first compartment or, as we say, in the first "place," is a recess, in which stands a cabinet full of ornamental objects; 2, is the fire-place with a mirror over it; 3, an easy chair, with davenport against the wall; 4, a side-table with fancy articles upon it; 5, a settee; 6, a whatnot; 7, the door, with screen behind it; 8, a piano; 9, a couch; 10, a chandelier suspended from the ceiling over No. 5 place. There are many other objects in the room, but these are prominent ones, and sufficient to define the "places" for the purpose of localising associations.

For a second room, take the dining-room, and dividing the floor into nine compartments, as before, consider the ceiling as the tenth "place." We can, if we take the rooms of our own houses, or any furnished rooms with which we are perfectly familiar, instantly recall the various objects that occupy these different compartments. The breakfast-room, study, bed-rooms, etc., may all, when re-

quired, be pressed into service.

The whole of the rooms are so chosen that the various objects which occupy the different "places" or compartments may act as prompters, so that if the mind thinks of an object located in one of the "places," it immediately knows in which room, and "place," to find it. If, for instance, we think of piano, the thoughts go to the eighth "place" of the first room; and if any particular event or idea has been associated with the prompter in that "place," and a strong connection formed, the thought of the piano located there will at once recall the associated idea.

The same rooms and places may be employed for any number of different subjects; indeed the greater variety of subjects that are located in each room, the greater will be the facility for forming associations. Suppose, for example, a person wishes to localise in his rooms the names of the Kings of England, commencing with the Norman Conquest, he will form an association (by one or other of the principles previously explained,) between William the Conqueror and the object which occupies the first place. William the II. he will connect with the second place

Henry I. with the third place, and so on.

When this is done the student will have not only a material object occupying each division of his room, as the cabinet, fire-place, easy chair, etc., but he will have also in association with the same "places" William I., William II., Henry I., etc., with any circumstances in their histories with which he is acquainted; and these in turn will present materials for forming new associations with other subjects that he may desire to remember. If, for instance, when a person has learned the succession of the Kings of England on the principle of Locality, and wishes to increase his knowledge by studying the propositions of Euclid, he may make use of the same rooms in which to arrange his knowledge as those occupied by the Kings of England, with this additional advantage, that if the cabinet, fire-place, etc., which occupy his "places" do not readily form connected ideas, and easily blend with the new ones which he wishes to remember, the Kings of England, with some of the events associated with them, will assist him. If William I. is associated with the *cabinet* in the first place, it will be as serviceable for a prompter as the cabinet itself.

LECTURES AND SERMONS.

To remember the substance of a lecture it is necessary clearly to perceive its chief topics, for on these all the other observations depend. The speaker does not always state the divisions of his subject, but in a well-arranged address they are so manifest that the hearer can take note of them. There should be in every division what M. Bautain, in his L'Art de Parler, terms une idée mère,—a "mother idea,"—one that gives birth to others. The hearer should endeavour to single out the "mother idea," for it contains the substance of the division, as the acorn contains the oak; and such leading idea, as the term denotes, introduces its dependent followers to the mind

both of the speaker and hearer.

In committing to memory the substance of lectures, etc, two courses are open to the student. First: he may connect the leading thoughts by one or other of the Principles or Laws of Association; that is to say, he may take the leading idea of the first head, and associate it with the leading idea of the second head, and so on through all the main divisions of the discourse. These ideas will, on account of their logical connection, easily combine. Through the whole of them there runs a kind of electric current, and the first idea brings up its companions, just as the first bar of a melody brings to mind the remaining part. Take, for example, the Four Rules of Remembrance given on pages 43-45. Rule I is, "Obtain a Deep Impression on the mind of that which you wish to remember." The substance of this rule may be condensed into two words - Deep Impression. Rule 2 is, "Bring ideas close together so as to Compare them." The leading thought is-Compare Ideas. Rule 3 is, " Never compare more than Two Ideas together at the same time." The substance of this rule is—compare Two Ideas only. Rule 4 is, "Associate Unconnected ideas by means of an Intermediate idea." Here the chief thought is Intermediate Idea. The substance of these rules may be briefly expressed, thus: — Deep Impression; Compare Ideas; Two

only; Intermediate Idea. After the mind has attentively dwelt upon these four rules, they may be still further condensed, so that one suggestive idea, or key-word will be sufficient to recall each rule; thus—

Impression—Compare—Two only—Intermediate.

After a little practice in connecting the heads of a discourse, the student should go on to associate the chief ideas that occur in the subdivisions. In this way, by the aid of the Natural Memory alone, he will soon be able to remember not only the substance of a discourse, but very many of the actual words spoken by the lecturer.

The Second method is by LOCALISATION. This method, which is an application of Art to facilitate the operations of Memory, will be found so useful in certain kinds of knowledge that the student is strongly recommended to avail himself of the great assistance it affords. It somewhat resembles the method of the ancients, but is much more simple in its application. Instead of combining by means of a suggestive idea or key-word, the different heads of the discourse one with another, he may localise the suggestive ideas or key-words with the prompters in his Memory-rooms. The chief idea in Rule 1—deep impression-he will associate with the recess in the first place (page 70), for a recess resembles an indentation or *impres*sion in the wall. Compare—recess, impression, deep impression. In Rule 2, the leading thought is-compare ideas, which he will associate with the mirror in the second locality. A mirror reflects the objects placed before it, so that we can see both the object and the reflection of it, and can *compare* the two. If this connection be seen, we may associate thus-mirror, reflection, compare ideas—and so fix the second rule in the memory. The leading thought of Rule 3—compare two ideas only condensed into-two ideas-must be combined with the prompter in the third place, namely, an easy two-armed chair. The two arms will serve as points of comparison with two ideas, so as to make a strong blending. Rule 4 condensed into-Intermediate ideas-will easily combine with the prompter in the fourth "place," which is intermediate between the recess and the door.

The subordinate ideas dealt with by the speaker in the amplification of his subject may be associated in the same manner with the other "places;" or one room may be taken for each main division of the discourse, the first "place" being reserved for the chief topic, and the remaining "places" being employed for the subdivisions, or subordinate ideas.

These two methods, namely, Association by the principle of LOCALITY of the chief divisions of a discourse, and Association by COMPARISON of the subdivisions, may be advantageously combined. The subjoined example will explain the process.

The subject of the discourse is "Blind Bartimæus." St. Luke xviii., 35-43. The following is the outline:—

- I. Consider the circumstances and situation of Blind Bartimæus.
 - 1. He was blind. 2. He was poor. 3. He was apparently hopeless.
- II. His application to Christ.
 - It was an application for mercy.
 It was an application of faith.
 It was an ardent and persevering application.
- III. The result of Bartimæus's application.
 - 1. The people endeavoured to silence him. 2. Jesus stood still. 3. Jesus granted the blind man's request. 4. Jesus honoured his faith.
- IV. The course Bartimæus adopted.
 - 1. He followed Christ. 2. He glorified God.

To commit to memory this outline by the combined methods of Localisation and Comparison, take the "places" of the first room for memorising the heads, then connect the subdivisions by comparing together the principal ideas which occur in them. The first head is "The circumstances and situation of Blind Bartimæus." If the attention be fixed for a few moments on the two ideas—"circumstances and situation" in conjunction with each other, they may be condensed into one, namely, situation, which must be taken as the key-word, or suggestive idea,

and localised in the first "place." Then connect the two ideas—situation and recess—by observing that the situation of the cabinet is in a recess. This simple association will be found quite sufficient to fix the leading idea in the memory. All that is necessary is to direct the mind to the recess, and the idea—situation—associated with it will spring up. With recess (a cul-de-sac) compare the subdivisions—blind, poor, hopeless, apparently hopeless—these are all connected ideas which, by the Laws of Association, easily blend when compared together.

Localise in the same way the second head, by associating it with the second "place" of the room. Mark the connection between the *fire*, which gives light and warmth, and Christ the Light of the world, and compare—*fire*, light, Christ, application to Christ. Then by the Law of Similarity compare mercy, faith, ardent faith, persevering application, and these analogous ideas will combine.

Follow the same method with respect to the third head. The leading thought is—result; connect this with the object in the third place—an easy-chair—the emblem of rest. Observe the connection between res-t and res-ul-t by comparing the similar letters; then, having placed the third head in safe keeping, compare with it—silence (the cessation from talking), stood still (the cessation from walking), request (ask), faith ("let him ask in faith," St. James i., 6), faith honored.

The last head is—"The course Bartimæus adopted." In the fourth "place" of the room is a side table with fancy articles upon it, which are very likely to be broken by the course of a blind man. Combine the prompter in this "place" with the leading idea—course. Then compare—course, follow, glorify, observing the similarity between the first syllable of follow and the last of glorify, a resemblance which, though it may appear slight, is quite sufficient in a connected discourse to recall ideas in association with each other, when they have previously been impressed upon the mind at the same moment of time.

This, then, is the method employed in memorising the substance of a discourse. It is simple in its application, and admirably adapted to the end proposed; and it is easy, by one or two repetitions, to review the ideas associated with the prompters located in the different "places." Moreover, if the leading ideas of a discourse be remem-

bered, they, in turn, will recall the subordinate ideas in connection with them; and thus the substance of the address will be remembered. After a little practice, all that will be necessary will be to associate two or three deas of a chief topic, and leave the rest to the unaided memory.

The following sketch of the sermon, it will be seen, forms a memorised plan of the whole, which can be reviewed in a minute or two. The associations which cluster around the leading ideas will recall with certainty all that is most im-

portant in the entire discourse.

- I. SITUATION: Blind, poor (hopeless), apparently hopeless.
- II. APPLICATION TO CHRIST:—(Christ), Mercy, faith, persevering faith.
- III. RESULT:—(Rest), Silence, stood still, request (" ask in faith"), faith honored.
- IV. COURSE: Followed, glorified.

