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VOL. I.

A WORD TO OUR READERS.

there room and need at the present time for a new educational journal? We think there is. Within the last quarter of a century especially, education has made rapid strides throughout the land. Not only have schools greatly multiplied, but

the improvement in the quality of their teaching is even more marked than the increase in their number. Results, and not attendance of scholars merely, is now expected and required from them. Grants for education-which have increased from year to year; Schools of Design, Mechanics' Institutions, and Working Men's Colleges; the movement in our great universities; the local examinations of Oxford and Cambridge, of the Society of Arts, and of the College of Preceptors; the discussions in Parliament and the press, in social congresses and public meetings-all evidence that the public mind is at length, and rapidly, becoming fully alive to the importance of education, and attaining to a better understanding of its requirements. It will be our ambition to render what aid we can in furtherance of this great work. Education is a vast continent even yet but partially explored and imperfectly cultivated. There is much to be done, and we hope to secure the co-operation of many who are engaged in the work of tuition, and of earnest, able, and tried friends of education in carrying out our enterprise.

It will be the especial aim of the Quarterly Journal of Education, by promoting intercommunication among teachers and others interested in education, to bring about a closer sympathy between them, and a better understanding of all matters connected with their common work.

Unconnected with party or sect, the Quarterly Journal of Education will afford facilities to the advocates of different systems and methods of teaching to make known their respective views, so that all may benefit by their mutual comparison. We shall discuss the books and appliances most useful for teaching, and endeavour to place our readers as far as possible au courant with whatever is most interesting in regard to education and its progress in all parts of the kingdom. Essays, and occasionally examination-papers, will also appear in our columns. Such will be the freight of the little bark we this day launch on its first voyage.

VOL I.

OUR EARLY ENGLISH SCIENTIFIC WRITERS.

BY THE EDITOR.



LONG and barren period intervenes between the scientific activity of ancient Greece and that of modern Europe. During the middle ages philosophy was mystical and dogmatic, rather than experimental and inductive. Men did not

trust to Nature and experiment, but leaned upon the staff of authority, and looked for guidance to the wisdom of the ancients. There was a disposition "to study the opinions of others, as the only mode of forming their own; to read Nature through books; to attend to what had been already thought and said, rather than to what really is and happens." Euclid was mathematics, Aristotle natural history. To question what Aristotle had said was almost as great an heresy as to question the dogmas and authority of the Church.

Philosophy thus came to be little else than an exposition of the thoughts of other men; and in place of independent investigation into the phenomena of Nature, were compilations and epitomes. "Experimenters were replaced by commentators; criticism took the place of induction; and instead of great discoverers we had learned men;" and as a consequence (as Lord Bacon, in describing the character and state of knowledge at this period, remarks), philosophy was "barren in effects, fruitful in questions, slow and languid in its improvement." The following sentences, which form the conclusion of a lecture-one upon a course of Euclid, delivered at Oxford-illustrate better, perhaps, than any description, this temper of mind :--- "Gentlemen hearers, I have performed my promise, I have redeemed my pledge, I have explained according to my ability the definitions, postulates, axioms, and first eight propositions, of the 'Elements of Euclid.' Here, sinking under the weight of years, I lay down my art and instruments."

But though the great strides made by modern science date back no farther than from the beginning of the seventeenth century, yet earlier beams of light during that drear interval penetrated the thick darkness around : a few bold spirits, from time to time, rose superior to the mental indolence and superstition and scholastic pedantry that prevailed, and, despite opprobrium and persecution, had the courage to interrogate nature for themselves. Their "ineffectual fires" may have "paled" in presence of the greater luminaries that have since risen above the horizon; but they were the heralds of the dawn, the precursors of that brighter and better day in which it is our happiness They faithfully handed down the torch of science, and did to live. somewhat also to increase its light. As there were reformers before Martin Luther, so in modern Europe there were philosophers who to some extent applied the inductive method in their researches before They were the avant couriers of that great power which Francis Bacon. has revolutionized the thought and changed the face of modern society, and their names therefore deserve a place among those which the world will not willingly let die. Holding this conviction, I propose very briefly to recall the names of some of those old English worthies who in their day rendered such service as they could in promoting a spirit of inquiry into

"Nature's infinite book of secrecy,"

and in advancing our knowledge of, and control over, the phenomena and forces of Nature.

The earliest English writer on science whose works have come down to us was Adelard, a monk of Bath, who lived in the middle of the twelfth century. He is said to have been learned in all the science of In pursuit of knowledge he travelled through France, Gerhis time. many, Italy, and Spain ; and also visited Arabia, then the great seat of The "Elements of Euclid" was translated by him out of learning. Arabic into Latin; a copy of which, beautifully written on parchment, with illuminated capitals, may be seen among the Arundel Manuscripts in the library of the British Museum. Beside this, and the translation of a work on the "Seven Planets," he wrote several treatises on Physics, and on Medicine, and one on the Seven Liberal Arts. A treatise by him on the Astrolabe is also preserved among the manuscripts in the British Museum; its chief, if not its only, value now is as a curious specimen of our early scientific literature.

Another scientific author, of some note in his time, was Daniel of Merley, or, as he is sometimes called, Daniel Morley, who, if not a contemporary of Adelard, flourished in the same century with him; and like him travelled into Spain and Arabia to increase his learning. He wrote a work on the "Principles of Mathematics," but of which no copy is known to be extant. Another work by him, entitled "De Inferiori et Superiori Parte Mundi," has been more fortunate in escaping the ravages of time; a copy of it is preserved in the British Museum, bound up with Adelard's treatise on the Astrolabe. It is based on the Almagest of Ptolemy, and is dedicated to John, Bishop of Norwich.

But, next to Roger Bacon, perhaps the most celebrated of our early scientific authors was Robert Grosseteste, Bishop of Lincoln, who was born in 1175, and died in 1253. If we are to credit his biographer, he must have been a living encyclopædia, having been not only profoundly versed in Scripture (a rare attainment in those days, even in a bishop), in theology, and in ecclesiastical law, but also excelling in music, logic, metaphysical philosophy, mathematics, astronomy, and other branches of natural philosophy. Besides being active in his episcopal duties, he was a voluminous author. The catalogue of his works appended to his biography shews that in addition to many theological and miscellaneous treatises, he wrote on the "Heat of the Sun," on "Motion," on the "Quadrature of the Circle," on the "Air," on the "Rainbow," and on the "Utility of the Sciences." A selection of his scientific works was published at Venice in 1514. From writing on astronomy he was called an astrologer, and is so designated by the poet Gower; and like all who at that time distinguished themselves by superior knowledge, he enjoyed -or we should rather say suffered-the reputation of being a magician. Stories were widely circulated and believed of his having invented a speaking head made of brass, and of an infernal horse which he had

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History-Teaching.

erected by his magic art, and on which he was said to have ridden through the air to Rome. Whether these stories point to some mechanical inventions, which popular ignorance would be sure to attribute to sorcery and connect with supernatural legend, cannot now be ascertained; but we know that any extraordinary invention or discovery, as the printing press, or gunpowder, would indubitably, in that age, be fathered on the Evil One, as the illustrious friend of Grosseteste, Roger Bacon, found to his cost.

But I must defer to another paper the sketch I propose to give of this the most distinguished Englishman in our scientific annals prior to the advent of his still greater namesake, the author of the "Novum Organon."

HISTORY-TEACHING.

BY WILLIAM ROSSITER, F.R.G.S.



TTEMPTING to "get blood from a stone" has generally been considered work in vain, and "skinning flints" is sometimes described as unprofitable labour. The same truth is put classically as "*ex nihilo*, *nihil fit*," and also colloquially as

"out of nothing, nothing comes." I suppose most of us have felt the truth of this, probably in more ways than one; but I think also that we teachers, especially teachers of English, suffer frequently from this law, without even realizing, fully, the cause of the failure of our work.

In teaching Latin or Greek, we never expect a pupil to use a word or a construction that has not been explained to him; nor do we look, in teaching physical science or mathematics, for our pupils to know what we have not taught them: yet, how frequently do we wish, rather than hope, for our school-boys to write good English, and to compose narratives and essays, without first supplying them with the means of acquiring the requisite knowledge or ability !

No subject is more frequently chosen for "composition" than history; and what materials do we give the minds of the "composers?" Generally, compilations of historical facts—frequently admirable as containing in a few hundred pages a *resumé* of the facts of history, but generally dry and barren for the purpose of *instruction*, giving schoolboys nothing but a stereotyped list of names and dates, summing up a reign in a chapter, a campaign in half a page, a character in three lines, and this generally in language the most general and comprehensive possible, and therefore the most difficult for a boy to comprehend.

As a step towards remedying this evil—and a very great step it is we have school-books which are not *compilations*, but *extracts* from good authors. These are exceedingly useful, so far as they can be useful, but they do not satisfy the want I am endeavouring to describe, the want on the part of school-boys of a sufficient *familiarity* with facts to know what to say, and with good English to be able to say it. The very excellence of the extracts is one great cause of this. An extract from Hallam or Macaulay is nourishment to a mind familiar with the names and things spoken of; but to one who knows but little of the facts, and comprehends, and that but imperfectly, but few of the allusions, an extract from a philosophical author is but a delusion and a mockery, except for the purpose of accustoming the mind to expressions which it may one day understand and know how to value.

There may be much difference of opinion as to the extent of this "want" on the part of our scholars, there will probably be even more as to the best means of supplying it, if admitted to be existing. The means I have adopted is to use, as reading-books, historical novels and plays. For example, in the study of the Plantagenet period, we have read "Ivanhoe," "King John," and "Richard II." I don't mean selections, but the whole book in each case, taking care to remember that we were reading "fiction" and not "fact," but on the whole enjoying the graphic descriptions of the novelist or poet somewhat more than we should the correct statement of carefully compiled facts, and, it is to be hoped, educating our hearts as well as our minds, by learning that "history" does not mean a list of battles, treaties, and persecutions, but a record of the lives of men and women by whose struggles, successes, and failures, we may learn to guide ourselves.

Probably our plan may call forth objections on many different grounds. If so, I will try to be guided by them, and if I can to meet them. Practically, at examinations, instead of some boys sitting chewing their pens, wondering what they shall say, I find every one complain that the time was not half long enough.

INDUSTRIAL AND REFORMATORY SCHOOLS FOR THE COUNTY OF KENT.-The Justices of Kent have resolved to avail themselves of the provisions of the Industrial Schools Act and the Reformatory Schools Act passed last session. At a meeting of magistrates held in January, a committee was appointed to consider the expediency of the court taking action under these Acts, and their report was presented at a court of general session, held on Thursday, 19th March. The committee were of opinion that it was desirable that the system of industrial schools should be put into operation in the county. They recommended that, in the first instance, suitable buildings, with land attached, should, if practicable, be hired for this purpose; but that, failing this, the court should erect one house for boys and another for girls, each house to be capable of accommodating about 50 children. With reference to the reformatory schools, the committee recommended that the court adopt the provision of the 27th section of the Act 29th and 30th Vict. cap. 117, by making contracts with the managers of the Reformatory School at Redhill, or any similar institution for the reception of boys and girls respectively. The court unanimously adopted the above recommendations, and notice was ordered to be given that at a subsequent session the justices would proceed to make a contribution out of the county rate for such purposes.

ON THE CULTIVATION OF THE MEMORY.

BY S. E. BENGOUGH.

AN possesses three primary intellectual faculties, imagination, memory, and reason. Reason is the monarch, which every other portion of his nature was created to obey: but the character and extent of the sway exercised by this kingly attri-

bute over the realm of mind depends upon the harmonious action of its two subordinates, the imagination and the memory. If imagination does not impart creative life to every province of science in which reason claims to exercise a judicial function, if memory does not retain its stores of knowledge in readiness for service at a moment's notice, reason expends its energies in vain, and, exhausted by fruitless efforts, too often becomes the deluded and willing slave of sense and appetite. In plain terms, the prerogatives of reason can only be maintained by the judicious culture of the other faculties. Yet any systematic discipline of the imagination has hitherto had little place in schemes of education. while it has been the custom to tax unduly the powers of memory without the slightest regard to the laws which regulate its action. The time, we trust, is not far distant when education will be based on rational principles; when the nature of the human mind, and the processes by which alone it can be normally developed, will be studied with no less care than that at present bestowed by the agriculturist on the composition of soils and the chemical elements of the crops which they are required to bear.

Youth is the seed time of our life, and the mind cannot be expected to produce a harvest useful and rich in quality, and beautiful in form, unless the germs of future intelligence be early implanted within the memory. It is a manifest duty, therefore, of all engaged in education to analyze carefully the constitution of this faculty, and to become acquainted with any methods by which the treasures committed to it may be preserved from perishing. Every individual possesses two almost distinct kinds of memory, one of which is for the most part under the control of the will, and is more properly termed recollection; the other is the passive recipient of impressions conveyed to it through the medium of the senses. The efficiency of this latter faculty depends mainly on the possessor's physical constitution, bent of character, and habits of life, and is only susceptible of a limited measure of improvement. It is far otherwise with the recollection, which is subject to volition, and the capabilities of which may be increased to an indefinite extent. With this portion of memory the educator is of course chiefly concerned, and the failure of attempts to impart information to the young generally arises from inattention to the laws on which the power of recollection depends. These are referable to the two heads of association and attention.

The principle of association of ideas may be described as the tendency of two or more facts or conceptions, which have been contemplated together or in immediate succession, to become so connected that one of them at a future time recalls the other, or introduces a train of thoughts which follow each other in the order in which they were originally associated. The causes or conditions of this association of ideas are threefold-resemblance or contrast, contiguity in time or place, cause and effect. On these principles, then, one thought may suggest or recall another, which has some relation to it in either of these respects. The success of the teacher or student in educating and strengthening the powers of recollection is mainly dependent on the judgment with which he seizes upon the associations best adapted to insure a lasting connection between some new fact, which it is desired to imprint upon the memory, and some other idea, which already exists within the mind. Now, whether the associations in any particular case should be strictly logical, local, or merely accidental and arbitrary, must be decided, not only by the subject matter to be remembered, but also by the mind and circumstances of the pupil. Associations, for example, of the strongest and most serviceable kind for one who had always lived in a city would be weak and almost unintelligible to a person brought up in the country, and vice versâ. As a general rule, an association should be natural and rational, should be calculated to quicken the attention by exciting interest, and should be of intrinsic value, and add to the stock of information at the same time that it furnishes assistance to the memory.