This is a summary of the mental process which goes on in committing the outline of the above sermon to memory, by the combined principles of LOCALITY and COMPARISON. There are no round-about and useless phrases to he learned, no imaginary pictures to be conjured up before the mind; but the mind perceives the points of analogy or relation existing in the different ideas, and combines them in a rational and easy manner in accordance with the True Principles of the Natural Memory, and the reflective and reasoning powers of the mind. Testimony is borne to the value of this method of Locality by a celebrated writer, Dr. Abercrombie, who observes :- "I have repeatedly made experiments on this method in remembering the discourses of public speakers, and the effect is certainly astonishing; for, though it is now many years since the experiments were made, I still find articles of furniture associated in the clearest manner with the sentiments delivered by some of the speakers."

While the speaker is proceeding with some of the minor points of his address, it will be well for the hearer to run over in his mind the ideas that he has localised and associated together. One or two such reviews during the delivery of the discourse will fix the important ideas in his memory, and though, while he is securing his valuable treasure of ideas, he may lose a few unimportant words, this loss will be amply made good by the firmer hold he

will have of the discourse in general.

When we listen to addresses and speeches which we do not care about *permanently* retaining in the memory, but merely wish to relate the substance of them to our friends when we reach home, we need not employ our "Memoryrooms," but may divide the room or hall, in which the address is delivered, into compartments in which to localise the speaker's remarks. These "places" may not be furnished, as the rooms of our houses are, yet they will answer exceedingly well for brief remembrances; but such knowledge as the student desires permanently to retain he should localise by means of the *places* and *prompters* in his own rooms.

By this plan of Localisation a speaker may arrange his ideas in logical sequence, and, without the aid of written notes, reproduce them in the order in which he composed them. "Suppose," observes Mr. Stewart, in his Elements of the Philosophy of the Human Mind, "that I were to fix in my memory the different apartments of some very large building, and that I had accustomed myself to think of these apartments always in the same invariable order; suppose, further, that in preparing myself for a public discourse in which I had occasion to treat of a great variety of particulars, I was anxious to fix in my memory the order I proposed to observe in the communication of my ideas; it is evident that by a proper division of my subjects into heads, and by connecting each head with a particular apartment (which I could easily do, by conceiving myself to be sitting in the apartment while I was studying the part of my discourse I meant to connect with it), the habitual order in which these apartments occurred to my thoughts would present to me, in their proper arrangement, and without any effort on my part, the ideas of which I was to treat. It is also obvious that a very little practice would enable me to avail myself of this contrivance, without any embarrassment or distraction of my attention."

Not only to public speakers and students in general will the application of these combined principles—LOCALITY and COMPARISON—render important service, but also to the man of business who has many engagements, or many calls to make. He will find it a time-saving and successful plan to localise a list of his engagements in due order by associating them with objects in his rooms. He has then only to direct his mind to the different "places" to recall the persons or engagements he has localised therein.

PROSE.

To remember the substance of a book, we proceed exactly in the same way as with a lecture or sermon. Before commencing to read a book, look carefully over the "Contents," in order to get a general idea of the scope of the work, and the order of arrangement; then, if the book is worth so much attention, the student should sit down with a determination to master the substance of it. He should read slowly so as to fix the attention upon the main points and secure a vivid impression. With pencil in hand he should mark the most striking passages, and the parts which contain the "mother ideas;" and then make an abstract—very concise, though substantial; not a mere transcription or verbal extract, but a suggestive synopsis of the chief ideas, which will recall the less important ones. When a chapter has been once read he should endeavour to recall the substance of it. If his mind wanders, and the facts and ideas are not deeply impressed on the brain, he should at once stop and begin again. Let him apportion one of the Memory-rooms to each chapter, if it be a long one, and localise the leading ideas in the different "places" in his room; for a short chapter one place may be found sufficient. The subordinate ideas employed in the expansion of the subject may be connected by Comparison, as explained in remembering the substance of a lecture or sermon. The student should practise the art of condensation by discriminating the essential ideas, and combining them into a summary by means of association. Every paragraph deals with a distinct topic, which is expanded into a number of sentences; every sentence is the expression of a thought. The substance of a paragraph may be condensed into a few sentences; the substance of a sentence into a suggestive idea that will be sufficient to reproduce the sentence. One sentence by means of a connecting link will recall the next, and so on

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until the substance of the whole paragraph is reproduced. When facility in condensation has been obtained, a very few connected ideas impressed on the memory will enable the attentive reader to remember the substance of what he reads. "The process of condensing books is a valuable intellectual exercise, and helps one to understand into how little space a good work may be compressed. It is almost a sure cure for loose habits of recollecting."—

Dr. Holbrook.

If he wishes to *commit to memory* the actual words, and not merely the substance of a piece of prose, he must read it over very attentively several times, taking special notice of any figures of speech, or peculiarities of diction, that occur in it, until the mind is thoroughly impressed with the substance of the piece. Then associate the principal ideas together, and when this is accomplished the student should endeavor to recite the piece from memory. If he cannot do it perfectly, he must go again over that part that caused the difficulty, and so proceed to the end. It is a good plan to repeat aloud the piece he is endeavoring to commit to memory. He will find that the ideas which have been associated together will, by their close connection, greatly aid him in repeating the very words of the piece, and give him a firmer grasp of it than would be the case by the ordinary method of mere repetition.

Let the student now take the following piece of prose as an exercise in committing to memory; it is the peroration of an address delivered at the opening of a Mechanics' Institute. The words in *italics* represent the suggestive ideas which are to be associated in consecutive order:—

"May it stand as a trophy of the victory of knowledge over ignorance, and of goodness, order, and progress over crime and sensuality! May it stand as a temple where young and ingenuous minds shall inquire after truth, where they shall be animated, not with the love of excelling merely, but with the love of excellence; where they shall be all anxious to go on accumulating their stores of knowledge, and still calling their faculties of mind and heart into active exercise! May it be as a fountain from which rich streams of knowledge shall flow over the land, and which, taking various directions of thought, as from a centre, shall carry manifold fertility with them, and rich harvests of that which shall be gathered in by the rising

and future generations, till they shall rejoice in the fulness of time, bringing their *sheaves* with them. May it be a *shrine* where from time to time one and another shall rise to much more than local *eminence*, shall win a name that nations shall pronounce with *reverence*, and take his place among the *laureled*. And may it be as a *monument* of progress—of that *bright law* of progress which is the great blessing of God upon *humanity!*"

POETRY.

Poetry is more easy to remember than prose, on account of its rhythm and metre. Cadence, harmony, and rhyme, by their beauty arrest the attention and impress the mind, and so afford the greatest possible assistance to the memory. In prose, historical narratives are related in plain, regular order, with but little coloring, but in poetry the imagination is brought more into exercise, and every object that presents itself is, with its attendant circumstances, minutely described in rhythmical language. In poetry, descriptions are freely embellished with metaphors, comparisons, and other figures of speech, which delight in a very high degree; and while the eye reads them, or the ear listens to them, the mind receives the impression, and thus, by the variety and succession of images employed, the words become firmly imprinted on the memory.

To commit poetry to memory, read over very attentively not more than one verse, or a few lines at a time; then select the most suggestive words in the several lines, and join them together by mental associations, as recom-

mended in the case of PROSE.

If a piece of poetry be thoroughly learned, the mention of a single word will often suffice to recall the whole. A boy in repeating a piece of poetry he has committed to memory will sometimes come to a stand in the middle, but suggest one word only and he will go on with ease to the end.

"Lulled in the countless chambers of the brain,
Our thoughts are linked by many a hidden chain;
Awake but one, and lo! what myriads rise;
Each stamps its image as the other flies."

When poetry is without rhyme, an extra perusal or two may be needed; and to a beginner a few more key-words may be required than would be necessary for one proficient in the method. What the student must be specially careful about is, that every key-word be firmly impressed on the mind, and be of such a character as to suggest the succeeding idea; then the whole piece will be easily remembered. The following lines from Akenside will serve as an exercise:—

"Let the mind
Recall one partner of the various league,
Immediate, lo! the firm confederates rise,
And each his former station straight resumes;
One movement governs the consenting throng,
And all at once with rosy pleasure shine,
Or all are saddened with the glooms of care."

Owing to the strength of First Impressions, the beginning of a piece that has been learned presents no difficulty in remembering. The difficulty comes later on. Analyse the above piece, and notice that one partner belongs to a league, and that they are banded together as firm confederacy, come to the particular notion of each person resuming his station. Observe, further, the oneness of the movement, and also of the throng, which is consenting. Then, observe the contrast between rosy pleasure, and the saddening glooms of care. Such a method of analysis and com-

parison fixes the ideas in the memory.

When a *long* piece of poetry is to be committed to memory the learner should make use of his Memory-rooms. By so doing he preserves the chain of continuity, and secures a deeper impression on the mind. If the poem be divided into stanzas, take one "place" of the room for each stanza, and associate the first key-word with the prompter in the first place of the room; the key-word of the second stanza with the prompter in the second place and so on. In this way five rooms of ten "places" each will suffice for If the poem be blank verse, take six or fifty stanzas. eight lines at a time and proceed with them as with the stanzas. The first suggestive word in each stanza, or division of the poem, will be connected with the prompters in the memorial "places," the other suggestive words will be associated by comparison with the first. A few keywords, well chosen, will suffice to enable us to commit to memory a piece of poetry of any length.

MUSIC.

The pupil in Music may readily learn the names of the notes on the five lines of the stave—E-G-B-D-F, by remembering that Every Good Boy Deserves Favor; and that the notes in the four spaces are F-A-C-E. Chords and cadences may be translated into figures, and these into words, and thus easily remembered. A knowledge of the different Keys, with their Sharps or Flats, may be acquired in a few minutes; thus, in the Major scale the Key signature of G is one sharp, D two sharps, A three sharps, E four sharps, B five sharps; associate these by remembering that—Great Dishes Are Easily Broken; or perhaps the student would prefer—GooD AlE, my Boy!

The Keys with *Flats* are—F one flat, B two flats, E three, A four, D five flats. Associate the Keys with *Flats* by remembering that the whole are contained in **Flat BEAD**, and observe that the order of the letters in

BEAD indicates the order of the Flats.