"Every fresh fact or idea," it has been truly said, "should be put by in its proper place in the mind—that is to say, the new fact or idea should be associated with its proper class of facts or ideas already existing in the mind. A general principle gives the key to the remembrance of a whole series of facts or events. Physical facts are best remembered through a knowledge of their general law, effects through a knowledge of their cause, and results through a knowledge of the general principles upon which they depend."

The unwillingness which every intelligent teacher must feel to encourage his pupils to form frivolous and unnatural, and therefore necessarily transient associations, will always prevent artificial aids to memory from occupying any but a very subordinate place in education. But a good mnemonical system has its use, and, if properly applied, would save a vast amount of time and labour. There are many things which it is necessary to remember, and which are incapable of rational association, such as statistics of every sort, unconnected events and lists of names. How much of the mental energy of children is wasted in the vain attempt to engrave upon the memory by wearisome repetition such items of information, which might be mastered more effectually in one tenth of the time by the aid of mnemonical association !

A striking instance of what may be done in this way is afforded by Mr. Stokes's ingenious method of teaching the multiplication table, by means of which—incredible as the statement may appear—a child of ordinary capacity may be made perfectly familiar with that formidable task in a single hour. This great boon to infancy has now been introduced into the chief national schools of Glasgow, the masters of which, fifteen in number, have signed a testimonial to its efficiency. Mr. Stokes is certainly at the head of all mnemonical professors. Having spent much time over different systems of artificial memory, we feel able to assert with confidence, that the mnemonical key which he places in the hands of his pupils combines in itself the advantages shared among all other systems, and we strongly recommend it to any one preparing for a competitive examination.

We have next to consider the surest method of quickening the attention, the importance of which arises from memory being often the result of the complex action of several senses. There is, so to speak, a muscular memory, or involuntary movement, the result of habit and suggestion-and a memory of the tongue, the eye, and ear, as well as reason. If each of these memories can be brought to bear simultaneously on the same object, an indelible impression is commonly produced. And this is not so difficult as might be supposed. We are acquainted with an accomplished German linguist who has availed himself of this principle in teaching language with astonishing success. Appealing to the eye by written words, to the ear by clear and forcible enunciation, and quickening the attention by always obliging his pupils "to suit the action to the word, and the word to the action," he undertakes to impart a conversational facility in French or German within a few weeks. To the simultaneous appeal made to eye, ear, and reason, we must attribute the success of the Pestalozzian system of instruction, which is especially adapted to infancy, when the activity of the powers of observation, as contrasted with those of reflection, clearly indicates that the senses are the chief channels by which knowledge should reach the mind. To us it seems scarcely credible, that fifty years ago geography was commonly taught without an atlas. Fifty years hence, it may seem equally astounding, that the minds of children of seven years old and upwards should be nourished, or rather starved, as they generally are at present, on a diet of grammatical abstractions never fully understood until the reason is matured.

Lastly, it is obvious that nothing quickens the attention so much as pleasurable interest. That which is learned unwillingly never sinks deep in the memory; and school tasks are too often rendered unnecessarily irksome and distasteful. We believe there are very few children who, if taught judiciously, would not take delight in their school books, instead of listlessly dogearing their leaves, or moistening them with their tears. It is needless to add, that when a lesson is learned *con amore* it is learned in half the time, and the mind receives on a sensitive surface a permanent impression.

THE NUMBER OF CANDIDATES FOR EXAMINATION AT THE TRAIN-ING COLLEGES.—By a return just issued, it appears that the number of candidates who presented themselves for examination at the training colleges at Christmas, 1866, was 1614, against 1555 at the previous Christmas, of whom 1207 passed their examination, against 1306 at the previous Christmas. The number of those who entered the training colleges in January, 1867, was 1121, against 1215 in January, 1866, and the number of pupil teachers apprenticed in 1866 was 3070, against 2631 in the previous year.

THE USE OF CYCLOPÆDIAS.*

BY VERNON LUSHINGTON, ESQ., B.C.L.

HE English Cyclopædia consists of eleven great volumes, twodevoted to geography, three to biography, two to natural history, and four to arts and sciences. No critic can pretend

to have read *it*, but only to have read *in* it; all, however, speak highly, most highly, in its praise. Its peculiar merits seem to consist in its convenient divisions, and a large degree of completeness, combined with a very moderate price. I have hardly done more than look into the Biography and Geography, but with very great satisfaction; reading descriptions of strange places I have visited, and life-stories of memorable men now passed away or still living.

Perhaps the first sensation of the reader on opening these massive volumes will be one of bewilderment, and unwillingness to traverse any such vast mountain of knowledge. But on better consideration he will feel two things; first, that kind of reverence which the spectacle of any great human labour cannot but call forth; and secondly, that this (or indeed any) Cyclopædia is a witness to the inexhaustible interest of reality and simple truth. He will see that it is in fact a record of a thousand thousand conquests over thick night, won in many generations by a far-reaching industry, and patient intelligence, in many cases even -say the discovery of America-by downright unmistakable valour : and so gazing on these columns, there may come flashing through his mind something of the exultation with which a people greets a victorious army returning homeward. At least he cannot but observe how the age in which we live is assiduously minding and doing her business; everywhere extending and consolidating positive knowledge; with honest sober eyes scrutinizing the past of human history, studying the starry heavens, the solid earth, and all living things, tracking everywhere the dominion of steadfast laws, then recording what is found, for ourselves and for those who come after. A Cyclopædia witnesses that all these things are being done.

But let not the reader stop here! Admiration is good, but not barren admiration. Let the book be really used. A great dictionary of this kind, if within easy reach, should be constantly appealed to. There is no study, no reading, which does not involve local conditions, the history of particular men, the growth of successive efforts, and a variety of other matters which it is well to know, sometimes even indispensable to know, if we would rightly understand the subject in hand. It is here that a Cyclopædia, the design of which we owe mainly to the great Frenchmen of the last century, may be of real service to the individual student. It is "a teaching all round," a catalogued summary of all knowledge. Under the names of particular men and places, it posts up such information as ordinary inquirers seek for concerning them ;

* "The English Cyclopædia," conducted by Charles Knight. London : Bradbury and Evans.

under the titles of subjects or things, it gives short popular treatises, popular in the right sense, which relate the history, and describe the scope of the special matter, whatever it may be: the essence of a good Cyclopædia being, as already suggested, that the information shall be easily found, and when found, shall be accurate, clear, and, so far as it goes, sufficient. Thus a Cyclopædia is a condensed library; which omits, of course, a whole world of truth and beauty that lies in the works of original authors, yet guides us to them, in some measure gives us their results, or at least announces them : it contains also much that is not to be found elsewhere. There might be worse desultory reading than in this big book; but its true use is to promptly supplement or animate our study of this or that subject, which we are otherwise steadily pursuing; to make our knowledge sure, precise; a thing of great importance. Therefore, when in doubt, look !

To take the biographical volumes, for instance. What interest to those who are studying mathematics or drawing, to look up the biography of Euclid or Titian; to our students of Latin, to find a life of Cæsar or Horace or Cicero ready at hand, with some reasonable criticism of their work as a whole; to our lovers of music, to read what follows under the names of Beethoven, Mozart, Rossini! Again, students of the physical sciences will often here find a helper at hand to solve some pressing doubt: often, also, they are discouraged from attacking scientific books (even if accessible) by their bulk and complexity; in this Cyclopædia they will find numerous articles contributed by distinguished professors, short and readable, yet thoroughly trustworthy, which may send them instructed and refreshed on their way. Again, to every thoughtful man the history of his own occupation and its processes presents peculiar interest : a banker's clerk may rightly wish to learn something of the history of banking; a wool-spinner to learn where the wool comes from, and how his beautiful machinery has been produced; an engineer to read of the labours of Watt and Stephenson, and so on. All such matters are very conveniently studied in a Cyclopædia. Again, for we must not pass over the two noble geographical volumes; our home, the city or town in which we live, the country round about, the places we visit in our holidays-these we cannot know too much of, and here again the Cyclopædia will be our friend.

These slender indications must suffice. It will be observed that a Cyclopædia does not dispense with ordinary text-books, and ordinary steady work, still less with poetry and art, and all that supreme class of human utterances which speak directly to the heart of man; but it has a use of its own for every class of students. As such it well deserves a place in every student's library.

This notice should not pass without a grateful tribute to Mr. Charles Knight himself. He is not the publisher, but the "conductor" of this Cyclopædia, the publishing part being undertaken by the firm of Bradbury and Evans: they also deserve our thanks, for they take upon themselves a heavy money-risk which can only be rewarded in many years. Mr. Knight's publishing days seem now over. He began his career at a time when books were printed for the rich few: he was the first of

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British publishers who dedicated themselves to the people. He has since been followed by many: new readers have produced new publishers, and these again new readers; and so the good work goes on. But Mr. Knight has the credit of leading the way; he was the first man; he threw his bread upon the waters. The object of his life has been to bring to the numerous humbler classes sterling English literature and solid information on national and every-day subjects. We cannot remember the first appearance of the "Penny Magazine," but it still gives pleasure in many a cottage, and in its day it wrought great things. Since then, Mr. Knight (whose own name is modestly omitted from the biographies) has brought out good volume upon volume, good series upon series; himself an author of considerable note, the writer of a history of England and many other books; and what is an especial claim of honour, he has done more, as editor and publisher, than any other Englishman for the name and fame and large use of Shakspere.

One day his own name will appear in this book, and all his labours be duly chronicled; and he will then show well worthy of comparison with the illustrious family of the Etiennes, more commonly known by the Latin name of Stephens, the celebrated printers of the sixteenth century, whose lives I have been reading (for the first time) among the biographies. They dwelt in Paris and Geneva, patronized, in the ancient worthy sense, by princes and wealthy merchants, by Francis I. and Henry III. of France, by the State Council of Geneva, by the munificent Fuggers of Augsburg; and, on the other hand, persecuted and hindered (not very seriously, however) by Catholic prelates. There they produced grand "Dictionariums" of Greek and Latin, editions of Greek and Latin authors, editions of the Bible, and theological works; writing and printing for the scholars of Europe. What could be done for letters in those days they did, and excellently well. The same noble enterprise and unwearied industry has marked the career of our English printer in the nineteenth century, in his labours to give to the people of England English secular literature. And here Mr. Knight stands as the representative of the latest-may we also say, in promise the highest?effort of the English printing-press. What a contrast, what a progress between the sacred missal, written by one hand, and tenderly illuminated for the delight of a few high-born eyes, and these stout volumes of secular lore, printed and stereotyped for the service of the million ! Something may be lost, but how great the gain ! Worthy of a "Hymn of Praise," such as Mendelssohn actually wrote in honour of Gutemberg, the first printer's anniversary day.

At the same time, this is true and most true—that life is a thousandfold more than books; and especially that no man can live upon a Cyclopædia. And the service which positive knowledge has to render is but begun. It has yet to make itself felt as a disciplined orderly whole; to deal with far higher subjects (a real political economy, for instance); and to do what no Cyclopædia can do—fashion a methodic education, and reach, in a living form, the great multitude of men. What is especially needed, is that the modern mind should be able to unite itself wholly with the past; should be able to rise above details—in history above chronicles, in science above specialities, in life above professional subtleties; not despising or neglecting these, but subordinating them; should comprehend the relations of the great provinces of knowledge to each other, their office to the individual mind and the social life of men. This seems a gigantic task, almost an impossible one, and, indeed, to the first undertaker it is a work of the first order of magnitude; but the thing once done or truly conceived, practical success is ultimately certain, and every step gained will wonderfully simplify and illuminate all our conceptions. A right education will, then, aim at communicating this ascertained order as the basis of all knowledge. But for this purpose a Cyclopædia is not the instrument. To the philosopher it is but a quarry of materials, to us it is and must remain only a discoursing dictionary. Such thoughts are naturally suggested by the spectacle of this vast accumulation of knowledge; and the question which will be asked, Whither is it all tending? And if, with such great issues before us, involving inevitable large changes of opinion and practice, we cannot but look with anxiety to the future, sincerity tells us we must on, and is full of noble hope withal. In the early times of maritime discovery, there was an African cape, called Bojador, or the "Outstretcher," which the navigator dared not pass; and rumour said that those who went beyond would become black men. The cape was passed, and the outward figure of the world made known; but the bold Portuguese did not become black !

To go back to Francis I. and the Stephens. Francis, whose face you may read in Holbein's portrait of him in Hampton Court, had faults enough, and an intriguing, warring life with the Emperor Charles V. and even our Henry VIII.; but he had a genuine love of having gifted men of peace working about him. Thus Andrea del Sarto, "the faultless painter" (of Browning's admirable poem), the knave also for once, who ran away to Florence with the King's money, describes his former joy—

> "In that humane great monarch's golden look,— One finger in his beard or twisted curl Over his mouth's good mark that made the smile, One arm about my shoulder, round my neck, The jingle of his gold chain in my ear, I painting proudly with his breath on me."

And so it is told how Francis would often visit Robert Stephens in his printing-house, and might be seen silently watching him finish his proof before he started upon familiar talk. The English people cannot so visit Mr. Knight; they are not kings at all; they can but buy Mr. Knight's books or read them, which is what Mr. Knight desires. But many and many a man unknown to him bears him silent gratitude; and, hereafter, a poor English student asking, "How came these good books to me?" may have for answer, "By the faithful work of many men; among the foremost, the worthy English printer, publisher, editor, and author, Charles Knight." And so we heartily congratulate him on this his great work.

ON TEACHING CHEMISTRY IN SCHOOLS.

BY W. H. WALENN, F.C.S.,

Compiler of Abridgments of Specifications relating to "Electricity and Magnetism: their generation and applications," "Photography," "Plating or coating metals with metals," etc., for the Commissioners of Patents.



HE reasons why chemical science has received so little attention in schools may be shortly stated under two heads :---ist. The belief that no practical good could be effected, in the pupil's mind, by adding to a curriculum already full to re-

pletion, a science difficult in itself and only useful to those who intend to make it the study and profession of their lives. 2nd. The very general, but erroneous idea, that chemical science is difficult to teach, more difficult to illustrate, and nearly impossible of experimental demonstration by the pupils themselves.

In respect to the first point, Dr. W. A. Miller, F.R.S., Professor of Chemistry in King's College, London, at the meeting of the British Association at Birmingham, in 1865, as President of the Chemical Section, gave it as his deliberate opinion, that the methods of investigation employed in Chemistry entitle it to be regarded as an "instrument in training the mind, and shaping the intellectual development of the future." After setting forth the difficulty which those whose education is based upon the linguistic system have to realize the magnitude and true bearing of the power of the science, "and its educational value," he goes on to say that, "Science is not merely to supply her facts: she is to be employed to develop the powers of the mind, and to discipline them for action. Hence it is of far more importance to instil principles, and to cultivate precision in observation, in thought, and in description, than it is to load the memory with mere facts, however valuable. In short, the system of cramming is to be eschewed, while the formation of habits of comparing, reasoning, and judging is to be encouraged in every way."

In respect to the second point, in answer to questions put by the Select Committee of the House of Lords on the Public Schools Bill, in 1865, Dr. Sharpey, L.L.D., F.R.S., observes, that the elements of inorganic chemistry are well adapted to render instruction in physical science exact and solid, "provided that instruction be carried on mainly by practical lessons at which the pupils take part themselves in the experiments, and are permitted to handle and work with apparatus."

Apart from the weight which necessarily attaches itself to the opinions of these celebrated men, we have no doubt that any well-informed person who looks into the subject for himself will come to the same conclusion, and that the introduction of Chemistry into schools is but a question of time.

It is now acknowledged, on all sides, that when learning is imposed as a duty only—as a task—that the progress of pupils therein is slow compared with that which is made when their interest is excited. Of all sciences, Chemistry is the one most capable of exciting interest in boys. In order to do so, however, striking results must be presented to their view, and, when they have sufficient facts in their minds, those facts may be applied to analyzing the results and deducing further facts from them; thus the development of the perceptive and of the rational faculties goes hand in hand, and one faculty is made to assist the other by action and re-action.

The labour of teaching is reduced, and the ability of the pupils is further stimulated, if they are allowed to make such experiments themselves as their progress in the subject warrants.

The method of teaching Chemistry may be by class books, followed up by lectures, oral and written examinations, and by certain experiments made by the pupils themselves.

Class books^{*} are very serviceable in the intervals between lectures; their principal uses seem to be, laying the foundation of the mnemonics of the subject, elucidating, by precept and example, the mathematical principles of the science, and explaining, in proper sequence, the various processes that are necessary to the attainment of a given result. They may either be employed to prepare the student for what will come in the next experimental lecture, or to explain more fully the results shown at the previous lecture, or (which is the most complete plan) to clear up the points of the last, and to lay a foundation of theory for the next lecture. In cases where only a small time can be allotted to the subject, the class book may be made the text book of the lecture, both in respect to the arrangement of the experiments and as to the matter to be placed before the pupils.

Lectures afford the means of laying before the pupils, in a connected view, the principles and practice of the subject, and many important details of manipulation may be successfully explained, which would be dry and trivial if written. Verifications of grand truths and the beauty of certain results may be made manifest, also deductions may be drawn from them which would scarcely appear warranted if merely read in a book. Where experiments are not admissible, as in illustrating the manufacture of iron, well marked and coloured diagrams of the furnaces and apparatus used are very suitable. Every boy should have a note book (of ordinary copy-book size) so as to take notes of the points of each lecture and sketches of the principal experiments and diagrams. At the end of each lecture, it is a very salutary practice to give out certain questions bearing upon the subject, to be answered in writing at the next lecture, also to examine the boys orally upon the principles that A weekly examination or "recapitulation" may have been inculcated. also take place with advantage.

The extent to which the pupils may be permitted to work out their own experiments must depend very much upon the class of school and upon the appliances at hand. That this can be done much more easily than is generally thought possible, the author has endeavoured to de-

* One of the newest and best class books is "Lessons in Elementary Chemistry: inorganic and organic," by Henry E. Roscoe, B.A., F.R.S., Professor of Chemistry in Owen's College, Manchester. London: Macmillan and Co. 1867. Price 4s. 6d.

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monstrate,* but, in establishments that have a laboratory attached, the pupils may readily work out most of the leading experiments to the verge of organic chemistry.

In imparting instruction in Chemistry, as in any other subject, the most important thing is to lay a good foundation. The great principles of the science should be deeply impressed, both on the memory and on the reason, at the beginning of the course, by repeated experiments, and by constant reference to examples in common life so as to connect the knowledge which is being imparted to that which already exists in the pupil's mind.

In the mnemonical part, every student should write out fairly in his note book and commit to memory good definitions of what the science treats of, and of the terms used; the principal elements should also be learnt by heart, together with their symbols and atomic weights. As the chief laws of the subject are elucidated (by experiment or otherwise), they should be placed in the said note book in a tabular form. By this means, at the end of the course, each student has a complete annotation and *memoria technica* written by himself, which he can therefore more easily refer to than any other book.

In the rational part, the notes on the lectures themselves will furnish abundant instances of the steps by which the discoveries of the science were made, and of the rationale of well established processes and definite changes. All calculations of atomic weights, density of gases, &c., as well as the laws and systems of crystallography, and of nomenclature and notation, come under this head, and afford good practice.

In the experimental part, it is also essential that lucid notes be taken, and it will be found most successful in the end if the demonstrator or teacher requires each boy to read over his notes to him before the students are dismissed; this is important, because it will be found that the experimental division of the subject clears up all points that were previously obscure, and there often remains some *débris* that require removal; also in interpreting the bearings and results of experiments, students necessarily require much guidance. All experiments should form a connected series, and should elucidate brilliantly and pointedly some great truth, the only exception to the latter rule being the exhibition of useful details of manipulation. Mere "cookery book" experiments (as the author has heard them called) such as "How to make green fire," "How to make mimic lightning," &c., and all that are isolated or have no immediate relation to the matter in hand, should, generally speaking, be avoided.

The highest authorities upon the Science of Chemistry have given their decided opinion that it should be taught according to the latest theoretical views, and with as little as possible reference to theories that rather form a matter of history than of present interest. For this reason the new nomenclature and notation should be adhered to throughout, in their pure and simple form; the notation fully deserves this straightforward treatment and this universal adoption, for it at once connects

* See "Little Experiments for Little Chemists," by W. H. Walenn, F.C.S. London: T. J. Allman, 463, Oxford Street. Price 15.

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atomic weights with volumes and with specific heats; further assistance to the unity of the science, as well as to its grasp of facts under a minimum of general laws, is afforded by the adoption of the theory of types in inorganic as well as in organic Chemistry, and the doctrines of atomicity and saturation of combining power remove many difficulties that have always been felt in the subject. The molecular and substitution formulæ that have lately come into general use, appear, in conjunction with the above theoretical principles, to have brought the science into a sufficiently stable condition to warrant the teaching of the latest theories in a connected form.*

In conclusion, it appears scarcely possible that the conscientious and enlightened preceptors of England will deny the entrance, into their scholastic system, of a science which draws out so many of the latent, but easily excited, faculties of the mind, and of outward application, as Chemistry. Chemistry is the rallying point of other exact and experimental sciences, and its branches are many, reaching even to the celestial bodies.

LATIN FOR LADIES.



T is only the other day that we were informed that the young ladies who were examined by the roving Cambridge authorities acquitted themselves eminently to the satisfaction of their questioners. And now we learn that the preparations for the

similar annual proceedings on the part of the University of Oxford are completed, and that girls and boys alike, though not, we presume, in company, are to be put through the examination process with due severity and rigour. On the whole, it strikes us that this is about the most astonishing of all the astonishing things which indicate the reality of that social revolution which English society has for some time been undergoing. That the old universities should send delegates all over the country to examine the sons of the smaller gentry and the men of business was a sufficiently startling novelty. But that "the cloister" should actually dispatch its missionaries to report upon the acquirements of the sisters of these long-neglected boys is a proof that our fundamental ideas as to what constitutes the perfection of the female character are radically changed. Of course it is not to be doubted for a moment that no sentimental gallantry has warped the judgment of the presiding examiners. We cannot suppose that a Latin translation, or the solution of a quadratic equation, presented by blushing sixteen, would not be as accurately estimated at its real value as the same performance sent up by an ungainly boy. We accept, therefore, the figures by which the examiners represent the amount of success attained by their fair students, and con-

* To preceptors the following work is a great boon, and is thoroughly exhaustive of the subject :—" Elements of Chemistry, theoretical and practical," by William Allen Miller, M.D., L.L.D., &c., Professor of Chemistry in King's College, London. Longman & Co. 3 vols. 3rd Ed. Price $\pounds 2$ 17s.

gratulate them on the delicacy and good sense which have led them to abstain from publishing the individual names of the interesting postulants for academic honours. We are quite satisfied with their report, and it only remains for us to speculate, with no little curiosity, as to the practical results which may be expected to follow from the success of this wonderful scheme.

That the general character of women would be materially altered, and altered for the better, by an improved education can hardly be doubted. Setting aside the popular nonsense about the absolute identity of men's and women's natural powers, it is certain that most of the defects which men so often cast in the teeth of women are mainly due to the wretched imitation of education which is all that is in the reach of the immense majority of Englishwomen. If then they can be made to learn anything, or rather to study anything thoroughly, and to carry on their studies beyond the period of mere girlhood, they must certainly acquire in some considerable measure that accuracy of thought, that dislike for rhetorical platitudes, that solidity and fairness of judgment, and that soundness of critical taste, for which, as things now are, the gentler sex is not, as a rule, highly distinguished. But it is the incidental consequences of the creation of a love for serious study among English girls of the middle and upper classes which present the most curious subjects What will be its effect upon the "matrimonial for speculation. market," and upon the education of men? We do not ask whether it will frighten away our ingenuous youth from offering their hands to young ladies of whose acquirements they stand in awe and dread. Possibly here and there some foolish man might abstain from making pretensions to the companionship of a pretty girl, through dread of being despised for his inability to extract the cube root and to discuss the doctrine of the Greek subjunctive mood. But as it is, cases of clever women marrying stupid husbands are quite numerous enough to reassure us on this head. The question is not as to the marrying prospects of stupid men, but as to the marrying inclinations of well-educated women in general. And here there does seem a probability of a change. At present, as we take it, it is the want of a definite interest in some work or occupation of real moment which sets girls speculating about marriage at so early a period. It is not because she has a dread of being an old maid, or is longing to be "settled in life," or is discontented with her home, that the thoughts of a girl of eighteen or nineteen are so often turned to matrimonial contingencies. It is rather because she has no present object on which to expend her energies, and nothing to work upon with a view to any permanent benefit. With boys and young men it is the reverse. Life with them is very soon a reality, without any necessity for an early marriage. Men, as a rule, do not look forward to marrying until they are eight or ten years older than girls are when they seriously contemplate it. Their business or their profession, that profession being more or less the continuation of the work of education itself, furnishes them with an object for their thoughts and for the employment of their energies. But when the average girl has gone through the wretched "course of studies" prescribed by the

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schoolmistress or the governess, all comes to an end, and the next thing is to be married, or, at any rate, to be engaged. Her education has totally failed to awaken her interest in the subjects of men's studies, and to cultivate her natural faculties to such an extent as to make their further cultivation and the acquisition of more knowledge a delight and a necessity. If, then, this new movement succeeds in converting the education of girls from a sham into a reality, it will follow that by hundreds and thousands they will be far less impatient for a "settlement," and will by common consent postpone by three or four years the recognised age at which girls may be expect to be mistresses of a home of their own. Some people may regret the change, but others will welcome the advent of the theory that a young woman of three-and-twenty is more likely to be wise in her arrangements for her future life than a girl of eighteen or nineteen.

Then, as to the education of the brothers and expectant husbands of these highly cultured girls. If we have to abandon the idea that the life of a woman is to be inspired by feeling and the life of a man by thought and knowledge, a man's standard as to what is expected of himself must be raised. Boys who habitually look down upon their sisters' learning and capacities are pampered in their own idleness, and never made, as they ought to be, to feel ashamed. At this time, with all our advances, the average amount of the real education of the faculties of English boys, with occasional exceptions, is simply disgraceful, from the boys of Eton down to the boys of the humblest grammar-school. And while Oxford and Cambridge examiners are scouring the country and decorating the young provincial prodigies with the title of A.A., the university system itself is so bad that of those who take an ordinary bachelor's degree a very large number are allowed to spend two-thirds of their time of residence in all but utter idleness, supplemented by six months' cram at the end, while the annual six months' vacation time is passed in pure, unmitigated amusement. But when the new order of things reigns in all good households, new ideas will take possession of the lads who now disport themselves so royally in their ignorance and self-satisfaction. Shame will do what self-respect and a sense of duty have failed to accomplish. And while the Oxford and Cambridge examiners are indoctrinating their charming candidates for distinction in the country, they will be preparing for themselves a condemnation as men incapable of controlling and teaching their own undergraduates.-Pall Man Gazette.

CAMBRIDGE LOCAL EXAMINATIONS.—The greatest number of successful candidates from any one school, at the late Cambridge Local Examinations, was thirty-six from the Devon County School, West Buckland, which for three years in succession has passed a greater number than any other school. Thirteen of these were in honours, and five were distinguished in particular subjects, among them being the first and second in order of merit in the Senior English Section.

A PLEA FOR THE ART OF READING ALOUD, AS A BRANCH OF REGULAR SCHOOL EDUCATION.

BY CHARLES JOHN PLUMPTRE,

Lecturer on Public Reading, King's College, Evening Class Department.

HERE is no complaint more general than the rarity of good readers in all classes of society. About five or six years ago, in consequence of a notification on the part of the late Bishop of Rochester, that a certificate of competence as a reader would

be required in the case of candidates for ordination in his lordship's diocese, a general awakening to the importance of the subject seemed to take place among clergy and laity, and for several weeks one could hardly take up a newspaper, from "The Times" to the humblest provincial journal, without seeing leading articles and letters on "Clerical Elocution."