The student should exercise his ingenuity in forming Associations for himself, as the young lady did who wished to remember that that L.K.Q.C.P.I. meant Licentiate of the King and Queen's College of Physicians of Ireland, when she combined this medical qualification of many letters thus:—Licensed to Kill, Qualified to Cure, Patients Invited. In the same way the anagram CABAL helps us to remember the ministry formed by Charles II., which consisted of Clifford, Ashley, Buckingham, Arlington and Lauderdale. So, too, the word VIBGYOR gives the initial letters of the colors of the rainbow, namely, Violet, Indigo, Blue, Green, Yellow, Orange, and Red.

The "Morse Alphabet," which consists of dots and dashes, and is employed by the Government in their telegraphic system, was at first found to be so difficult to acquire that a gentleman was engaged to devise a scheme for the rapid learning of the symbols. The alphabet was divided into groups of letters which were combined into easy phrases. One group, T, M, O, Ch, which represented the four dashes respectively (- -- ---, was formed into the phrase—Turnips Make Oxen Cheerful. The other groups were associated in a similar manner.

FURTHER APPLICATIONS OF THE SYSTEM.

In the foregoing pages the laws and principles of the Natural Memory have been developed, and applied by simple methods to general subjects. The preceding chapters, which are adapted to every class of persons, exhibit a system by means of which the Memory can be trained and disciplined for more difficult exercises. following chapters exhibit the same principles and processes, but lead the student on to higher applications of them, and to special subjects of a more complicated These chapters are intended only for those who have not merely read through the foregoing pages but have mastered the instructions, and have committed to memory the exercises given as simple applications of them. Such students will find the copious examples hereafter given especially valuable and time-saving, and will enable them to become masters of the most difficult subjects in a short space of time, provided they have made themselves perfectly familiar with the principles and examples previously given.

THE DAYS OF THE MONTH AND YEAR.

To remember any particular day of the month, let the first two consonants represent the month; thus j, n for January; f, b for February, and so on. These letters, which, according to the "Alphabet of Figures," are equivalent to 82 and 76 respectively, may, however, be represented by any other letters having the same numerical value; thus, instead of j, n, we may employ ch, n; or sh, n, which also equal 82; again, f, b=76, but v, p; or w, b, also equal 76, and may, therefore, if preferred, be substituted for f, b: in this way a fertility of resources is secured for making appropriate combinations of familiar ideas.

As it is important to represent each month by two figures, let m, m, stand for May; and to distinguish June

from January, let j, m, stand for June; or s may be prefixed to m, and j, for May and June respectively, without affecting their numerical value.

The following table shows the figures which stand for

the different months of the year:

January = 82February ... f, b, = 76= 34 March m, r, = 64 April p, r, m, m; s, m, = 33, 03May j, m; s, j, = 83, 08June ... July ... j, l, = 85 ... August ... = 90 ... g, s, ... September ... s, p, ... October \ldots k, t, \ldots n, v, \ldots = 91 November = 27 December ... d, s,

Two figures should be employed for the day of the month; for dates before the tenth, any figure, except 1, 2 and sometimes 3, may be used as the initial one. If, for instance, we wish to express the fourth day of a month, we may prefix to r, which represents 4, any letter we please, so that it be not an equivalent for 1 or 2; if we prefix the cypher, the value of the 4 is not altered, and if we prefix another letter, say m, the number given is 34—which being an impossible date cannot lead to any confusion or mistake. The student should place the day of the month first in the series, and remember that in dates before the 10th it is the second figure only that is of value. When, besides the day and month, the year is required, add three figures to represent the year; thus—

Columbus discovered America, 11th October, 1492 = 11, 91, 492, which figures, translated into familiar ideas,

give :- Deity guides the reckoning.

Elizabeth ascended the throne, 17th November, 1558;

17, 27, 558 = Tough enough loyal chief.

Napoleon III. deposed, 4th September, 1870; 04, 06, 870 (i.e., 4, 6, 1870) = A sire's spirit chafes.

LATITUDES AND LONGITUDES.

For the Latitude, take the first two letters of the first word; the remaining word or words, will give the Longi-

tude. The names of the places, if Unfamiliar ideas, must be converted into Familiar ones (see page 50), and associated with the Memorial words which give the Latitudes and Longitudes.

	LAT.	Long.
ROME	 41	15 ReD TowN (there are many
and the state of t		Cardinals in Rome who wear red)
NAPLES	 41	15 RighTeous DeLiverance (un
		der Garibaldi).
MADEIRA	 33	16 MaMma's DePôt.

When the Latitude or Longitude requires only one figure, prefix s, which equals *nought*, so as to have *two* letters to indicate it, thus:—

	LAT.	Lond	3.	
PARIS	 48	2		ReJoicing SuNdays. RiSing SyMpathy.
MADRID	 40	3		RiSing SyMpathy.

If the Longitude requires three figures, proceed as in Chronology, page 61, thus:—

	LAT.	Long.
PEKIN	 40	117 ReCeived a DeaDly Foe, (as
	in	the overthrow of the Summer Palace).
JAPAN	 	110 MuRderous DeeDS, (as the
		slaughter of the Christians there).

If the minutes, as well as the degrees, are required, proceed as follows:—

	L.	AT.	Lo	NG.	
BRISTOL	51°	33'	 2°	40'	Light MaMma!
					SuN RiSes.
DUNEDIN	46°	12'	 170°	32'	RoBust TowN,
					ouTVieS MaNy.

SPECIFIC GRAVITIES.

The student who has a general idea of the subject will know that Platinum is very heavy, and that Magnesium is very light. If these two simple facts are borne in mind, no mistake, between whole numbers and decimal places, can possibly be made with respect to the rest of the metals. Three figures will generally be sufficient to indicate both the whole numbers and the decimals, though more deci-

mal places can be taken if required. When there are several decimal places, separate words may be taken to represent them; thus, 3'1415 My dear doll.

Platinum		 21.5	 NoT Light.
Gold		 19.4	 DeCoyeR.
Mercury		 13.6	 TeMPerature.
Lead		 11.3	 DeaDly Missile
Silver		 10.2	 TaSseL.
Iron		 7.48	 FoRGe.
Magnesium		 1.75	 Tis Very Light.
Sulphuric Aci	d	 184	 SoDa JaR.

As any number of cyphers can be prefixed to a whole number without altering its value, we may employ an initial s, as in the last example, if by so doing we secure a better association. Notice also the association by Contrast: Sulphuric Acid, a very strong acid; Soda, a very strong alkali. It is by observing such points of comparison that the natural memory, as well as the reflective power gains strength.

In the same way may Logarithms, Atomic Weights, Combining Equivalents, Heights of Mountains, and other studies involving the Remembrance of Numbers be easily committed to memory. The examples given are illustrations only of the *Principles* of the method, and show the student how to proceed in applying these principles to any

subject to which he may devote his attention.

LOCALISATION.

When the student is thoroughly acquainted with the method of Localisation by means of the actual rooms of his own house, and can readily form associations with the material objects located in them, he may then advance to another plan—very simple in its application and most serviceable as a means of recalling ideas or events in orderly succession. Let him draw on a sheet of paper ten compartments, in each of which he should write the name of some material object; or, if he prefer, draw a representation of it; as in the following diagram:—

and the same of th					
r Tie.	2 Inn.	3 Imp.			
4 Arrow.	5 Awl.	6 Boy.			
7 Foe.	8 Shoe.	9 Cow.			
	10 Daisy.				

This will represent a "Memory-room," and by a few repetitions the pupil will become quite familiar with the

prompters located in the different places.

The following list of prompters may be assigned to four additional rooms. Fifty "places" will generally be sufficient for ordinary purposes; though any number may be employed at the discretion of the student. He should, however, not attempt too much at first, but proceed gradu-

ally, for his ultimate success in the system will depend upon a perfect knowledge of its first principles. It will be observed, by a reference to the "Alphabet of Figures," that each object is assigned to its respective place because the number of it is indicated in the word employed; thus, d, l represent 15, and therefore idol is put in the fifteenth place; and so on with all the other numbers. The first two articulated consonants indicate the number, but, as previously stated, the initial s has no numerical value.

II Tooth, idiot. 31 Mate, meadow. 12 Town, den. 32 Man, moon. 13 Tomb, dummy 33 Mummy, mamma. 34 Mirror, comrade. 14 Tower, deer. 15 Idol, doll. 35 Mule, mill. 16 Top, tube. 36 Map, mob. 37 Muff, mufti. 17 Dove, thief. 38 Match, image. 18 Dodger, dish. 39 Mug, smoke. 19 Duke, dog. 20 Incense, nose. 40 Rose, house. 21 Note, gnat. 41 Reed, hat. 22 Nun, union. 42 Ring, hen. 23 Enemy, name. 43 Room, ham. 24 Nero, snare. 44 Rower, hero. 25 Knoll, nail. 45 Reel, halo. 46 Rope, hoop. 26 Note-book, knob. 27 Navvy, knife. 47 Roof, hive. 28 Engine, niche. 48 Arch, hedge. 29 Nag, ink. 49 Rock, hag. 30 Mistress, maze. 50 Lass, slice.

The student will find these prompters most useful in arranging events or topics. A good plan, especially for the student of history, is to draw in a note-book diagrams, as in the foregoing example, of his "Memory-rooms." One page should be devoted to each "room," and should contain a record of the principal events of one century. Then each "place" will represent ten years, and ten such "Memory-rooms" will furnish a history of a thousand years, and will show in Chronological order the leading events of that period. The "place" will suggest the event localised in it; and the event will, by its Association with the "place," recall the date of its occurrence.

TO REMEMBER THE ORDER OF EVENTS.

To remember the order of events, two plans are open to the student:—Ist, by Comparison; 2nd by Localisation. We will illustrate the succession of the Sovereigns of England by both methods, as an example of what may be done in other subjects:—

I. By COMPARISON.—The two Williams lead the way; no one can mistake about them. The next Sovereign is—

Henry I.,

who is succeeded by one king-

Stephen;

then we have a second Henry. Compare the termination of Stephen with the beginning of **Henry**, (hen-Hen).