But no adequate practical result of any substantial and permanent nature followed from all these discussions. It was an illustration of the old proverb, "Great cry but little wool." Complaints teemed on all sides, but there was little done to remedy the complaint. Several of the bishops have, I know, from that time advised young curates and candidates for orders to take a regular course of instruction in the art of public reading, from those whom they thought were competent; from natural qualifications, education, position, and experience, to teach that art. But beyond this nothing has been done, and the evil is nearly, if not quite, as prominent and widely spread as ever.

What a very able writer says, under the signature of "Rhetor," in a letter to the editor of "The English Churchman," dated October 3, 1861, may be reproduced now with as much truth as then. The laity (he says towards the close of his letter) complain, and most justly, of the bad reading inflicted on them Sunday after Sunday. But how can it be otherwise while the present system lasts? Candidates for the ministry have no proper instruction, either in the public schools or universities. They enter on their professional duties with provincialisms and cockneyisms uncorrected, and read positively worse than many of their congregation. The varieties of professional incapacity are endless-the *mutterer*, who swallows all his final syllables—the *drawler*, who wearies with his tediousness-the gabbler; who rushes through the service at express speed—the *preacher*, who mistakes prayers for sermons—the spouter, who mouths the prayers with the most painful affectation. All these evils are the necessary consequences of the inadequate estimate of the end in view, and the means to be employed for its attainment. Some take half a dozen lessons, perhaps, from a strolling player, or trust to one lecture on church reading, given by the examining chaplain at the close of the examination for orders ! The only true mode is a regular course of instruction under a judicious teacher, carried on during the year which ought to be devoted to theological training, after taking the ordinary degree. It rests with the bishops to secure this by insisting on a certificate of attendance on such a course, and I hope the time is

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not far distant when a reform so urgently required will be effected by the rulers of the Church.

A recent offer has been made by an anonymous benefactor, to found an annual prize of $\pounds 40$, at the universities of Oxford and Cambridge, for the encouragement of proficiency in the art of good reading, but, I regret to say, has been declined by both universities, on the ground, I believe, of the difficulty of carrying out the wishes of the donor by adequate and systematic instruction at the universities, as well as by the alleged difficulty of deciding who are, or are not, the best readers in the competition for the prize. The rejection, and the ground of the rejection, of this liberal offer, have excited much dissatisfaction in the public mind, and the leading journals have expressed their opinions on the subject in no very measured language, which I have no desire to reproduce; but I cannot help thinking that what has been found to work so well, and to be so easily carried out in London, may also be introduced and flourish at Oxford and Cambridge.

At King's College, London, there has existed for nearly twenty years, a Lectureship of Public Reading and Speaking, most ably filled now by my friend and colleague, the Rev. Alex. J. D. D'Orsey. On the establishment of the Evening Class Department of King's College, a similar Lectureship was made part of its instruction, to which I had the honour of being appointed last summer; and though my experience does not date so far back as Mr. D'Orsey's, I am enabled to confirm all that he has said on the subject of public reading and speaking, in his lecture at the Royal Institution and other places, and can bear witness to the need for instruction in the art, as well as to the excellent results that in most cases quickly follow from a regular course of practical training. Prizes and certificates of merit are given for excellence in public reading and speaking in both the Day and Evening Departments of King's College; and my colleague and I have hitherto found no very great difficulty in deciding to whom such prizes and certificates should be awarded. Surely, then, what has so long been found practicable here will be found practicable elsewhere.

The prevalence of bad reading, in one or other of its almost countless forms, is too generally admitted to need any formal quotation from writers or other authorities in support of such an assertion. Whence does this fault proceed? I believe, in general, from inattention in childhood, and the almost total absence of any system of teaching in a scientific yet natural manner in our public and private schools. I should prefer on this point taking the evidence of a most competent witness in regard to all that relates to educational matters—the Rev. Francis Trench—rather than offer any remarks of my own. Mr. Trench, in a lecture delivered at St. Martin's Hall in 1854, and subsequently published, says :—

"I must confess I can recall nothing worse than ordinary school reading and recitation (mark, I say ordinary, because I am well aware there are some exceptions), whether in the institutions for the rich or for the poor in our land. Many amongst us can remember very well the method in which we ourselves said our scholastic lessons in our former

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days. Whether any improvement in this matter has of late taken place, I am unable to say. I trust that it may be so; but at the public school where I myself was, and one, too, not inferior in repute to any in the land -I mean Harrow-the utmost attainable speed in repetition was allowed, a false key and monotonous delivery of the worst kind was never corrected or rebuked, no attempt whatever was made to render, or to keep, the utterance in harmony with the sense; and bad habits of delivery were formed and allowed, in a manner almost too strange for belief, and on which I can only now look back with exceeding surprise. Nor do I conceive that the system was in the least better at other schools. I cannot let them escape. For should the Etonian, or the Winchester, Rugby, or Westminster man, or the representative of any other public school, ask me what grounds I have for such a statement, my answer to the challenge would be, that at college I had full means and opportunity to judge from the reading of the students there. They were gathered from all schools of distinction; and to any one hearing them it was evident enough that the general delivery at other schools was by no means superior to that which was allowed, and which prevailed at my own. A system this not only most objectionable, and most injurious at the time even to a just impression of the sense of the passage read, but also so lasting in its evil consequences, that many never are emancipated or escape from them. I say this advisedly; and even those who do escape often only escape after many years, and with no little difficulty. Hence, I believe, originates much of the bad reading which we hear in public worship. Hence, I believe, originates that monotonous cadence and drawl, which is so adverse to the due expression by the reader, and to the due comprehension by the hearer, of any passage read. The ear may be lulled, but the mind is not reached; at least, if reached, it is reached in spite of the readers' bad tone and enunciation. And here I quote the words of one who felt this evil very deeply, and laboured very constantly for its removal, or, at least, its mitigation-the Rev. C. Simeon. 'How often,' said he, 'are the prayers of the Church spoiled, and good sermons rendered uninteresting, by bad delivery on the part of ministers."

Mr. Trench then proceeds to show in detail how the same lamentable neglect of the art of reading aloud prevails equally in private schools, from the highest to the lowest class, and calls attention to the fact, that even at the time when he was speaking, so glaring was the evil in our national schools that a circular letter had been sent from Her Majesty's Board of the Privy Council to the various inspectors of schools, stating that "complaints have been made to their lordships concerning the very small degree of attention which *reading* (as part of *elocution*) receives in elementary schools, and making it imperative to include an exercise on the art of reading in the oral part of the next Christmas examination at the training schools."

I trust I have said enough to prove how general is the neglect of the art of reading aloud in our public and private schools. The neglect is, however, I am strongly disposed to believe, far greater in schools for boys than in schools for girls. As far as my own experience goes, I know that in London and the suburbs, out of a hundred schools where elocution is taught, at least three-fourths are ladies' schools. Hence, probably, may be found one reason why, as a rule, women read aloud better than men.

But what is the cause of this admitted neglect of the art of reading in so many schools and families? Why is it that elocution has been of late years so much disregarded as a part of education, and yet music, singing, drawing, and other accomplishments, have all received their due share of attention? One reason is, I believe, to be found in the fact that this very word, *elocution*, has been made a *bugbear* of, and has frightened away many from its study, through a completely erroneous interpretation of its meaning and character. Do not many persons imagine that the study of elocution must lead to a pompous, bombastic, stilted, or pedantic style—a style in which the artificial reigns predominant over everything that is simple and natural? I can only say, if elocution meant anything of the kind I should be the last man to advocate its adoption in schools or anywhere else. If I am asked to define what I then mean by elocution, I think I should answer-" That which is the most effective pronunciation that can be given to words when they are arranged into sentences and form discourse." In this, of course, I include the appropriate inflections and modulations of the voice, the purity of its intonation, the clearness of articulation, and, when suitable to the occasion, the accompaniments of expression of countenance and action. This art of elocution, then, I may further define as that system of instruction which enables us to pronounce written or extemporaneous composition with proper energy, correctness, variety, and personal ease; or, in other words, it is that style of delivery which not only expresses fully the sense and the words so as to be thoroughly understood by the hearer, but at the same time gives the sentence all the power, grace, melody, and beauty of which it is susceptible.

Is it not strange, let me ask, when we reflect on the marvellous power which spoken language has to excite the deepest feelings of our common nature, that the cultivation of the art of speaking which once "received so much attention, should afterwards and for so long a time have been almost completely neglected. We know what importance the ancient orators of Greece and Rome attached to the study of rhetoric. The prince of them all, Demosthenes, asserted that "Delivery" (under which term is included everything that relates to the effective management of voice, look, and gesture) is the first, the second, and the last element of success in a speaker; and the great Roman orator (Cic. de Orat. lib. 1.) most truly remarks that "address in speaking is highly ornamental and useful in *private* as well as in public life." And surely this is as true in our own day as it was in his. For even, assuming that a youth has no apparent prospect of debating in Parliament, of addressing judges or juries at the Bar, or appealing on the most solemn and important topics of all from the pulpit, does it therefore follow that he need bestow no trouble in learning to speak his native language elegantly and effectively? Will he never have occasion to read aloud in his family circle, or to a company of friends, some leader from "The Times" or other

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newspaper, some chapter from a book, or some verses from a poem? And what a difference will there be in the effect produced upon the reader and upon his audience accordingly as this is done well or ill? We are most of us in the present day accustomed to have our sons and daughters taught dancing, drilling, or calisthenic exercises, that give strength, flexibility, and elegance to the limbs—and very excellent are all such accomplishments in their way. But after all, the limbs are portions of our frames far less noble than the tongue; and yet, while no gentleman who can afford it hesitates about expending time and money in sending his son to the fencing, drilling, or dancing master, how few, comparatively, send as systematically their children to the elocution master, to be taught the full development of that which is the crowning glory of man—the divine gift of speech.

I believe firmly that consumption, and many other diseases of the respiratory organs, which carry off so many thousands amongst us, while they are in the very spring-time of life, would be greatly lessened in number, and prevented in development, if the art of reading aloud were more generally and properly taught and practised. This is not mere vague assertion. Let me call in support of my statement a high medical authority, Sir Henry Holland. In Sir Henry Holland's "Medical Notes," at p. 422, I read as follows :---

"Might not more be done in practice towards the prevention of pulmonary disease, as well as for the general improvement of health by expressly exercising the organs of respiration—that is by practising according to method those actions of the body through which the chest is in part filled or emptied of air? Though suggestions to this effect occur in some of our best works on consumption, as well as in the writings of certain continental physicians, they have hitherto had less than their due influence, and the principle as such is comparatively little recognised, or brought into general application. In truth, common usage takes for the most part a directly opposite course; and under the notion or pretext of quiet, seeks to repress all direct exercise of this important function in those who are presumed to have any tendency to pulmonary disorders. . . . As regards the modes of exercising the function of respiration, they should be various, to suit the varying powers and exigencies of the patient. Reading aloud (clara lectio) is one of very ancient recommendation, the good effects of which are not limited to this object alone. It might indeed be well were the practice of distinct *recitation*, such as implies a certain *effort* of the organs beyond that of mere ordinary speech, more generally used in early life, and continued as a habit, or regularexercise, but especially by those whose chests are weak, and who cannot sustain stronger exertions. Even singing may for the same reasons, be allowed in many of such cases, but within much narrower limits, and under much more cautious notice of the effects than would be requisite in reading. If such caution be duly used as to posture, articulation, and the avoidance of all excess, these regular exercises of the voice may be rendered as salutary to the organs of respiration as they are agreeable in their influence on the ordinary voice. The common course of education is much at fault in this respect. If some small part of the time given to crowd-

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ing facts on the mind not yet prepared to receive or retain them, were employed in fashioning and improving the organs of speech under good tuition, and with suitable subjects for recitation, both mind and body would often gain materially by the substitution."

I might quote opinions to precisely the same effect from the works on consumption and other diseases of the respiratory organs, of Dr. James Bright, Dr. Godwin Timms, Combe, Mayo, and other eminent physicians and physiologists, but there is no need to multiply quotations; suffice it to say that all these high medical authorities concur in the same opinion, viz., that "reading aloud" is, when conducted on sound principles, an exercise for the delicate and for the robust, as healthy and strengthening to the body as it is pleasant and profitable to the mind.

I am not without strong hope that the whole subject will, in course of time, meet with the attention it so well deserves. It is now nearly eight years ago since, with the sanction of the Vice-Chancellor, and the approval of the Bishop of the diocese, I began my work as a lecturer and teacher of elocution, in reference to professional and public life, at the University of Oxford on the same day that my colleague, Mr. D'Orsey, entered on a similar course at the university of Cambridge; and now we are associated in the same work, though in different departments, at King's College. Our pupils have steadily increased, our services have been called into requisition at many large schools in the provinces, as well as in London," and I have every reason to believe that a growing interest in the art of public reading and speaking has been manifested. I only trust that this interest may extend to all classes-high and low, rich and poor-and bear substantial and enduring fruit, in the shape of men and women with sound and healthy lungs, pleasant and agreeably modulated voices, and clear and effective enunciation.

THE EDUCATION GRANT.—In the year ending March 31, 1866, $\pounds 622,730$ was expended from the Parliamentary grant in aid of Education in Great Britain. The amount was thus distributed : In annual grants to elementary schools in England and Wales, $\pounds 378,003$ for day scholars, and $\pounds 10,003$ for evening scholars ; $\pounds 68,034$ in annual grants in Scotland ; $\pounds 21,040$ in building grants ; $\pounds 69,935$ in grants to training colleges ; $\pounds 685$ in unexpired pensions ; $\pounds 75,030$ in administration and inspection. Classified according to the denominations of the recipients, the expenditure was as follows:—On schools connected with the church of England, $\pounds 351,498$; on schools connected with the British and Foreign School Society, $\pounds 58,623$; Wesleyan Schools, $\pounds 28,592$; Roman Catholic Schools in England, $\pounds 26,084$; parochial union schools, $\pounds 120$; schools in Scotland connected with the Established Church, $\pounds 46,465$; the Free Church, $\pounds 29,297$; the Episcopal Church, $\pounds 4,019$; Roman Catholic schools in Scotland, $\pounds 3,002$.

JOHN STUART MILL ON THE VALUE OF THE ANCIENT CLASSICAL LANGUAGES AND LITERATURE IN EDUCATION.

From the Inaugural Address delivered to the University of St. Andrew's, Feb. 1st. 1867.



NIVERSITIES do enough to facilitate the study of modern languages, if they give a mastery over that ancient language which is the foundation of most of them, and the possession of which makes it easier to learn four or five of the continental languages than it is to learn one of them without it. . .

The only languages, then, and the only literature, to which I would allow a place in the ordinary curriculum, are those of the Greeks and Romans; and to these I would preserve the position in it which they at present occupy. That position is justified, by the great value, in education, of knowing well some other cultivated language and literature than one's own, and by the peculiar value of those particular languages and literatures.

There is one purely intellectual benefit from a knowledge of languages, which I am specially desirous to dwell on. Those who have seriously reflected on the causes of human error, have been deeply impressed with the tendency of mankind to mistake words for things. Without entering into the metaphysics of the subject, we know how common it is to use words glibly and with apparent propriety, and to accept them confidently when used by others, without ever having had any distinct conception of the things denoted by them. To quote again from Archbishop Whately, it is the habit of mankind to mistake familiarity for accurate knowledge. As we seldom think of asking the meaning of what we see every day, so when our ears are used to the sound of a word or a phrase, we do not suspect that it conveys no clear idea to our minds, and that we should have the utmost difficulty in defining it, or expressing, in any other words, what we think we understand by it. Now it is obvious in what manner this bad habit tends to be corrected by the practice of translating with accuracy from one language to another, and hunting out the meanings expressed in a vocabulary with which we have not grown familiar by early and constant use. I hardly know any greater proof of the extraordinary genius of the Greeks, than that they were able to make such brilliant achievements in abstract thought, knowing, as they generally did, no language but their But the Greeks did not escape the effects of this deficiency. own, Their greatest intellects, those who laid the foundation of philosophy and of all our intellectual culture, Plato and Aristotle, are continually led away by words; mistaking the accidents of language for real relations in nature, and supposing that things which have the same name in the Greek tongue must be the same in their own essence. There is a well-known saying of Hobbes, the far-reaching significance of which you will more and more appreciate in proportion to the growth of your own intellect: "Words are the counters of wise men, but the money of fools." With the wise man a word stands for the fact which it repre-

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sents; to the fool it is itself the fact. To carry on Hobbes' metaphor, the counter is far more likely to be taken for merely what it is, by those who are in the habit of using many different kinds of counters. But besides the advantage of possessing another cultivated language, there is a further consideration equally important. Without knowing the language of a people, we never really know their thoughts, their feelings, and their type of character: and unless we do possess this knowledge, of some other people than ourselves, we remain, to the hour of our death, with our intellects only half expanded. Look at a youth who has never been out of his family circle: he never dreams of any other opinions or ways of thinking than those he has been bred up in; or, if he has heard of any such, attributes them to some moral defect, or inferiority of nature or education. If his family are Tory, he cannot con-ceive the possibility of being a Liberal; if Liberal, of being a Tory. What the notions and habits of a single family are to a boy who has had no intercourse beyond it, the notions and habits of his own country are to him who is ignorant of every other. Those notions and habits are to him human nature itself; whatever varies from them is an unaccountable aberration which he cannot mentally realize: the idea that any other ways can be right, or as near an approach to right as some of his own, is inconceivable to him. This does not merely close his eyes to the many things which every country still has to learn from others : it hinders every country from reaching the improvement which it could otherwise attain by itself. We are not likely to correct any of our opinions or mend any of our ways, unless we begin by conceiving that they are capable of amendment: but merely to know that foreigners think differently from ourselves, without understanding why they do so, or what they really do think, does but confirm us in our self-conceit, and connect our national vanity with the preservation of our own peculiarities. Improvement consists in bringing our opinions into nearer agreement with facts; and we shall not be likely to do this while we look at facts only through glasses coloured by those very opinions. But since we cannot divest ourselves of preconceived notions, there is no known means of eliminating their influence but by frequently using the differently coloured glasses of other people : and those of other nations, as the most different, are the best.

But if it is so useful, on this account, to know the language and literature of any other cultivated and civilized people, the most valuable of all to us in this respect are the languages and literature of the ancients. No nations of modern and civilized Europe are so unlike one another, as the Greeks and Romans are unlike all of us; yet without being, as some remote Orientals are, so totally dissimilar, that the labour of a life is required to enable us to understand them. Were this the only gain to be derived from a knowledge of the ancients, it would already place the study of them in a high rank among enlightening and liberalizing pursuits. It is of no use saying that we may know them through modern writing. We may know something of them in that way; which is much better than knowing nothing. But modern books do not teach us ancient thought; they teach us some modern writer's notion of ancient

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thought. Modern books do not show us the Greeks and Romans ; they tell us some modern writer's opinions about the Greeks and Romans. Translations are scarcely better. When we want really to know what a person thinks or says, we seek it at first hand from himself. We do not trust to another person's impression of his meaning, given in another person's words; we refer to his own. Much more is it necessary to do so when his words are in one language, and those of his reporter in another. Modern phraseology never conveys the exact meaning of a Greek writer; it cannot do so, except by a diffuse explanatory circumlocution which no translator dares use. We must be able, in a certain degree, to think in Greek, if we would represent to ourselves how a Greek thought : and this not only in the abstruse region of metaphysics, but about the political, religious, and even domestic concerns of life. will mention a further aspect of this question, which, though I have not the merit of originating it, I do not remember to have seen noticed in any book. There is no part of our knowledge which it is more useful to obtain at first hand-to go to the fountain head for-than our knowledge of history. Yet this, in most cases, we hardly ever do. Our conception of the past is not drawn from its own records, but from books written about it, containing not the facts, but a view of the facts which has shaped itself in the mind of somebody of our own or a very recent Such books are very instructive and valuable; they help us to time. understand history, to interpret history, to draw just conclusions from it; at the worst, they set us the example of trying to do all this; but they are not themselves history. The knowledge they give is upon trust, and even when they have done their best, it is not only incomplete, but partial, because confined to what a few modern writers have seen in the materials, and have thought worth picking out from among How little we learn of our own ancestors from Hume, or Hallam, them. or Macaulay, compared with what we know if we add to what these tell us, even a little reading of cotemporary authors and documents ! The most recent historians are so well aware of this, that they fill their pages with extracts from the original materials, feeling that these extracts are the real history, and their comments and thread of narrative are only helps towards understanding it. Now it is part of the great worth to us of our Greek and Latin studies, that in them we do read history in the original sources. We are in actual contact with cotemporary minds; we are not dependent on hearsay; we have something by which we can test and check the representations and theories of modern historians. It may be asked, why then not study the original materials of modern history? I answer, it is highly desirable to do so: and let me remark by the way, that even this requires a dead language; nearly all the documents prior to the Reformation, and many subsequent to it, being written in Latin. But the exploration of these documents, though a most useful pursuit, cannot be a branch of education. Not to speak of their vast extent, and the fragmentary nature of each, the strongest reason is, that in learning the spirit of our own past ages, until a comparatively recent period, from cotemporary writers, we learn hardly anything else. Those authors, with a few exceptions, are little worth reading on their

own account. While, in studying the great writers of antiquity, we are not only learning to understand the ancient mind, but laying in a stock of wise thought and observation, still valuable to ourselves; and at the same time making ourselves familiar with a number of the most perfect and finished literary compositions which the human mind has produced —compositions which, from the altered conditions of human life, are likely to be seldom paralleled, in their sustained excellence, by the times to come.

Even as mere languages, no modern European language is so valuable a discipline to the intellect as those of Greece and Rome, on account of their regular and complicated structure. Consider, for a moment, what grammar is. It is the most elementary part of logic. It is the beginning of the analysis of the thinking process. The principles and rules of grammar are the means by which the forms of language are made to correspond with the universal forms of thought. The distinctions between the various parts of speech, between the cases of nouns, the moods and tenses of verbs, the functions of particles, are distinctions in thought, not merely in words. Single nouns and verbs express objects and events, many of which can be cognized by the senses : but the modes of putting nouns and verbs together, express the relations of objects and events, which can be cognized only by the intellect; and each different mode corresponds to a different relation. The structure of every sentence is a lesson in logic. The various rules of syntax oblige us to distinguish between the subject and predicate of a proposition, between the agent, the action, and the thing acted upon; to mark when an idea is intended to modify or qualify, or merely to unite with, some other idea; what assertions are categorical, what only conditional; whether the intention is to express similarity or contrast, to make a plurality of assertions conjunctively or disjunctively; what portions of a sentence, though grammatically complete within themselves, are mere members or subordinate parts of the assertion made by the entire sentence. Such things form the subject-matter of universal grammar; and the languages which teach it best are those which have the most definite rules, and which provide distinct forms for the greatest number of distinctions in thought, so that if we fail to attend precisely and accurately to any of these, we cannot avoid committing a solecism in language. In these qualities the classical languages have an incomparable superiority over every modern language, and over all languages, dead or living, which have a literature worth being generally studied.

But the superiority of the literature itself, for purposes of education, is still more marked and decisive. Even in the substantial value of the matter of which it is the vehicle, it is very far from having been superseded. The discoveries of the ancients in science have been greatly surpassed, and as much of them as is still valuable loses nothing by being incorporated in modern treatises : but what does not so well admit of being transferred bodily, and has been very imperfectly carried off even piecemeal, is the treasure which they accumulated of what may be called the wisdom of life : the rich store of experience of human nature and conduct, which the acute and observing minds of those ages, aided

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in their observations by the greater simplicity of manners and life, consigned to their writings, and most of which retains all its value. The speeches in Thucydides ; the Rhetoric, Ethics, and Politics of Aristotle ; the Dialogues of Plato ; the Orations of Demosthenes ; the Satires, and especially the Epistles of Horace; all the writings of Tacitus; the great work of Quintilian, a repertory of the best thoughts of the ancient world on all subjects connected with education ; and, in a less formal manner, all that is left to us of the ancient historians, orators, philosophers, and even dramatists, are replete with remarks and maxims of singular good sense and penetration, applicable both to political and to private life: and the actual truths we find in them are even surpassed in value by the encouragement and help they give us in the pursuit of truth. Human invention has never produced anything so valuable in the way both of stimulation and of discipline to the inquiring intellect, as the dialectics of the ancients, of which many of the works of Aristotle illustrate the theory, and those of Plato exhibit the practice. No modern writings come near to these, in teaching, both by precept and example, the way to investigate truth, on those subjects, so vastly important to us, which remain matters of controversy from the difficulty or impossibility of bringing them to a direct experimental test. To question all things; never to turn away from any difficulty : to accept no doctrine either from ourselves or from other people without a rigid scrutiny by negative criticism, letting no fallacy, or incoherence, or confusion of thought, slip by unperceived; above all, to insist upon having the meaning of a word clearly understood before using it, and the meaning of a proposition before assenting to it; these are the lessons we learn from the ancient dialecticians. With all this vigorous management of the negative element, they inspire no scepticism about the reality of truth, or indifference to its pursuit. The noblest enthusiasm, both for the search after truth and for applying it to its highest uses, pervades these writers, Aristotle no less than Plato, though Plato has incomparably the greater power of imparting those feelings to others. In cultivating, therefore, the ancient languages as our best literary education, we are all the while laying an admirable foundation for ethical and philosophical culture. In purely literary excellence-in perfection of form-the pre-eminence of the ancients is not disputed. In every department which they attempted, and they attempted almost all, their composition, like their sculpture, has been to the greatest modern artists an example to be looked up to with hopeless admiration, but of inappreciable value as a light on high, guiding their own endeavours. In prose and in poetry, in epic, lyric, or dramatic, as in historical, philosophical, and oratorical art, the pinnacle on which they stand is equally eminent. I am now speaking of the form, the artistic perfection of treatment : for, as regards substance, I consider modern poetry to be superior to ancient, in the same manner, though in a less degree, as modern science : it enters deeper into nature. The feelings of the modern mind are more various, more complex and manifold, than those of the ancients ever were. The modern mind is, what the ancient mind was not, brooding and self-conscious; and its meditative self-consciousness has discovered depths in

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the human soul which the Greeks and Romans did not dream of, and would not have understood. But what they had got to express, they expressed in a manner which few even of the greatest moderns have seriously attempted to rival. It must be remembered that they had more time, and that they wrote chiefly for a select class, possessed of leisure. To us who write in a hurry for people who read in a hurry, the attempt to give an equal degree of finish would be loss of time. But to be familiar with perfect models is not the less important to us because the element in which we work precludes even the effort to equal them. They shew us at least what excellence is, and make us desire it, and strive to get as near to it as is within our reach. And this is the value to us of the ancient writers, all the more emphatically, because their excellence does not admit of being copied, or directly imitated. It does not consist in a trick which can be learnt, but in the perfect adaptation of means to ends. The secret of the style of the great Greek and Roman authors, is that it is the perfection of good sense. In the first place, they never use a word without a meaning, or a word which adds nothing to the meaning. They always (to begin with) had a meaning; they knew what they wanted to say; and their whole purpose was to say it with the highest degree of exactness and completeness, and bring it home to the mind with the greatest possible clearness and vividness. It never entered into their thoughts to conceive of a piece of writing as beautiful in itself, abstractedly from what it had to express; its beauty must all be subservient to the most perfect expression of the sense. The curiosa felicitas which their critics ascribed in a pre-eminent degree to Horace, expresses the standard at which they all aimed. Their style is exactly described by Swift's definition, "the right words in the right places." Look at an oration of Demosthenes; there is nothing in it which calls attention to itself as style at all: it is only after a close examination we perceive that every word is what it should be, and where it should be, to lead the hearer smoothly and imperceptibly into the state of mind which the orator wishes to produce. The perfection of the workmanship is only visible in the total absence of any blemish or fault. and of anything which checks the flow of thought and feeling, anything which even momentarily distracts the mind from the main purpose. But then (as has been well said) it was not the object of Demosthenes to make the Athenians cry out "What a splendid speaker !" but to make them say "Let us march against Philip !" It was only in the decline of ancient literature that ornament began to be cultivated merely as ornament. In the time of its maturity, not the merest epithet was put in because it was thought beautiful in itself; not even for a merely descriptive purpose, for epithets purely descriptive were one of the corruptions of style which abound in Lucan, for example : the word had no business there unless it brought out some feature which was wanted, and helped to place the object in the light which the purpose of the composition required. These conditions being complied with, then indeed the intrinsic beauty of the means used was a source of additional effect, of which it behoved them to avail themselves, like rhythm and melody of versification. But these great writers knew that ornament for the

sake of ornament, ornament which attracts attention to itself, and shines by its own beauties, only does so by calling off the mind from the main object, and thus not only interferes with the higher purpose of human discourse, which ought, and generally professes, to have some matter to communicate, apart from the mere excitement of the moment, but also spoils the perfection of the composition as a piece of fine art, by destroying the unity of effect. This, then, is the first great lesson in composition to be learnt from the classical authors. The second is, not to be prolix. In a single paragraph, Thucydides can give a clear and vivid representation of a battle, such as a reader who has once taken it into his mind can seldom forget. The most powerful and affecting piece of narrative, perhaps, in all historical literature, is the account of the Sicilian catastrophe in his seventh book, yet how few pages does it fill ! The ancients were concise, because of the extreme pains they took with their compositions; almost all moderns are prolix, because they do not. The great ancients could express a thought so perfectly in a few words or sentences, that they did not need to add any more : the moderns, because they cannot bring it out clearly and completely at once, return again and again, heaping sentence upon sentence, each adding a little more elucidation, in hopes that though no single sentence expresses the full meaning, the whole together may give a sufficient notion of it. In this respect, I am afraid we are growing worse instead of better, for want of time and patience, and from the necessity we are in of addressing almost all writings to a busy and imperfectly prepared public. The demands of modern life are such-the work to be done, the mass to be worked upon, are so vast, that those who have anything particular to say -who have, as the phrase goes, any message to deliver-cannot afford to devote their time to the production of masterpieces. But they would do far worse than they do, if there had never been masterpieces, or if they had never known them. Early familiarity with the perfect makes our most imperfect production far less bad than it otherwise would To have a high standard of excellence often makes the whole be. difference of rendering our work good when it would otherwise be mediocre.