Henry II.

is succeeded by two kings-

Richard - John.

Compare the termination of Henry with the commencement of Richard, (ry-Ri).

Henry III.

follows, and after him the three Edwards, viz.,

Edward I. - Edward II. - Edward III.

Compare again the order of succession thus far;—after Henry I. is one king, Stephen; after Henry II. are two kings, Richard and John; and after Henry III. are the three Edwards; then follows—

Richard II.

Connect Edward and Richard by comparing the terminations of their names (ard-ard). Then follow—

Henry IV. - Henry V. - Henry VI.

The Henrys are followed by Edwards, as before-

Edward IV. - Edward V.

and these are again followed by a Richard-

Richard III.

Observe that Richard the second follows three Edwards,

and Richard the third follows two Edwards. Notice also that both Richard II. and Richard III. are followed by Henrys—

Henry VII. - Henry VIII.

The last Henry is followed by the last Edward-

Edward VI.

II.—By Localisation.—To commit to memory the order of the Sovereigns of England, assign one "place" to each sovereign, and associate the name of the sovereign

with the prompter in that place.

Let us illustrate this by taking the prompters given on page 87. The names of persons are abstract and unfamiliar ideas, which do not blend with other ideas, because they have no distinctive quality; familiar ideas must, therefore, be chosen in their stead, as stiff for Stephen, joined for John, etc. The pupil should refer to page 66 to see how to deal with names of kings where there are several of the same name.

The following table shows the names and order of the Sovereigns of England; so that, if any king be named, the order of his reign is instantly recalled; or, if the order be given, the name of the monarch is immediately known. The words in *italics* show the names of the Sovereigns; the order of their reigns is seen in the prompters, which easily blend with the names; thus, Richard I. is seen (page 87) to be the sixth in order by the word *boy*, which is the prompter in the sixth place.

1	Wil. I.	White tie.	19	Hen. VII.	Heavy duke.
2	Wil. II.	Wine inn.		Hen. VIII.	
3	Hen. I.	Haughty imp.	21	Ed. VI.	Deep note.
4	Stephen	Stiff arrow.	22	Mary	Merry nun.
5	Hen. II.	Handy awl.	23	Elizabeth	A lazy enemy.
6	Rich. I.	Ruddy boy.	24	Jas. I.	Jaded Nero.
7	John	Joined foe.	25	Ch. I.	Cheated knoll.
8	Hen. III.	Homely shoe.	26	Cromwell	Crumpled note-book
9	Ed. I.	Dead cow.	27	Ch. II.	Changing navvy.
10	Ed. II.	Dying daisy.	28	Jas. II.	Junction engine.
II	Ed. III.	Damaged tooth.	29	Wil. III.	Whimmy nag.
12	Rich. II.	Ruined town.	30	Anne	A new mistress.
13	Hen. IV.	Hero's tomb.	31	Geo. I.	Giddy mate.
14	Hen. V.	Hollow tower.	32	Geo. II.	Gainful man.
15	Hen. VI.	Hapless idol.	33	Geo. III.	Gaming mummy.
16	Ed. IV.	Dirty top.	34	Geo. IV.	Gorgeous mirror.
17	Ed. V.	Ideal dove.	35	Wil. IV.	Weary mule.
18	Rich. III.	Rum dodger.	36	Victoria	Victor's map.

THE LEARNING OF LANGUAGES.

WE now come to treat more fully of the LEARNING OF LANGUAGES, and to give such instruction as will be serviceable to the student in acquiring a knowledge of any language he may desire to learn. But we shall confine our illustrations more particularly to the Latin and French, though the same principles will be equally applicable to other languages.

The learning of a language comprehends the learning of the words of the language, and the changes they undergo in construction and arrangement. If, then, by a few simple rules many of these changes can be pointed out, the pupil will know thousands of words without the wearisome task

of learning them one by one.

AN Easy Method of Learning Several Thousand Latin Words.

 Most English words ending in nce or ncy are made into Latin by changing ce or cy into tia (tire); as, Eng.—patience, clemency; Lat.—patientia, clementia. Compare Nance—Nancy with tire (tia).

2. English words ending in ion become Latin by rejecting the final letter; as Eng.—religion, opinion; Lat.—

religio, opinio.

3. Words ending in ty (tie) in English are changed into

tas (task); as, Eng.—liberty; Lat.—libertas.

4. English words ending in ude become Latin by changing e into o; as, Eng.—fortitude, magnitude; Lat.—fortitudo, magnitudo.

5. Most Adjectives of more than one syllable that end in d become Latin by the addition of us (dust); as,

Eng.—rapid, putrid; Lat.—rapidus, putridus.

6. English words ending in r, t or n (retain), between two vowels are made Latin by changing the last vowel into us (retain us); as, Eng.—pure, mute, obscene; Lat.—purus, mutus, obscenus.

7. Most English words, of more than one syllable, ending in nt become Latin by changing t into s (toss); as, Eng.—vigilant, latent; Lat.—vigilans, latens.

8. Many English words ending in al become Latin by adding is (al-is, Alice); Eng.—mortal, liberal;

Lat.—mortalis, liberalis.

When the beginner in Latin has learned the above simple rules, he will have acquired a good stock of words with very little labor. The familiar ideas suggested by the unfamiliar ones are enclosed in brackets, and the words in brackets, which are intended to aid the memory, are to be associated by Comparison—tie with task, etc.

DECLENSION OF LATIN NOUNS.

Latin Nouns, unlike English ones, undergo a change of Termination to express their different relations and connections. This is called *Declension*. The word musa signifies a song. When the Romans wished to speak of some property of a song, instead of using a preposition, as we do, they changed the ending of the word, and said musæ; when they spoke of something being done to a song, they said musam, etc. Hence it is seen that Latin Nouns have two parts, the Stem, which undergoes no change, as mus, and the Termination, which varies to express a difference of relation, as mus-a, a song; mus-æ, of a song; mus-arum, of songs, etc. The learning of these terminations or Case-endings, generally involves a great deal of trouble and confusion of ideas to the student; but by the method now to be explained the task may be easily accomplished.

Nouns have Six Cases; but, as the Vocative is generally like the Nominative (except in the second declension), we will dismiss that case at once, and consider that there are only five cases to learn. To learn these, take one of your Memory-rooms for each Declension, and localise the five case-endings, singular and plural in each room; that is to say, let the first place of your first room be reserved for the Nominative singular, the second place for the Accusative, the third for the Genitive, the fourth for the Dative, and the fifth for the Ablative. In your sixth place put the Nominative plural, the Accusative plural in the seventh place, the Genitive in the eighth, the Dative in the ninth,

and the Ablative in the tenth. One room will thus suffice for each Declension, and in five rooms the whole of the Declensions may be safely stored away, ready to be called

forth when required.

The Declensions of Nouns are unfamiliar ideas; they are mere sounds to the English reader, and as such must be treated. Pronounce the Terminations a, am, æ, etc., separately and distinctly, and consider whether the sounds call up in your mind any English words with which you are familiar. If they do, connect these words with the prompters which occupy the "places" of any of your rooms; and when this is done, you will have the Declensions firmly impressed upon your memory for ever. The following is the method:—

FIRST DECLENSION.

Singular.			Plural.				
Nom.	a suggests	ale	Nom.	æ suggests	ear		
Acc.	am "	ham	Acc.	as "	ass		
Gen.	æ "	ear	Gen.	arum ,,	air		
Dat.	æ "	ear	Dat.	is ,,	hiss		
Abl.	â ,,	hay	Abl.	is "	hiss		

SECOND DECLENSION.

	Singular.			Plural.	
Nom.	us suggests	use	Nom.	i suggests	eye
	11	hum	Acc.		horse
Gen.	i ,,	eye	Gen.	orum "	oar
Dat.	0 ,,	hoe	Dat.	is "	hiss
Abl.	o . ,,	hoe	Abl.	is "	hiss

THIRD DECLENSION.

	Singular.			Plun	ral.	
Nom.	(various)		Nom.	es sug	gests	ease
Acc.	em suggests	hem	Acc.	es	"	ease
Gen.	is "	hiss	Gen.	um		hum
Dat.	i ,,	eye	Dat.	ibus	,,	high 'bus
Abl.	е "	eel		ibus		high 'bus

Having turned the *unfamiliar* terminations into *familiar* ideas, the next step is to connect these familiar ideas with the objects in the Memory-rooms. Taking the objects mentioned (page 70) as an illustration of the method of proceeding, associate:—

ale	with	cabinet	ear	with	whatnot
ham	,,	fire-place	ass	"	door
ear	"	easy-chair	air	"	piano
ear	,,	side-table	hiss	"	couch
hay	,,	settee	hiss	,,	chandelier

A very good plan is to draw on a sheet of paper a diagram of your "room," and write the prompters with the suggested ideas and the Terminations, in the compartments; as in the following example, which represents the First Declension:—

cabinet ale a	fire-place ham am	easy-chair ear æ
side-table ear	settee hay â	whatnot ear
door ass as	piano air arum	couch hiss is
	chandelier hiss is	

Put this diagram in some conspicuous place, as upon a wall or mantel-piece in a room you frequently enter; then, by occasionally looking at it, you will stereotype its contents indelibly upon the brain. In the same way manage the other Declensions.

CONJUGATION OF LATIN VERBS.

In learning the Conjugations of Verbs it is necessary (as in the case of Nouns) to observe that every Verb consists of two parts, the *Stem*, which is invariable in every form of the Verb, and *Termination*, which changes to express variation in meaning; thus, am-o, *I love*; am-as,

thou lovest; am-at, he loves, etc. In this illustration it will be observed that the Stem of the verb undergoes no change, while the Termination is changed to express I love, thou lovest, he loves, etc. The pupil should learn the Terminations apart from the Stem; he will thus simplify the task of learning.

There are Four Conjugations of Latin Verbs, and they all terminate in **re** in the Active Infinitive. The last letter of the *Stem* is called the *Character*, and points out the Conjugation to which any Verb belongs; thus—

amA-re monE-re reG-ere audI-re

When we meet with the word audire, for instance, we know that it is in the Infinitive Mood by the Termination re. We know also that it belongs to the Fourth Conjugation by its Character i—the last letter of the Stem audi, which undergoes no change in the various forms of the Verb: the word is thus broken up into its elements and easily understood.