For all these reasons, I think it important to retain these two languages and literatures in the place they occupy, as a part of liberal education, that is, of the education of all who are not obliged by their circumstances to discontinue their scholastic studies at a very early age. But the same reasons which vindicate the place or classical studies in general education, shew also the proper limitation of them. They should be carried as far as is sufficient to enable the pupil, in after life, to read the great works of ancient literature with ease. Those who have. leisure and inclination to make scholarship, or ancient history, or general philology, their pursuit, of course require much more; but there is no room for more in general education. The laborious idleness in which the school-time is wasted away in the English classical schools deserves the severest reprehension. To what purpose should the most precious years of early life be irreparably squandered in learning to write bad Latin and Greek verses? I do not see that we are much the better even

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for those who end by writing good ones. I am often tempted to ask the favourites of nature and fortune, whether all the serious and important work of the world is done, that their time and energy can be spared for these *nugæ difficiles* ? I am not blind to the utility of composing in a language, as a means of learning it accurately. I hardly know any other means equally effectual. But why should not prose composition suffice? What need is there of original composition at all? if that can be called original which unfortunate schoolboys, without any thoughts to express, hammer out on compulsion from mere memory, acquiring the pernicious habit which a teacher should consider it one of his first duties to repress, that of merely stringing together borrowed phrases? The exercise in composition, most suitable to the requirements of learners, is that most valuable one, of retranslating from translated passages of a good author: and to this might be added, what still exists in many Continental places of education, occasional practice in talking Latin. There would be something to be said for the time spent in the manufacture of verses, if such practice were necessary for the enjoyment of ancient poetry; though it would be better to lose that enjoyment than to purchase it at so extravagant a price. But the beauties of a great poet would be a far poorer thing than they are, if they only impressed us through a knowledge of the technicalities of his art. The poet needed those technicalities : they are not necessary to us. They are essential for criticising a poem, but not for enjoying it. All that is wanted is sufficient familiarity with the language, for its meaning to reach us without any sense of effort, and clothed with the associations on which the poet counted for producing his effect. Whoever has this familiarity, and a practised ear, can have as keen a relish of the music of Virgil and Horace, as of Gray or Burns, or Shelley, though he know not the metrical rules of a common Sapphic or Alcaic. I do not say that these rules ought not to be taught, but I would have a class apart for them, and would make the appropriate exercises an optional, not a compulsory part of the school teaching.

SCIENCE AND ART DEPARTMENT.—New Minute. — My Lords have promulgated a new Minute to the effect, that every student in the future who obtains a first or second class position in the May examination, in any science subject, may teach, and earn the payments or results, a privilege hitherto confined to certificated teachers. The teachers' examinations for certificates in November are to be abolished. This action of the Committee of Council assimilates, in this particular, the relation of science teachers with the lately modified relation of the art teachers to the Department.

THE SUPPLEMENTARY MINUTE OF THE REVISED CODE.

BY J. STUART LAURIE, FORMERLY H. M. INSPECTOR OF SCHOOLS.



HE reception accorded to the *Revised Code* four years ago is still fresh in the memory of every one interested in the question of popular education. Educational bodies viewed, with

an alarm that amounted almost to a panic, the threatened demolition of what they had been accustomed for a quarter of a century to regard as the bulwarks of the system. But all protest was in vain : and the representatives of the people sanctioned and ratified the official proposals. Indiscriminate building grants to Primary, and various grants to Training, schools were cancelled; pupil-teachers could no longer claim the enviable title of "pampered recipients of State bounty;" teachers were constrained to relinquish, suddenly and unexpectedly, their "vested interests," in the shape of the money-value which their certificates variously represented; and annual grants henceforth took the simple form of 4s. per head on the average attendance, and 2s. 8d. per pass in the three fundamental branches of knowledge, Reading, Writing, and Arithmetic. This was aptly termed, "payment for results." and the practical ring of the phrase doubtless contributed largely to the success of the measure. The gross result shows an annual "saving" of no less than £400,000, together with, in Mr. Lowe's opinion, "increased efficiency," into the bargain !

But the permanency of that orator's notable triumph was ever liable to be endangered by a grave omission in his subversive system of tactics. He omitted to include Her Majesty's Inspectors in his *taboo*. He had at hand a sufficiently feasible and ready-made plea for their abolition, too; seeing that the occupation of those gentlemen was, in a dignified professional sense, clearly gone; while the proposal would have been ably seconded by personal predilections, if one may draw an inference from various acts of scant courtesy, and a uniformly supercilious bearing. From whatever cause, H. M. Inspectors remained in the field, empowered to report progress to two successive chiefs, neither of whom was above lending an ear to deliberate representations, based on the results of arduous experience acquired at the Queen's expense.

Excellent a beginning to a scheme of national education as the *Revised Code* would unquestionably have been, and admirably fitted as it even still is, as a groundwork for a noble superstructure, it has been ascertained that, as a practical measure, it is capable of improvement: that, for example (r), small schools—generally the most needy section—derive but a meagre proportion of pecuniary benefit from the new form of grant; that (2), the rate at which pupil teachers are everywhere diminishing forbodes the steady decay of that key-stone of the system; and that (3), the higher, non-paying subjects, such as Geography, Grammar, and History, are vanishing, or have already vanished, from the common routine of instruction. With a praiseworthy unanimity, the late Vice-President of the present, and their efforts to supply, at the triffing cost

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The Supplementary Minute of the Revised Code.

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of \pounds 70,000, remedies for the defects alluded to; and, what may be styled, their joint plan has taken the form of a Supplementary Minute.* The title of the new Minute, and Mr. Corry's early assurance that it "did not cancel a single article of the *Revised Code*," ought, in all reason, to have satisfied Mr. Lowe that the latter measure was not about to be "tinkered" and "tampered with;" and it is therefore hoped that his menace of "a speedy and well-merited extinction of the whole system," will graciously be allowed to remain in abeyance, until the country is ripe for a comprehensive, and emphatically *national* scheme.

The heads of the Supplementary Minute are briefly as follow :----

I. The payment *per pass* in reading, writing and arithmetic, respectively, is raised from 2s. 8d. to 4s.—up to the maximum of 120 *passes*; all *in excess* of that number being rated as formerly, at 2s. 8d.

The conditions annexed to this *additional* grant of $\pounds 8$ are (a), that for all scholars above 25 there be an apprentice for every 40, or an assistant for every 80 in *average* attendance; (b), that the number of passes exceed 200 per cent. of the annual average over six years of age, and, further, that one fifth part of the whole number of passes fall under Standards. IV. to VI.; and (c), that at least one-fifth of the average over six years of age pass a satisfactory examination in *any* specific subject or subjects; scholars who have already passed in Standard VI. being, on the same condition, entitled to claim a repetition of the grant.

II. In reference to condition (a), the new Minute offers a distinct aid towards its fulfilment, by means of a prospective *bonus* to schools of \mathcal{L}_{10} and \mathcal{L}_{5} respectively, for every male apprentice admitted into a training school in the first and second class; and the same schools are further entitled to participate in the success of their former apprentices, at the rate of \mathcal{L}_{8} and \mathcal{L}_{5} respectively, according to their rank in the annual students' examinations.

While no doubt can be entertained of the practical judiciousness of these provisions, and of their fitness to dovetail into the structure of the Revised Code, it remains to be seen whether much material advantage will accrue to the smaller schools, shackled as they are by a too heavy expenditure, and deplorable irregularity in the attendance; and whether the indirect inducements held out to apprentice-recruits will prove equal to an emergency which want of confidence in the bona fides of the Government and the large demands of rival labour markets have created. This at least is certain-that the stimulus now given to the conservation or restoration of the old scale of indispensable branches-Geography, Grammar and History (which may be taught singly, or all three successively adjusted to the progress of the several standards), will impart fresh heart to the teacher; and that the moral intention of the measure will be accepted by educationalists at large as an earnest that the legislature did not mean, after all, to throw them eventually on their own, often sorely overstrained, resources.

In regard to the historical phases of the question, we seize this opportunity to disabuse the public mind of the various illusory fictions with

* See page 36.

which the results of the "Government" scheme anterior to the present one have been wantonly beset :----

1. "That system, where adequately developed, was not a failure, but a triumphant success. The teaching was thoroughly good, not superficial and ambitious, but sound and practical." — (Mr. Fraser, Times, April 18, and Commissioners' Report, I. 308—313.)

2. Where the efficiency was at fault, "the great source lay in the want of adequate funds preventing the employment of competent teachers."—(Com. Rep. II. 115.)

3. It was, therefore, a physical impossibility for teachers to pay the requisite attention to the lower classes, especially in cases where pupil-teachers or stipendiary monitors were not procurable. And on the other hand.

4. The unwise extension of the old capitation grant (for attendance alone) to towns above 5000 inhabitants, in addition to the somewhat lavish expenditure on building Primary, and subsidizing Training, Schools, incited warrantable apprehensions as to the pitch which the Parliamentary vote would ultimately be required to reach.

5. The unsatisfactory condition of the lower sections, which, however, was greatly exaggerated, and so amplified in argument as to be made to apply to schools *as a whole*, combined with the desirability of retrenchment to pave the way for a change.

6. Accordingly, when Mr. Lowe propounded the plan of the *Revised* Code, professedly based on the conclusions of the Commissioners, and guaranteed for the measure *efficiency* coupled with *economy*, the assent of the House to the measure was readily given.

7. The new code substituted a simple and palpable, for a cumbrous and indefinite, machinery, and it therefore displayed, among other virtues, a captivating fitness for administrative purposes.

8. But, although many educationalists are prepared to acknowledge its expediency as a basis for a national scheme, those immediately acquainted with its mode of working, or practically engaged in working it, object not so much to the limitation of the scale of subjects, as to the virtual exclusion of *education*, in the true sense of the term, in connexion with the instruction. The form of the teaching is now purely mechanical; the memory and manual dexterity are exercised—the understanding and imagination, not at all. Hence the grave complaint that the "tone" of schools is lowered, a result which could not well be anticipated by Mr. Lowe, seeing that "tone" is neither a quantitive element; nor, as he confessed, cognizable by his intelligence. Obviously it is only by increasing the teaching-power that larger and higher results. can be secured, and we therefore hail the supplementary Minute as a step in the right direction.

NEW EDUCATIONAL MINUTE.

THE following minute by the Lords of the Committee of Council for Education was adopted on the 20th of February last:---

Their lordships, having considered—1. The present ratio of teachers to scholars in the elementary day schools under inspection, and the state of instruction in such schools, as shown by the result of the examinations under article 48 of the code, and by the reports of Her Majesty's inspectors; also, 2. The present supply of candidates qualified for admission into the normal schools for training masters—Resolved :

1. To provide in the estimate for public education in England and Wales, during the financial year 31st March, 1867-8, for an additional grant of 1s. 4d. *per* pass in reading, writing, or arithmetic, up to a sum not exceeding $\pounds 8$ for any one school (department), upon the following conditions beyond those now specified in the articles 38-63 of the code, viz. :--

- (a) The number of teachers must have allowed, throughout the past year (article 17), at least one certificated or one assistant teacher, fulfilling respectively the condition of articles 67 and 91-3, for every 80 scholars, or one pupil teacher fulfilling the conditions of articles 81-9 for every 40 scholars after the first 25 of the average number of scholars in attendance.
- (b) The number of passes in reading, writing, and arithmetic must I. exceed 200 per cent. of the annual average number of scholars in attendance who are over six years of age. In schools where the calculation of average attendance is made indiscriminately upon scholars above and scholars under six years of age, the school registers of age are to determine in what ratio the average number in attendance is to be divided. 2. Fall under Standards IV.—VI. to the extent of at least one-fifth part of the whole number of passes.
- (c) The time tables of the school, in use throughout the past year (article 17) must have provided for one or more specific subjects of secular instruction beyond article 48. The inspector must name the specific subject or subjects in his report, and must state that at least one-fifth part of the average number of scholars over six years of age have passed a satisfactory examination therein.

2. To exempt for one year, from the operation of article 46, children who have already passed in Standard VI., provided they pass a satisfactory examination in the subjects professed in their school beyond articles 48 conformably to section (c) in paragraph I of this minute.

3. To provide in the same estimate for certain new grants to elementary schools wherein it should appear from the inspector's last report that the number of teachers throughout the year (article 17) had been sufficient to satisfy section (a) in paragraph 1 of this minute; such grants to be at the rate of \mathcal{L}_{10} for every male pupil teacher admitted (articles 105-110) from the said elementary schools into any normal school under inspection from candidates placed by examination in the first class, and \pounds_5 for every male pupil teacher so admitted from candidates in the second class.

3. To offer certain further new grants to the same elementary schools for every male pupil teacher who having been admitted from them into a normal school under inspection at the examination (articles 103) held in December, 1867, or at any later examination, should at the end of his first year's residence, be placed in the first or second division (articles 119, 121, 102); such grants to be at the rate of $\pounds 8$ for every student placed in the first division, and $\pounds 5$ for every student placed in the first division, and $\pounds 5$ for every student placed in the second division. No grants of this kind can become payable before December, 1868, and, therefore, although offered now, they have no place in the estimate for the financial year March 1867-8.

5. To pay, in the financial year 31st March 1867-8, only so many twelfth parts of the additional grants offered by this minute as, in the case of grants under paragraph 1, equal the number of months from 1st April to the end of the school year (article 17), and, in the case of grants under paragraph 3, equal the number (nine) of months from 1st April to 31st December (article 81, f. 2.)

THE NEW EDUCATIONAL MINUTE IN THE HOUSE OF COMMONS.

In the House of Commons on Friday, April 5th, Mr. Lowe, on the motion for going into Committee of Supply, moved "That this House dissents from so much of the minute of the Committee of Council on Education as provides for an increase of the grants now made to primary schools." He entered into an elaborate argument to show that in most cases the money granted under this minute would be wasted, and that it would do mischief instead of good. He stated that the minute involved an increased expenditure of \pounds 70,000 a year, and he contended that this was not justified, considering the steady and satisfactory progress which had been made under the system introduced in 1862. There had already been an increase in the number of pupils amounting to \pounds 110,000, and a saving of \pounds 400,000, as compared with the expenditure under the old system.

Mr. Corry defended the minute, and explained that its object was to give assistance to small schools. He had felt from the representation made to him that these schools were entitled to aid, and it was upon his recommendation that the minute had been issued.

After some observations from Mr. P. F. Powell,

Mr. H. A. Bruce said the result of the new system introduced in 1862 was that the schools were receiving two-fifths less than they received formerly, the sum paid being $\pounds 620,000$ instead of a million. As to the minute, his only objection to it was that it was too economical.

Mr. Henley and Mr. Pugh supported the minute.

Mr. Hadfield denounced all State education whatever.

Upon a division Mr. Lowe's motion was rejected by 203 to 40.

FORTHCOMING UNIVERSITY EXAMINATIONS.

OXFORD.

THREE scholarships of \pounds 70 a year each for three years, having been founded in Balliol College by Miss Hannah Brackenbury "for the encouragement of the study of law and history, and of the study of natural science, or one of the aforesaid studies, in order to qualify students for the professions of law and medicine respectively;" there will be an examination for one Scholarship, in the subject of natural science, in November next; the precise time and further particulars to be announced hereafter. Candidates must not have exceeded eight terms from their matriculation. Papers will be set in the following subjects:—I, Mechanical Philosophy and Physics; 2, Chymistry; 3, Physiology; but candidates will not be expected to offer themselves for examination in one or more of the above subjects, if the Examiners should consider it expedient.

On Saturday, May 4, there will be held an election at Merton College to—I, One Classical Postmastership, value \mathcal{L}_{100} per annum, tenable for five years; 2, one Mathematical Postmastership, value \mathcal{L}_{80} per annum, tenable for five years; 3, one Classical Postmastership, value \mathcal{L}_{80} per annum, tenable for five years; 4, one National Science Scholarship, value \mathcal{L}_{60} per annum, tenable for five years. Candidates for the above must be under twenty years of age. Also, 5, one Classical Postmastership, value \mathcal{L}_{80} per annum, for five years, open to candidates of any age; 6, one Exhibition, value \mathcal{L}_{25} , for three years, also with no limit of age. Candidates for the Natural Science Scholarship will be examined in the ordinary classical matriculation subjects; viz., a portion of a Greek and Latin author, Latin writing, grammar, arithmetic, and algebra; and to those who pass this examination, papers will be offered in physics, chymistry, and physiology. The examination begun April 30th.

A Fellowship will be filled up at Lincoln College on Tuesday, July 2. Candidates must call on the Rector some time before the 25th of June. The examination will begin on Tuesday, the 25th of June, at 10 a.m. The Fellowship is open to all members of the University who have passed all the examinations required for the degree of B.A. The Fellow elected will be required to reside, and, except under certain contingencies, to take Holy Orders, within ten years.

There will be an election at Brasenose College on Friday, May 10, to (at least) four open Scholarships—viz., three of the value of $\pounds 80$ a year during residence, and one of the value of $\pounds 73$ during residence. One of the former will be awarded for proficiency in mathematics, subject to a pass examination in classics. Candidates, who must produce evidence of being under 20 years of age, and must bring testimonials of good conduct from their college or school, are required to present themselves to the Principal between 8 and 9 p.m. on Monday, May 6, or between 9 and 10 a.m. on Tuesday, May 7. The examination will begin at the last-named hour.

There will be an election to an Open Scholarship in Pembroke College on Friday, May 17. The Scholarship is worth $\pounds 72$, and is tenable for five years. An Exhibition, worth $\pounds 50$, may be filled up at the same

time. In awarding this, the pecuniary circumstances of candidates will be taken into account. The examination will commence on Tuesday, the 14th, at 10 a.m., and candidates must be under 20 years of age.

CAMBRIDGE.

THERE will be an examination for two Exhibitions at King's College on the 12th, 13th, and 14th of June. The Exhibitions will be of the value of \pounds 50 per annum, and will be tenable for three years, or until such time as the student shall succeed in obtaining one of the Open Scholarships hereafter to be offered by the College. Candidates must be under 20 years of age, and have not previously entered any other College in the University. Further information may be obtained from the Rev. W. R. Churton, Tutor of the College.

There will be two minor Scholarships at Clare College open for competition to those intending to commence residence in October, of $\pounds 60$ each, tenable for two and a half years, or till exchanged for a Foundation Scholarship. The examination will commence on Wednesday, June 5, at 9 a.m. These Scholarships will be awarded to deserving candidates only. Preference will be given to those who show special proficiency in either classics or mathematics. Candidates to send in their names, with testimonials as to character, to the Rev. W. Raynes, tutor. Subjects for examination :--Latin and Greek translation and composition; Euclid, plane trigonometry, arithmetic, algebra, geometrical and analytical conic sections.

An examination for four Minor Scholarships will be held in Downing College on Wednesday, the 5th of June next, and the two following days, and will begin at 9 a.m. on Wednesday. The examination will be in Classics and Elementary Mathematics, but some weight will be given to proficiency in French and German. Two additional papers of an elementary character will be set, one on Moral Philosophy, in connexion with the principles of Jurisprudence, and on International Law; the other on the Natural Sciences in connexion with Medicine-namely, Chymistry, including Analysis, Mineralogy, Botany, Comparative Anatomy, and Physiology: and in awarding two of these Scholarships considerable importance will be attached to any special proficiency in the legal or in the medical subject. Persons who have not been entered at any College in the University, or who have not resided one entire term in any such College, are eligible to these Minor Scholarships, which will be of the value of $\pounds 40$ per annum, and tenable for two years, or until their holders are elected to Foundation Scholarships. No one elected Minor Scholar will receive any emoluments until he has commenced residence as a student of the College.

The syndicate for conducting the non-gremial examinations at Cambridge have just presented a report as to the girls' examination, which was originally put forward merely as a three years' experiment. They state that the scheme has been a complete success, and recommend that the examination be made a permanency. No lists are to be published, but each girl who passes is to receive a certificate, and those who have passed with credit, certificates of honour. The examinations are

Forthcoming University Examinations.

to be at the same times and in the same subjects as those of the boys. For the junior examination the girls are not to be more than sixteen years of age, and for the senior examination not more than eighteen years; all, except in cases where the parents disapprove, are to be examined in religious knowledge.

THE OXFORD LOCAL EXAMINATIONS .- The Oxford Local Examinations will be held this year at Oxford, London, Bath, Birmingham, Brighton, Exeter, Faversham, Finchley, Gloucester, Leeds, Lincoln, Liverpool, Manchester, Northampton, Nottingham, Southampton, Taunton, Truro, West Buckland, Windermere. The examination will commence in each place on Tuesday, the 11th of June, at 9 o'clock, a.m. The Master and Fellows of Balliol College, Oxford, anxious to encourage middle-class education, have offered five exhibitions to be competed for at the Oxford Local Examinations in the present year. These exhibitions will be of the annual value of £52 10s., and will be tenable during residence for four years. They will be offered to those among the senior candidates who shall obtain the highest places in the first division of the general list. The Exhibitioners will be expected to produce testimonials of good conduct, and to commence residence in January, 1868; and will be required to pass the first of their University Examinations (Responsions) within six months. The Exhibitioners will have to pay to the University an admission fee of \pounds_2 10s. and an annual fee of \pounds_1 . They will also have to pay to Balliol College the annual sums of \pounds_{22} 8s. for tuition, and of \pounds_{10} for furnished lodgings; but they will not be subject to any other College charges, and they will be able to regulate the expense of their own living.

MIDDLE CLASS EDUCATION IN THE METROPOLIS. - The second annual meeting of the Governors of the Corporation lately established by Charter for the promotion of Middle Class Education in the Metropolis, was held on Monday, March 18th, in the Mansion House, the Lord Mayor in the chair. The school in Bath Street, City Road, was opened at Michaelmas, and the Council congratulated the Governors on the success which had attended it. During the first quarter there were 518 scholars, there are now 650, with upwards of 200 applicants for admission, for whom the Council cannot find accommodation in the present building. They hoped to be able to obtain from the Ecclesiastical Commissioners, with whom they were in treaty on the subject, upwards of an acre of freehold ground of the Finsbury estate, on which a school capable of accommodating 1000 scholars could be built. The erection of a similar school would shortly be commenced in Southwark. There was a sum of $\pounds_{48,412}$ in hand. The report and statement of accounts were adopted. Sir John Lubbock, Mr. Alderman J. Lawrence, Mr. J. P. Gassiot, Mr. Samuel Morley, Mr. Sheriff Waterlow, and others, addressed the meeting. Letters were read from Mr. Goschen and other members of Parliament, regretting their inability to attend. After the transaction of some formal business, a vote of thanks to the Lord Mayor closed the proceedings.

KING EDWARD'S SCHOOLS, WITLEY, GODALMING.



HE pleasant and healthy neighbourhood of Witley, a village and railway station on the line from London to Portsmouth, a few miles beyond Godalming, has been chosen as the new site of the above schools, consisting of an Industrial School

for Boys, and a Girl's School. The schools were formally opened on Friday, April the 5th.

It is worth while to glance at the history of this foundation. In the year 1552 the citizens of London presented a supplication to King Edward VI., "in the name of the poor, and for Jesus Christ's sake, that his Majesty would be pleased to grant them one of his houses, called the Palace of Bridewell (situated between St. Bride's Church and the Fleet, which is now New Bridge Street), for the harbour and lodging. of the said poor. This request was granted; and while stringent lawswere enacted to put down the social evils of beggary, misery and thievery, which were then rife in the city of London, it was provided that the poor-house at Bridewell should be a workhouse, where those who needed relief at the public cost should be compelled to earn it by their labour. But the legislators and social reformers of that day, being wiser, apparently, than we are now, did not think it was doing enough to deal with the case of adult pauperism. They sought also to prevent its growth, by teaching the young to work for an honest living. "And first," say the citizens of London, in their supplication to the King, "we thought to begin with the poor child; that he should be harboured, fed and clothed, and virtuously trained up;" whereupon they proceed to state their plans for the establishment of the Industrial Schools, or "House of Sundry Occupations," in which a variety of useful trades may be taught to the boys and girls who would else be running wild and wicked in the streets. So truly did the benevolence or prudence of the Londoners, three hundred years ago, anticipate the efforts of the founders. of our modern "Homes" and "Refuges," which are "supported by voluntary contributions," and are confessedly unequal to the wants of the present time. Bridewell Hospital was intrusted, in 1557, to the management of the governors of the House of Bethlem, which was then situated on the north side of the City walls, outside Bishopsgate, and was afterwards erected in Moorfields. It very naturally came to pass that, in connection with the relief of the destitute, and with the education of children at Bridewell, there were cells or prisons for the punishment of beggars, prostitutes, and other disorderly persons, as well as of idle or disobedient apprentices, such as we see in some of Hogarth's pictures; this part of the establishment, with the whipping-post and stocks, being under the magisterial jurisdiction of the Aldermen of the city of London. In 1831 the Schools and House of Occupations belonging to Bridewell were removed from New Bridge Street to a site adjoining the premises now occupied by Bethlem.

The prison and the workhouse have been superseded by the modern establishment of Houses of Correction in the one case, and by the

King Edward's Schools, Witley, Godalming.

operation of the New Poor Law in the other; but King Edward's Schools have continued their useful work. This institution was, for many years, to all intents and purposes, a reformatory school for juvenile criminals; in fact, it might claim the honour of having set the first example of that great movement which has latterly been carried on by the reformatory schools established in London and in other parts of the kingdom. We find it stated in a report by the chaplain, the Rev. E. Rudge, that, so lately as 1856, nearly one fourth of the inmates of King Edward's Schools were convicted criminals, and some of the boys had been several times in prison. The institution is now placed on quite a different footing. It has been converted into a school rather for destitute than for criminal children. By the existing rules, criminal children are not to be received, except in special cases, and the proportion of them is limited to one sixth part of the whole number of inmates : but. practically, even this proportion has never been reached since the new scheme came into operation, and there are now only two or three of the boys who have been convicted of crime. A few destitute cases are admitted from the city of London on the recommendation of the Alder-The number of boys at the end of last year in the schools was men. 74, and of girls 100; the total number of both sexes from 1830 to 1866 inclusive having been 3653. Their average age on admission is twelve or thirteen. Some of the boys are instructed by "arts-masters" in such trades as tailoring and shoemaking, to which gardening will now perhaps be added; the girls learn needlework, and that of the kitchen and laundry; the school teaching consists of reading, writing, arithmetic. English history, geography, singing, and the Church Catechism. Of those who left the school during the last year, twenty boys entered the royal navy, eleven entered the army, and others were apprenticed to trades, or sent home to their friends; the girls were placed in domestic service. By a wholesome and praiseworthy regulation, 178 boys and 42 girls, former inmates of the schools, attended before the committee of governors with certificates of good conduct from their employers, and received the customary reward of $\pounds I$ each, some for the first time, others for the second or third time; as the governors keep an eye upon them during three years from their leaving the schools.