We now come to the Indicative and Subjunctive Moods.

The Personal Terminations are—

Singular. o-m s t
Plural. mus tis nt

The Second Person Singular in the tenses of the Indicative and Subjunctive Moods ends in s, as, ama-s, thou lovest; moneba-s, thou wast advising; rega-s, thou mayest rule. Observe that s begins the word SECOND. In the same way you will not fail to remember that the Termination of the Third Person is t, and t begins the word THIRD, —ama-t, he loves; moneba-t, he was advising; rega-t, he may rule. In the Plural the Terminations of all the Tenses are—

Ist pers. 2nd pers. 3rd pers. mus tis nt

To remember these Terminations, join them together as if they were syllables of some foreign words. Then ask yourself, What does this newly-coined word suggest by its sound? *Mus-tis-nt* sounds something like—

Miss! 'tis aunt.

Here, then, are three English words—familiar and suggestive ideas—easy to remember; and these English words, connected with each other, will recall the unfamiliar Latin Terminations mus. tis, nt.

The Present Tense of the Indicative is formed by adding the Terminations to the *Character* of the Verb, *i.e.*, to the

last letter of the Stem.

INDICATIVE MOOD.

Present Tense.

Singular.

Singular.

Ist	conj.	am -o,*	-as,	-at;	-amus,	-atis,	-ant.	
2nd	,,	mon-eo,	-es,	-et;	-emus,	-etis,	-ent.	
3rd	,,	reg -o,	-is†	-it;	-ĭmus,	-Itis,	-unt.	
4th	**	aud -io,	-is,	-it ;	-īmus,	-ītis,	-iunt.	

Plural.

Plural.

The Present Tense of the Subjunctive Mood is easily remembered. In the First Conjugation a of the Infinitive is changed into e in the Subjunctive; in the other Conjugations a is prefixed to the Personal Terminations, as:— Infinitive amAre; Present Subjunctive am-em; Infinitive reGere; Present Subjunctive reg-am.

SUBJUNCTIVE MOOD.

Present Tense.

Ist conj.	am -em,	-es, -et:	-emus, -etis, -ent.		
2nd ,,	mone-am,	-as, -at;	-amus, -atis, -ant.		
3rd "	reg -am,	-as, -at;	-amus, -atis, -ant.		
			-amus, -atis, -ant.		

The Imperfect Tense is formed by inserting **ba** in the Indicative, and **re** in the Subjunctive Mood, before the Personal Terminations. The word **ba re** will recall this: bare is easily compared with imperfect. As soon as this is formed in the mind (and how instantly is it done!) the Imperfect Tenses, both of the Indicative and Subjunctive Moods are known.

^{*} Am-o is contracted from amA-o.

[†] In the Present Indicative of the Third Conjugation & becomes & before the Personal Terminations, but in the Third Person Plural, the Termination is unt; in the Fourth Conjugation it is softened into iunt.

INDICATIVE MOOD.

Imperfect Tense.

Singular.

Plural.

Ist o	onj.	ama -bam,	-bas,	-bat;	-bamus,	-batis,	-bant.
2nd	"	mone-bam,	-bas,	-bat;	-bamus,	-batis,	-bant.
3rd	"	rege -bam,	-bas,	-bat;	-bamus,	-batis,	-bant.
4th	"	audie-bam,	-bas,	-bat;	-bamus,	-batis,	-bant.

SUBJUNCTIVE MOOD.

Imperfect Tense.

Singular.

Plural.

```
1st conj. ama -rem, -res, -ret; -remus, -retis, -rent.
2nd ,, mone-rem, -res, -ret; -remus, -retis, -rent.
3rd ,, rege -rem, -res, -ret; -remus, -retis, -rent.
4th ,, audi -rem, -res, -ret; -remus, -retis, -rent.
```

The Future Tense of the Indicative Mood is formed by adding **bo** to the *Stem* in the First and Second Conjugations: ama-**bo**, mone-**bo**; and by adding **am** in the Third and Fourth Conjugations, reg-**am**, audi-**am**. If **bo** and **am** be reversed we have the Latin word **am-bo** which signifies **both** (or the *two*); this association will remind the pupil that there are *two* forms for the Future, and **am-bo** will serve to recall those two forms.

Should the pupil experience any difficulty in making comparisons in any of the remaining tenses (or in any tenses of irregular verbs), so as to form good associations, he may adopt the principle of Locality, and follow the same plan as in learning the Declensions of Nouns. No irregularities, however great in any of the verbs, can be a hindrance to the application of the principle of Localisation in all such cases; for, if no points of similarity appear between the different parts of the same verb, by which they can easily be linked together and remembered, strange indeed will it be, if *any* verbs can be found that when pronounced, will not suggest *some* idea by which an easy blending can be formed.

The Verb esse, to be, should be early learned, for the tenses of esse furnish excellent points of comparison with parts of other verbs, especially with the Perfect, Pluperfect, and Future Perfect Tenses.

GENDER OF LATIN NOUNS.

One of the great difficulties which the beginner of a language has to encounter arises from the Genders of Nouns. He should not trouble himself about these until he knows the meanings of the words. In nine cases out of ten the Genders may be known from the signification of the words themselves; and, if a few good general rules be committed to memory at the outset, he will easily learn the exceptions. The student should first learn perfectly the meanings of the words, then the following rules; he will thus acquire a knowledge of the Genders with very ltttle trouble.

Nouns of the First Declension are, for the most part, Feminine, and Nouns of the Fifth, or last Declension, are Feminine. Think of this by comparing *first* with *last*—the two extremes—which are Feminine.

Nouns of the Second Declension are Masculine, and Nouns of the Fourth Declension are also Masculine. Remember this by observing that Nouns of the first but one (*i.e.*, the second), and the last but one (*i.e.*, the fourth), are Masculine.

The following Nouns of the Second Declension are exceptions to the above rule:—

(a) Feminine. Alvus, the belly; domus, a house; humus, the ground; vannus, a winnowing fan.

(b) Neuter. Pelagus, the sea; virus, venom; and Nouns ending in -um.

Nouns of the Third Declension vary in Gender.

Masculine Terminations of the Third Declension.
Nouns ending in o, er, or, os are Masculine; as, Nom. leo, Gen. leonis. To remember these Terminations, join them together and treat them as a foreign word (see page 95).

Er-or-os, distinctly articulated, is similar in sound to error rose. If the o, which is also a Masculine Termination, be prefixed to these two words, the Terminations will then form an exclamation, which a man (masculine) might utter:—

O error rose (o, er, or, os .

Exceptions: Feminine nouns in o, er, or, os: Caro (carnis), flesh; cos (cōtis), a whetstone; dos (dōtis), a dowry; linter (lintris), a boat; arbor (-ŏris), a tree.

When the Termination o, however, is preceded by d, i, or g, the Noun is Feminine; the word dig will remind you

of this :- a female (feminine) dig-ging.

Exceptions to this rule: Masculine nouns in -do: ordo (inis), a rank; cardo (ĭnis), a hinge; prædo (ōnis), a robber; comedo (ōnis) a glutton.

The following in -go are Masculine: ligo (onis), a mat-

tock; margo (ĭnis), a border.

The Termination -es is masculine when the Genitive increases (i.e., becomes, as it were, more important). Connect Man, the more important of the sexes, with Masculine. When -es does not increase it is Feminine, but the following Feminine nouns in -es increase in the Genitive: compes (ĕdis), a fetter; merces (ēdis), hire; merges (itis), a sheaf; quies (ētis), rest; seges (ĕtis), a cornfield; teges (ĕtis), a covering.

Arrange them in the order of connection, and compare them thus:—Sheaf, *corn-field;* corn-field, *hire;* hire, (slave), *fetter;* fetter (fatigue), *rest;* rest (sleep), *covering.* The words in parentheses indicate Intermediate ideas.

Neuter Nouns in -er: Cadaver (ĕris) a corpse; iter (itineris), a journey; papaver (ĕris), a poppy; tuber (ĕris), a swelling; uber (ĕris), a teat; ver (vēris), the spring;

verber (ĕris), a rod.

Compare these exceptions by observing the points of resemblance between the Latin words, thus: ver occurs in four words out of the seven; in the first two—cadaver and papaver, it comes last. In ver, the third word, there are three letters only; while in verber, the last word, ver is the first part of it. Notice also the t's in iter and tuber, and the similarity of sounds in tuber and uber.

Neuter Nouns in -or. Cor (cordis), the heart; marmor

(ŏris), marble; œquor (ŏris), a flat surface.

Neuter Nouns in -os. Os (ossis), a bone; os (ōris), the mouth.

Feminine Terminations of the Third Declension Nouns ending in as, is, aus, are Feminine. Pronounce these terminations together. They sound something like asses house; s, x resembles Essex in sound, and the association

Asses' house in Essex (as, is, aus, s, x)

will give the Feminine Terminations.

The following are exceptions to this rule :-

Masculine Nouns in -is. Amnis, a river; annalis, annals; axis an axle; callis, a footpath; canalis, a channel; cassis, a net; caulis, a stalk; cinis, ashes; collis, a hill; crinis, hair; cucumis, a cucumber; ensis, a sword; fascis, a bundle; finis, an end; funis, a rope; fustis, a club; ignis, fire; lapis, a stone; mensis, a month; orbis, a circle; panis, bread; piscis, a fish; potlis, meal; postis, a door-post; pulvis, dust; sanguis, blood; sentis, a thorn; scrobis, a ditch; torris a firebrand; torquis, a collar; unguis, a nail; vectis, a lever; vermis a worm.

The exceptions to this rule form a long list of words which the pupil is sometimes told to fix in his memory by learning them in the form of verse. But a more easy way is to arrange them in pairs, in that order in which some analogy is seen between the two *Familiar ideas* to be linked together. Then combine the English words by comparison, and they will become so firmly fixed in the memory that the whole series may be readily recalled.

Compare :-

Fish, river—river, channel—channel, ditch—ditch, worm—worm, dust—dust, ashes—ashes, meal—meal, bread—bread, cucumber*—cucumber, stalk—stalk, thorn—thorn, bundle—bundle, fire—fire, firebrand—firebrand, stone—stone, hill—hill, footpath—footpath, net—net, blood—blood, sword—sword, nail†—nail, hair—hair, rope—rope, axle—axle, lever—lever, club—club, door-post—door-post, (nails) annals—annals, month—month, circle—circle, collar—collar, end.

The following Masculine Nouns in s and x (Essex) are also exceptions to the rule:—Dens, a tooth; fons, a fountain; mons, a mountain; pons, a bridge; rudens, a line; calix, a goblet; codex, a manuscript; cortex, bark; grex, a flock; pollex, a thumb; silex, a flint; thorax, the breast; vertex, a whirlpool.

* Bread one kind of food; cucumber another kind.

⁺ Sword, an artificial weapon; nail, a natural one.

Compare them thus :-

Bark, manuscript—manuscript, thumb—thumb, tooth—tooth, breast—breast, flint—flint mountain—mountain, fountain—fountain, whirlpool—whirlpool, goblet—goblet, bridge—bridge, line—line, flock.

Neuter Terminations of the Third Declension. Nouns ending in ar, us, er, are Neuter. When these Terminations are pronounced as syllables of one word, they suggest the two familiar words arouse her. This association will easily recall the Terminations.

Nouns ending in any of the following letters are Neuter:

—a, c, e, l, n, t. Change the order thus—l, e, a, n, c, a, t, and associate lean cat (a thing that nobody cares about and is nothing) with Neuter; but sal, salt; and sol, the

sun, are Masculine.

Nouns of the Fourth Declension are Masculine, except acus, a needle; idus (plural), the ides; manus, a hand; porticus, a porch; tribus, a tribe, which are Feminine; but nouns in -u are Neuter.

Nouns of the Fifth Declensions are Feminine, except meridies, mid-day, which is Masculine, and dies, a day; dies in the plural is Masculine, but in the singular it is Feminine.

In the copious examples given above the student will see a development of a Natural System of Memory in its application to some of the greatest difficulties in the learning of languages. If he follows the instructions given in this work, he will be able to learn the Rules of Grammar, and the exceptions to them, without much difficulty. It will be seen in the association of ideas, that each idea comes before the mind twice; it is connected, as a link of a chain, with that which precedes and with that which follows; and so one idea recalls the next in regular succession. The pupil, for instance, no sooner calls to his mind fish (see page 100) than up springs river also, because fish and river are analogous ideas, which have been placed simultaneously before the mind, and compared together; river for a similar reason recalls channel, channel recalls the

next word, and so on through the list, each word recalling its successor. Two or three attentive perusals, with the associations, will be all that is needed for the pupil to become so perfectly acquainted with every word in the list, that when he meets with one of them in reading, or has occasion to make use of one in writing, he knows it is an exception to the rule. By this association, and by constantly meeting with the words in the course of his reading, he will become as familiar with them as with his own name.

In the above lists, the English significations, and not the Latin words, are compared. Of course it is assumed that the significations of the Latin words are perfectly known. No attempt should be made to commit to memory a list of unknown words, which are unfamiliar ideas. But when the significations of the words are perfectly known, the mention of an English word will cause the foreign one to spring up in the mind, so that no sooner is fish, or river named, than piscis, or amnis starts up likewise.

RULES OF SYNTAX.

The Rules of Syntax may be committed to memory in the same way as Prose. Read attentively, two or three times over, the rule you desire to learn, then select the leading ideas which occur in it, and associate them by Comparison. Take the following Rule as an example:—
"Adjectives which signify desire, knowledge, memory, fear, with their opposites, govern the Genitive." All that is necessary in order to commit this rule to memory is to compare the different ideas, which are in italics, thus:—

Desire, knowledge-knowledge, memory-memory, fear.

The following lists, which embrace some of the most important rules of the Latin Grammar, should be committed to memory in the same way. These lists are arranged for the student according to the analogy of ideas, in that order which presents the greatest facilities for association. In all cases he should learn the meanings first, and when he is perfectly acquainted with these, he should associate the English words together, in the order in which they stand in the lists. The ready way to learn vocabularies has been already given on page 54

Adjectives which govern a Genitive Case, arranged for association.

Immemor beneficii, unmindful of kindness.

Assuetus, accustomed insuetus, unaccustomed improvidus, heedless providus, heedful memor, mindful immemor, unmindful oblitus, forgetful incertus, uncertain certus, certain calidus, wise rudis, ignorant nescius, unaware inscius, not knowing præscius, foreknowing gnarus, expert peritus, skilful imperitus, unskilful ignarus, inexperienced

piger, slow impiger, active audax, bold securus, careless noxius, hurtful pavidus fearful impavidus, fearless innoxius, harmless insons, innocent reus, guilty conscius, conscious cupidus, desirous invidus, envious anxius, anxious solicitus, solicitous avarus, covetous avidus, greedy expers, destitute of.

Adjectives which govern a Dative Case, arranged for association.

Res tibi facilis, ceteris difficilis, the thing easy for you, difficult for others.

Commodus, advantageous inutilis, useless utilis, useful idoneus, serviceable supplex, submissive similis, similar dissimilis, dissimilar contrarius, contrary gravis, troublesome alienus, foreign inimicus, hostile

obnoxius, exposed to incommodus, disadvantageous finitimus, vicinus, neighbouring propinguus, near carus, dear benignus, benign amicus, friendly jucundus, pleasant gratus, agreeable pronus, inclined facilis, easy difficilis, difficult.

Adjectives which govern an Ablative Case, arranged for association.

Animus curâ liber, a mind free from care.

Dives, rich inops, poor inanis, empty vacuus, void

cassus, devoid of orbus, bereft of viduus, deprived of extorris, exiled

liber, free
plenus, full
largus, plentiful
ferax, abounding
uber, fruitful
copiosus, abundant

immodicus, excessive modicus, moderate contentus, content fretus, relying on dignus, worthy indignus, unworthy.

GOVERNMENT OF VERBS.

Verbs which take after them an Accusative Case with the Infinitive Mood, arranged for association.

Dixit se esse beatum, he said that he was happy.

Respondeo, I answer dico, I say affirmo, I affirm nego, I deny fateor, I confess miror, I wonder puto, I suppose existimo, I think censeo, I think intelligo, I understand credo, I believe spero, I hope cupio, I desire* malo, I prefer sentio, I feel

audio, I hear
video, I see
scio, I know
ostendo, I show
simulo, I feign
obliviscor, I forget
memini, I remember
gaudeo, I rejoice
arbitror, I judge
hortor, I exhort
jubeo, I order
cogo, I compel
nolo, I am unwilling
volo, I am willing.

Verbs which take an Infinitive Mood after them arranged for association.

Puer vult fieri doctus, the boy wishes to become learned.

Constituo, I resolve statuo, I determine videor, I seem habeor, I am held existimor, I am thought soleo, I am accustomed paro, I prepare tento, I try

conor I endeavour
contendo, I hasten
studeo, I am eager
malo, I prefer
cupio, I desire*
possum, I am able
volo, I am willing
nolo, I am unwilling

and others of like signification.

^{*} It will be observed that some of these Verbs admit of more than one construction. Cupio, for instance, may be followed by the Accusative with Infinitive (Oblique Enunciation), as—Cupio, me esse clementem; or by the Infinitive (Prolative Infinitive), as—Cupio satisfacere reipublicæ.

Verbs which govern the Genitive Case, arranged for association.

Reminiscor beneficii tui, I remember your kindness.

Memini, I bear in mind recordor, I remember reminiscor, I recollect obliviscor, I forget misereor, I pity miseresco, I compassionate

piget, it grieves pænitet, it repents pudet, it shames tædet, it wearies refert, it concerns interest, it is the interest of.

Verbs which govern the Dative Case, arranged for association.

Parcit captivis, he spares the captives.

Respondeo, I answer dico, I tell impero, I command præcipio, I order obtempero, I obey auxilior, I assist repugno, I resist moderor, I restrain tempero, I check officio, I hinder obsto, I oppose certo, I contend æmulor, I emulate antecello, I surpass succedo, I follow commodo, I serve colludo, I sport with nubo, I marry gratulor, I congratulate

blandior, I flatter indulgeo, I indulge faveo, I favour studeo, I am eager for servio, I am devoted to placeo, I please displiceo, I displease irascor, I am angry succenseo, I rage invideo, I envy noceo, I huri medeor, I heal medicor, I cure ignosco, I pardon persuadeo, I persuade credo, I believe. fido, I trust parco, I spare suppetit, 'tis enough.

Verbs which govern the Ablative Case, arranged for association.

Carne utuntur, they use meat.

Abundo, I abound careo, I want abutor, I abuse utor, I use fungor, I discharge

potior, I gain possession of vescor, I feed upon fruor, I enjoy dignor, I am worthy glorior, I boast.

AN EASY METHOD OF LEARNING SEVERAL THOUSAND FRENCH WORDS.

I. Nouns and Adjectives which end in ble, ion, ent, ge, ce, ne, de, are generally the same in French as in English. Notice that these terminations occur in the words fable, opinion, prudent, passage, distance, scene, servitude, and compare these words thus:—

Fable, opinion—opinion, prudent—prudent, passage—passage, distance—distance, scene—scene, servitude.

Notice also another point of comparison: the first three words—fable, opinion, prudent—have three letters each that mark the similarity of the two languages; the four other words—pasage, distance, scene, servitude—have but two letters each to indicate the resemblance.

2. English words ending in fy become French by changing fy into fier (mark the connection, fy—fier);

as, Eng., glorify; French, glorifier.

3. Most English words ending in ish become French by changing sh into r (share); as, Eng., abolish; French, abolir.

4. Most Verbs ending in s, or t, between two vowels, become French by adding r to the English. Associate these letters together by observing that r, s, t is the natural order of the letters in the alphabet, they therefore are connected; as, Eng., use; French, user.*

5. English words ending in cy or ty (ci-ty) become French by changing these terminations into ce and té respectively; as, Eng., clemency, beauty; French, clémence, beauté. Other Nouns ending in y change y into ie; as,

Eng., fury; French, furie.

6. Words ending in ary or ory (hairy, hoary) become French by changing these terminations into aire, and oire; as, Eng., military, victory; French, militaire, victoire.

7. Words ending in our and or become French by changing these terminations into eur: as, Eng., odour.

^{*} But verbs ending in bute and tute in English drop their final t, before adding r; as, Eng., contribute, substitute; French, contributer, substitute; and Verbs ending in ate become French by changing ate into er; as, Eng., abrogate; French, abroger.

doctor; French, odeur, docteur; and words ending in ous change ous into eux; as, Eng., vigorous; French vigoreux

CONJUGATION OF FRENCH VERBS.

After the detailed explanations that have been given of the method of learning the Latin Conjugations, but little need be said in reference to the French Conjugations, as the principle upon which both are learned is precisely the same; and the observations which were made in reference to the Latin are equally applicable to the French, or to any other language.

The student is recommended to commence the French Conjugations with the Verb avoir, to have, not only because this Verb more frequently occurs than any other, but also because the Tenses of avoir furnish excellent points of comparison with other Verbs, so that when it is perfectly learned, the Conjugations of other Verbs will be

acquired with greater ease.

The Tenses of avoir should be learned in the same way as the Declensions of Nouns (see page 93.)

Avoir, to have.

INDICATIVE MOOD.

Present Tense.

J'ai, I have. tu as, thou hast. il a, he has.

nous avons, we have. vous avez, you have. ils ont, they have.

The forms of the Verb to be learned are-

ai, as, a; av-ons, av-ez, ont.

ai suggests hay av-ons suggests having as ,, ass av-ez ,, a way a ,, ale ont ,, aunt

Having changed the *unfamiliar* notions into *familiar* ones, the student should associate them by Comparison, or, if he prefers, he may take one of his Memory-rooms for localising them. When he has done this he will be able

to run over easily and with the greatest certainty the Present Tense of avoir. To do this all that is necessary is to recall the prompters in the Memory-room, these will instantly recall the familiar ideas associated with them, and these with wonderful rapidity will in turn reproduce the French ai, as, a, etc.

When the student has learned the Present Tense of avoir he should proceed to the Present tense of être, and

commit it to memory in a similar manner :-

Être, to be.

INDICATIVE MOOD.

Present Tense.

Je suis, I am tu es, thou art il est, he is nous sommes, we are vous êtes, you are ils sont, they are

Taking another Memory-room for this Verb, the pupil should combine the forms of this Verb with the prompters contained therein; thus—

suis s	suggests	sweet	sommes	suggests	sum
es	"	ease	êtes	,,	ate
est	,,	east	sont	,,	song

After the Tenses of the Auxiliary Verbs are learned, the student should proceed to the Regular Verbs. He should first of all commit to memory the Present Tense of the Four Regular Conjugations,* bearing in mind the observations which have been made on the importance of distinguishing between the *Stem* of the verb and its ending (see page 94). The *Stem* of the verb, which undergoes no change, is seen by cutting off the Termination of the Infinitive; thus—

parl-er sent-ir, dev-oir, rend-re.

The following are the Terminations of the Present Tense of

^{*} Strictly speaking there are only three Regular Conjugations, viz., those ending in er, ir, re. Verbs in oir undergo many changes in their Stems.

THE FOUR REGULAR CONJUGATIONS.

Singular.				Plural.			
I parl	-e,	-es,	-e,	parl	-ons,	-ez,	-ent.
2 sen(t)	-S,	-S,	-t,	sent	-ons,	-ez,	-ent.
3 doi	-S,	-S,	-t,	dev	-ons,	-ez,	-ent.
4 rend	-S,	-S,	_*	rend	-ons,	-ez,	-ent.

In looking over these Terminations we see at once that (with the exception of the First Conjugation) the First Person Singular ends in s; compare s with the first letter of the word singular (i.e. one). The Termination of the Second Person Singular is also s. S is the first letter of the word SECOND. The Termination of the Third Person is t. T is the first letter of THIRD. The Terminations of the First Conjugation in the singular are e-es-e; join them together as one word e-es-e: they resemble in sound the word easy, as it would be pronounced by a person that stammers.

In the Plural the Terminations of all the Conjugations are the same, and the student will notice that in the First and Second Persons, ons, ez, are the same as in the cor-

responding Persons of the Verb avoir.

The Imperfect Tense has the same Terminations in all the Conjugations, viz.:—

Singular. Plural.
-ais, -ais, -ait; -ions, -iez, -aient,

added to the Stem of the Verb; as, av-ais, I had; parlait he spoke. It will be seen that the sign of the Imperfect Tense is I. Observe that imperfect begins with I.

The Terminations of the Future Tense the pupil has already learned in avoir. They are simply the Present Tense of avoir added to the Infinitive, thus, parler-ai, as, a, ons, ez, ont.

The Conditional may be regarded as an Imperfect Future, the Terminations of the *Imperfect* being added to

the Infinitive; thus, parler-ais, ais. ait, etc.

The foregoing are the principal parts of the French Conjugations; the remaining parts may be easily learned in the same way

⁺ As d cannot be followed by t, this letter is dropped in the Fourth Conjugation.

GENDER OF FRENCH NOUNS.

"The Genders," as Mr. Cobbett justly observes, "present, beyond comparison, the most laborious task we have to perform in learning the French Language," but the following observations will enable the pupil to greatly lessen the difficulties of this otherwise "laborious task."

Nouns ending with a consonant are Masculine, but those which terminate in x, eur, ion, son preceded by a

vowel, are Feminine.

This rule includes nearly 5,000 words, and has only the following exceptions, which are Feminine:—

Clef key
cour, court
nef, nave (of a church)
tour, tower
vis, screw
cuiller, spoon
dent, tooth
chair, flesh
faim, hunger
soif, thirst
boisson, drink
chanson, song
moisson, harvest
cuisson, baking

façon, making
part, part
dot, portion
main, hand
leçon, lesson
fois, times
nuit, night
souris, mouse
forêt, forest
mer, sea
rançom, ransom
hart, halter
mort, death
fin, end.

Nouns ending in a, é i, o, u, are Masculine, but the Terminations, té and tié are mostly Feminine.

This rule embraces upwards of 1,000 words, and has only the following exceptions, which are Feminine:—

Midi, noon eau, water peau, skin glu, birdlime fourmi, ant tribu, tribe foi, faith loi, law merci, mercy vertu, virtue.

Nouns ending in age, ége, uge, aire, oire, le. aume, ême, ome sme, and iste are Masculine. This rule embraces upwards of 1,000 words, and has but few exceptions. These Terminations should be committed to memory in the same way as those on page 98.

ADJECTIVES.

Adjectives are generally placed after the Nouns they qualify, as un homme pieux, a pious man; but the following, which are arranged for association, precede Nouns

(with the meanings given here), as un brave homme, an honest man.

Jeune, young
joli, pretty
beau, fine
brave, honest
bon, good
meilleur, better
digne, worthy
saint, holy
méchant, wicked
mauvais, bad
plaisant, ridiculous
triste, paltry
sot, silly

chétif, mean
vilain, ugly
vieux, old
ancien, ancient
vaste, vast
gros, big
grand, great
habile, clever
cher, dear
petit, little
different, sundry
nouveau, new, fresh
vrai, downright.

Adjectives followed by de.—Adjectives which signify desire, knowledge, fear, guilt, grief, joy, fulness, plenty, want, width, length, and depth, require de before the following noun; as, un homme avide de richesse, a man greedy of wealth; une rivière profonde de vingt pieds, a river twenty feet deep. Commit this rule to memory in the same way as the rule on page 102.

Adjectives which, in English, are followed by of, from, by or with, generally take de after them in French, as, Il est content de votre conduite, he is pleased with your conduct.

Adjectives which denote fitness, inclination, necessity, habit, difficulty, resistance, submission, or likeness, require à before the following Noun; as Il est propre à tout, he is fit for anything.

GOVERNMENT OF VERBS.

To overcome the difficulty of acquiring a thorough knowledge of the Government of French Verbs, the pupil should bear in mind that most of them require de before the following Verb. The Verbs which take à, or no Preposition, should be committed to memory, as being fewer in number; the rest will require de before the next Verb; as, Il a promis de venir, he has promised to come.

Verbs which require no Preposition before the following Verb, arranged for association.

Allez voir votre ami, go and see your friend.

Aller, to go venir, to come envoyer, to send

voir, to see sembler, to seem parâitre, to appear prétendre, to pretend aimer mieux, to prefer souhaiter, to wish vouloir, to wish désirer, to desire espérer, to hope compter, to expect entendre, to hear avouer, to confess croire, to believe savoir, to know how déclarer, to declare témoigner, to testify nier, to dany oser, to dare daigner, to deign faire, to make laisser, to allow pouvoir, to be able devoir, to have to.

Verbs which require à before the next Verb, arranged for association.

J'Apprends à chanter, I learn to sing.

Montrer, to show how se prendre, to begin accoutumer, to accustom employer, to employ engager, to engage inviter, to invite autoriser, to authorise exhorter, to exhort encourager, to encourage se disposer, to prepare chercher, to seek aider, to help dépenser, to spend

travailler, to work
enseigner, to teach
apprendre, to learn
aimer, to love
penser, to think
hésiter, to hesitate
borner, to limit
pousser, to impel
enhardir, to embolden
persévérer, to persevere
persister, to persist
aboutir, to tend
réussir, to succeed.

Verbs which are followed by in or for in English, or by a Preposition which may be changed into in or for, govern the Infinitive in French with à; as, aidez moi à le faire, help me to do it, i.e., help me in doing it.

Verbs which in English are followed by of, from, by or with, take de before the Infinitive; as, il m'empêcha de

venir, he prevented me from coming:

Verbs which require à before a Noun or Pronoun, arranged for association.

Obéissez à vos maîtres, obey your masters.

Viser, to aim at travailler, to work at jouer, to play at déplaire, to displease plaire, to please obéir, to obey désobéir, to disobey insulter, to insult répondre, to answer dire, to tell enseigner, to teach resister, to resist nuire, to hurt pardonner, to pardon obvier, to prevent permettre, to allow remédier, to remedy subvenir, to relieve contribuer, to contribute pourvoir, to provide for penser, to think of ressembler, to resemble convenir, to suit succéder, to succeed survivre, to survive se rendre, to surrender se livrer, to yield to se fier, to trust applaudir, to applaud aboutir, to end.

VERBS CONJUGATED WITH ÊTRE

The following Verbs are Conjugated with être in French, and to have in English:—

Aller, to go arriver, to arrive décéder, to die mourir, to die naître, to be born entrer, to come in partir, to set out sortir, to go out tomber, to fall venir, to come devenir, to become disconvenir, to disagree intervenir, to intervene parvenir, to attain revenir, to come back survenir, to happen.

The object of the pupil is to know that when he has to employ any of the above Verbs he must Conjugate them in their Compound Tenses with the auxiliary être, and not with avoir; he must say je suis entré, for I have entered, and not j'ai entré. When he is familiar with the significations of the foreign words, so that without any hesitation he can give the English for the French and the French for the English, he can arrange them in the following order for Comparison; then by one or two repetitions he will indelibly impress them on his memory:

Go become ... born. ... go out. ... happen. go out ... set out. born set out ... attain. ... arrive. happen ... come. ... intervene. arrive attain ... come back. intervene ... disagree. come back ... come in. disagree ... fall. ... become. fall come in

The preceding examples illustrate many important Rules of Grammar, and show the student how to surmount some of the greatest difficulties of a language. Further exercises will not be needed, as he will be now able to make other lists for himself, and form Associations in almost any branch of study.

SHORTHAND.

The connection between Memory and Shorthand may not, at first sight, be apparent to everyone. Those who make a daily use of this time-saving art, and who know how much it improves the memory, will naturally look for some reference to it in a book which has for its object the strengthening of the memory. The learning of a system of shorthand, exact and logical, scientific and simple, comprehensive and yet not beyond the intellectual abilities of any ordinary mind, is in itself a most valuable training. When added to this, its value for storing up material for future use and thought is considered, few will deny it a place by the side of an art which has similar aims.

It may not be without some interest to the reader, as showing the capabilities of Phonography, to observe that the author's manuscript of this revised edition was sent to the publisher in shorthand, and printed from the phonographic characters without being transcribed into longhand, and that all the correspondence between author and publisher has been in Phonography. It is evident that a great saving of time is effected by an author when his manuscript can be printed from his shorthand writing. Before the invention of Phonography such a thing was not possible.

Phonography, or Phonetic Shorthand, was invented by Mr Isaac Pitman in 1837. The system is capable of answering every requirement of the man of science or of business, as well as of the professional reporter. Its principles may be mastered in a few hours, and an hour's daily practice in reading and writing continued for two months will generally ensure tolerable facility in using it.

The reader is recommended to commence his study with the "Phonographic Teacher," price 6d., to be obtained through any bookseller, or from the publishers of

this book. (See Catalogue at the end.)

In the "Phonographic Teacher" the pupil will find a number of mnemonic suggestions to aid the memory. The order of the six long voweis, which consist of dots and dashes, thus: | ah, | eh, | ee, | au, | oh, | oo, is given in the sentence—

Pa may be thought so poor.

The short vowels are memorised in a similar manner.

The eight straight stroke consonants $\ p$, $\ b$, $\ l$, $\ d$, $\ l$,

pub-toddy-charge-keg

are all familiar ideas that are closely connected with each other, and therefore may be easily associated by comparison. A large circle, round like the moon, divided by an horizontal line thus (represents the letters m and $\sim n \pmod{3}$; but if the circle be divided vertically, thus, (), it represents the letters (th and) s (this). The upper part of the circle forms an arch of which [I is the left side and] r the right side; while the lower part of the circle resembles a dish in shape , of which the left side represents \(f, and the right side \) sh (fish which is easily associated with dish). A small circle o stands for the letter s, which is the initial sound in the word circle. These examples will be sufficient to point out how the pupil should proceed in applying the system to Phonography. The list of contracted words employed in reporting may be committed to memory by the method for associating Unconnected Ideas as explained on pages 48, 49.

The English language contains forty one distinct sounds, and the alphabet of Phonography provides a sign for each. A dot written after a consonant at the top represents the sound of ah, heard n the word pa; so that represents

pa. A dot in the middle of a consonant represents the sound eh, heard in the word pay, as in the word may, and at the end ee, as in — key. When the consonants of the Phonographic Alphabet are joined, they are written without lifting the pen. Thus, suppose we wish to write the word gate, we write —, and then insert the vowel

eh gate.

The simple forms employed in the alphabet are varied by the addition of hooks and small circles, so as to express two, three, or even five letters in one stroke. Groups of consonants, such as pr, pl, spr, st, stnd, strds, in praise, plead, spring, step, stand, custards, are written with a single motion of the hand. Thus, a hook at the beginning of the consonant \p, makes \pr, and if hooked on the other side, \pl, so that the words pray and play would be written \pray, \play play. A small circle represents s. It may be written at the beginning or end of a consonant, or between two consonants; thus \sim seek, \prop plays, \sim plays, \sim tracks, \sim risks.

The most frequently occurring words, a, the, and, of, in, to, etc., are represented by single characters or letters,

thus $\setminus p$ represents up, $\underline{\hspace{0.5cm}} k$, come, etc.

There are three styles of Phonography—the Learners' style, the Corresponding style, and the Reporting style. These styles differ from each other only in the number of

abbreviating principles, and contractions used.

There are exceptional facilities for learning Phonography. In addition to over 1,000 public and private colleges, schools, and public institutions in which the art is taught; there are numerous private teachers, and the Phonetic Society with nearly 4,000 members, in every part of the United Kingdom. The members of this society undertake to correct the exercises of learners free of charge. In most large towns Phonographic Associations are established, which afford facilities for learning and getting up speed in Phonography, and for social intercourse and improvement

CONCLUSION.

WHEN the student has mastered the Principles of the system, he should proceed to apply them to those particular studies in which he is engaged; then he should occasionally review the knowledge he has acquired; for that which is worth spending much time to acquire is worth spending a little time to retain. By occasionally reviewing what he has learned, he will revive and deepen the Primary Impression; and if the process of review is accomplished, not by mere parrot-like repetition, which is of little service, but by distinctly reviving the same combinations and associations as were employed in the first instance, remembrance becomes a Re-collected Impression of previous ideas, which are brought back to consciousness by the slightest effort of the will. If the course of instruction given in the preceding pages be carefully followed out, the learner will be amply satisfied with the result; for the NATURAL MEMORY will be IM-PROVED by the exercise, while the habit of attention, and the power of forming Mental Associations, will become more and more easy. Time and labor will be saved, and thus will be seen the appropriateness of the motto on the title-page:-"HE THAT SHORTENS THE ROAD TO KNOWLEDGE LENGTHENS LIFE."

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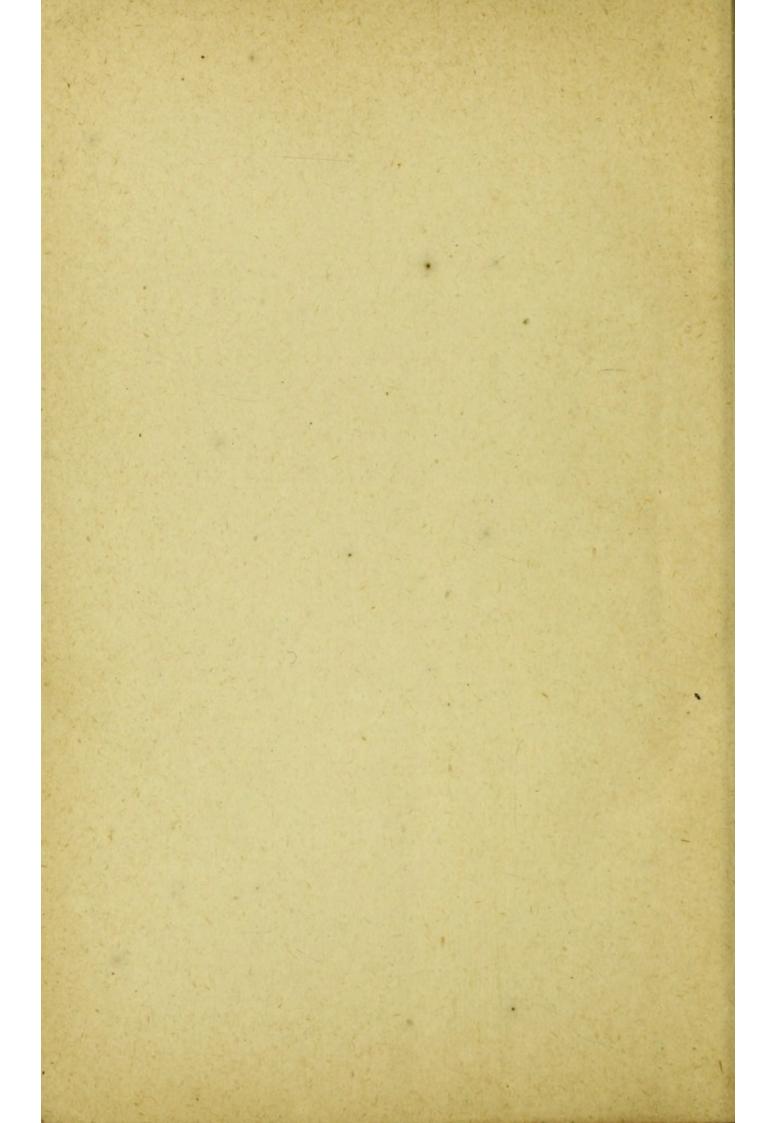
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