UNIVERSITY EDUCATION.—The Bill brought in by Mr. Ewart, Mr. Neate, and Mr. Pollard-Urquhart to extend the benefits of Education in the Universities of Oxford and Cambridge to students not belonging to any college or hall, provides that, notwithstanding anything contained in any Act of Parliament now in force relating to either of the Universities of Oxford and Cambridge, or in statutes, charters, deeds of composition, or other instruments of foundation, of either of the said Universities, or of any college or hall within the same, any person may be matriculated without being entered as a member of any college or hall, and may, if he shall think fit, join inmself to any college or hall, with the consent of the head thereof, but without being obliged to reside within the same; and every person so matriculated shall in all respects and for all intents or purposes be and be considered as a member of the University, and upon joining any college or hall shall in all respects and for all intents or purposes be and be considered as a member thereof. For the purposes of this Act the cathedral or house of Christ Church, in Oxford, shall be considered to be to all intents and purposes a college of the University of Oxford.

MR. GLADSTONE ON COMPULSORY EDUCATION.—Mr. Gladstone has addressed the following letter to the Rev. J. Oakley :—

"11, Carlton House Terrace, S.W. Feb. 20.

"Rev. and dear Sir,—I have read the report of the sub-committee of the London Diocesan Board of Education with much interest, and it is from no feeling of indifference or aversion if I decline to take part in its proceedings on the subject. It is because I make it a rule on all questions of a nature to come before Parliament for its decision, to avoid, if possible, taking any part beyond its walls, in order that I may be at liberty to act freely for the best at the proper time.

"As regards opinion, however, I may say that while I well understand, or at least appreciate, the grounds of the present movement, and am very glad that the clergy, under the bishop, have entered actively into the matter, I yet see much difficulty in the way of direct compulsory measures. I have always leaned very much to a scheme, the main point of which was, that it should be made penal to employ for wages persons below a certain age not furnished with certain certificates of education and attainment.

"A plan of this kind was prematurely proposed some years back in a bill by Mr. Adderley, and was rejected on account of the immature state of circumstances, which, however, must probably ripen from year to year. A measure of that nature might be brought into action gradually, like the new law of 1834.

"I remain, dear Sir, your very faithful servant, "Rev. J. Oakley." "W. E. GLADSTONE.

NOTICES OF NEW BOOKS.

Calisthenics; or the Elements of Bodily Culture—On Pestalozzian Principles, designed for Practical Education in Schools, Colleges, Families, &-c. By HENRY DE LASPEE, 2nd Ed. Griffin & Co.

THIS work is well known to teachers of Calisthenics, and has been so often favourably noticed, that we need here merely record the appearance of a second edition of it. In the preface the author makes the following remarks:

"In reply to the chief objections raised against my system: First, 'That it is too scientific and laborious for general use,' I can only say, that having myself been from early youth regularly trained, and being perfectly well acquainted with all which passed for, and was admitted into schools as, Physical Education; it was the inadequacy and inefficiency as branches of Education, which caused me to deviate from, and relinquish them, and led me to this system, as more simple and comprehensive than the others; and which will be found to be so, after a little study, when it will enable any judicious teacher, governess or mother, to teach and apply it with good effect. Secondly: 'that I had copied my work from another abroad,' is easily answered, when I state, that, even to this day, there exists not another book on the subject of Physical Education, like mine: methodically treated as to tendency, from elements to object. When I resolved and proceeded to commit my system to writing, it had no precedents, nor were there authorities, which I could have constilted, except Pestalozzi's method, for the treatment of the subject of Bodily Culture. Pursuing the same, the course lay already before me; I was no more my own master, so as to write down, or leave out, what I wished; and even what remained of my own prejudices had to give way, to what method dictated."

An Elementary Physical Atlas, intended chiefly for Map drawing. By the

Rev. J. P. Faunthorpe, B.A., F.R.G.S., Vice-Principal and Geographical Lecturer of Battersea Training College.

MAP DRAWING though comparatively a new branch of instruction is, in Middle-Class, as well as Primary Schools, steadily attaining the prominence it deserves as a mechanical aid towards, and confirmatory test of, Geographical knowledge. The work before us is the latest, and one of the most meritorious efforts in this direction ; and, as the Battersea students have always stood in the first rank in this subject, in connexion with the Certificate examinations, the authorship is a satisfactory guarantee of the practical ability displayed in this compilation. The maps are severally executed in Mr. Stanford's well known style; and the whole is preceded by concise instructions in letter-press, first, in regard to the general difficulties, and, secondly, in the form of specific directions for each map

Questions and Answers on Geography, the Globes and Astronomy with a short Account of the Winds, Tides, Air, &c. By J. J. HOOKE. London: T. J. Allman.

THIS new Historical Geography of Mr. J. J. Hooke, supplies a desideratum long felt in schools; seeing it contains a large amount of information, interestingly put together, and which is found in no other book of the same kind. The answers to the questions are not verbose, nor is there one word *de trop*; and, therefore, the pupil is not necessitated to cull his information from matter which is often made obscure by a too profuse use of words.

We do not say that Mr. Hooke's book is superior to other geographies or even that it is equal to some; but we consider it is free from the fault which many of them have, viz., of saying too much, and thus wearying the pupil; or of others, which are too meagre. The subjects introduced are, of necessity, numerous, so that the amount of instruction contained in so small a compass is somewhat surprising. A brief discourse on Astronomy is added; but no more is said about it than the youthful mind can readily comprehend. There are also short chapters on the Winds, Tides, Air, Eclipses, the Thermometer, and various other subjects, all explained in as concise a form as possible, and in a manner capable of being easily understood by the learner.

WORDS.

Passages from various Writers in illustration of certain words. The words arranged alphabetically.

Abrade (to wear away). "For fifteen years the treaty of Vienna was observed as sacredly as if it had been written on the skies; and it has taken nearly fifty years altogether to ADRADE this mighty landmark down to the level of history."— TIMES.

Absinthe (a narcotic). "The American Tax Bill adopts all these in an exaggerated form, and swallows them as a whet, just as an epicure swallows a taste of ABSINTHE or an anchovy, or half-a-dozen oysters, to prepare the appetite."—TIMES.

Abstention (restraint). "The dignity of France will end by being compromised and ABSTENTION will become a duty."— TIMES.

Absume (to destroy gradually). "Since we last mentioned the Pontiff, his patrimony had ABSUMED away from him like grease before the fire."—TEMPLE BAR.

Acclaim (shout of praise). ""The Liberty of the Press; it is the air we breathe, if we have it not we die !" And then what stentorian cheering till the walls of the old Crown and Anchor shook again; and the crowds in the Strand took up the ACCLAIM —and even sleepy Temple Bar seemed inclined to make an effort towards an echo." —THES.

Acclimatized (inured to a climate). "The general good health of sailors in the Arctic regions proves nothing against the depressing influence of cold, for these sailors are picked men, and in the prime of life. Under such circumstances it may, perhaps, be possible to become 'ACCLIMA-TIZED,' and to feel the cold less the longer the exposure to it."—TIMES.

Acolyte (boys attendant upon the priesthood. "Then comes the bishop in his mitre, his yellow stole upheld by two principal priests (the curate and sub-curate), and to him his ACOLYTES waft incense, as well as to the huge figure of the Madonna which follows."--ROBA DE ROMA, BY W. STORY.

Acumen (quickness of intellect). "In the north of America the people are all protectionists, in the south they are all free-traders, not because the south possesses any greater amount of logical ACUMEN

than the north, but because each acts only for its own interests."-TIMES.

Adhibit (to apply). "In May 1830, George IV. became so greatly debilitated that it was found inconvenient and painful for him to sign with his own hand public documents; a bill was, therefore, passed allowing the sign manual to be ADHIBITED by a stamp in his Majesty's presence."— DR. FARE.

Egis (a shield). "But as General Hunter has friends in the cabinet, and is supposed to be sheltered under the broad ÆGIS of Mr. Secretary Stanton, to whom the president defers in military matters, it is possible that he will be allowed to retain his post."—TIMES.

"Providence has covered you with its ÆGIS, and the country with its acclamations."—ADDRESS OF THE LEGISLATIVE BODY TO THE EMPEROR NAPOLEON, MARCH, 1861.

Esthetic (the science of our feelings and emotions.) "No rich drawing-room could show more taste in its arrangements, or have a more soothing effect on a mind to which the sense of *ESTHETIC* fitness is its native element."—MISS MULOCK.

"A purely painful domestic tragedy indeed, or a subject calculated merely to harrow up the feelings of the spectator, or to excite feelings of horror and disgust like many of the Spanish pictures of martyrdom, should, in our judgment, be proscribed as violating ÆSTHETIC propriety." —TIMES.

Affluent (flowing). "There is another word which I have just employed — AFFLUENT—in the sense of a stream which does not flow into the sea, but joins a larger stream; as, for instance—the Isis is an affluent of the Thames, the Moselle of the Rhine."—DR. TRENCH.

Agglomerate (to gather up as a ball). "The rest of the place and of the inhabitants, as I saw it, and them, might be considered as an AGGLOMERATE of three or four sheds, a few long huts, a saw mill, and some twenty negroes sitting on a log looking at the trains."—TIMES CORRE-SPONDENT (MR. RUSSELL).

Agnatic (a descent from the same father).

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"The Duchies can, therefore, in no way pretend that violence has been done to their rights. Their AGNATIC succession has been completely respected, and is now the law of the whole monarchy. The only question then, regards the Augustenburg family."—TIMES.

Alembic (a vessel used in distilling). "The moment a doctrine is propounded, hundreds of busy brains are at work to look at it, from every possible point of view, to ventilate, to sift, to examine, and regard it under every conceivable light or shade. In this fiery ALEMBIC truth is effectually separated from falsehood, and things are brought down from vague generalities [to practical principles." — TIMES.

"Cobden's ideal of universal peace was not perchance the highest; but everything that was good and noble in his idea remains with us, and is still a part of our vital force. Purged of its crudities, in the sacred ALEMBIC of death, it is now of tenfold worth and purity." — TELE-GRAPH.

Ambidexter (a double dealer). "Incomparably more brilliant, more splendid, eloquent, accomplished, than his rival, the great St. John could be as selfish as Oxford was, and could act the double art as skilfully as AMBIDEXTROUS Churchill (Marlboro)."—THACKERAY.

Amenities (agreeableness of situation). "I see nothing in the acquirement of a livelihood by manual labour that degrades a man of good character. I want to know why it i is that these AMENITIES of life should be confined to one class—that the man that gets his livelihood by mere manual labour should not be as refined as the greatest man in the land."—MR. ROEBUCK.

Amplify (to enlarge). "I cannot, however, go along with the honourable member in thinking that the mere abolition of passports is a great security for peace between two nations, and I think that in making such an assertion, the hon. member rather AMPLIFIES a small matter."— LORD PALMERSTON.

Amplitude (*largeness, abundance*). "Had Mr. Page only put the public to great inconvenience by pulling down the old Westminster Bridge, and stopping the traffic till the new one was thrown open in all its AMPLITUDE of way, what a jubilee there would have been at its opening."— TIMES.

Anachronism (an error in computing time). "And now that Italy has organ-

ized herself, and the period of revolution has passed into that of regular and established government, the intervention of France is an ANACHRONISM which she herself ought to be the first to recognize."— TIMES.

"For the ancient history of Egypt, four authorities] are relied upon; they differ one from another by hundreds, indeed by thousands of years. To make Napoleon the Great the immediate successor of Charlemagne would not be a greater ANA-CHEONISM than is to be found in comparing the assertions of the four authorities in question."—EXAMINER.

Ancillary (subservient). "The mover and supporters of this bill very fairly avow that it is the first step towards proposing the ballot for parliamentary elections. One honourable member has told us that it is ANCILLARY and supplementary to a proposal of vote by ballot."—LORD PAL-MERSTON.

Angularities (angles or corners). "We have debated upon public affairs till we have hardly left to ourselves a substantial difference of opinion to debate about.— We have rounded the corners, and planed off the ANGULARITIES, till there is hardly anything left to lay hold of."—TIMES.

Anneal (to temper). "In that case war would gratify the warlike passions of the American people, both north and south, and would tend in popular opinion to strengthen and ANNEAL the broken links of their ancient partnership."—TIMES.

of their ancient partnership."—TIMES. Anomalies (irregularities). "It is inevitable that the question should arise shall these ANOMALIES be meddled with? shall it be attempted to remove them, and bring writing and speech into harmony and consent."—DR. TRENCH.

"The new ANOMALIES which it introduces, and the old ANOMALIES which it spares and re-enacts, are equally mischievous and unmeaning."—TIMES.

Anomaly (a deviation). "The Horse Guards receive three-pence a day—or twenty-five per cent. more pay than the Blues. This has gone on for many years —at last the ANOMALY struck some meditative individual, and he devoted his leisure to an historical inquiry into the matter."—TIMES.

Anonyme (*feigned name*). "Historicus in his reply to me yesterday, does himself great credit as an adroit special pleader, whatever judgment must be passed upon that candour which his chosen ANONYME seems to claim."--G. N. SAUNDERS.

THE AGENCY DEPARTMENT

In connection with the "Quarterly Journal" is conducted by Mr. F. S. de Carteret-Bisson, at 70, Berners Street, Oxford Street, W., to whom all Communications relating to this Department should be made.

No. in Register. SCHOOLS FOR SALE.

281. LONDON.-Superior School for Ladies. Established 25 years, and situate in a favourite suburb of London. Average attendance 30 Boarders : terms 50 guineas each, besides extras (day pupils easily obtained if desired). A splendid detached Mansion, standing in its own grounds, with lawns, croquet ground, conservatory, and every convenience. Rent £130. Gross receipts past year £2,007 7s. Goodwill £650. School fixtures and furniture at valuation. The average gross receipts for past 3 years are £1,990 6s. 4d. The house and grounds are in every way suited for a high class school. A bath room and hot and cold water for the upper rooms, also gas has been introduced at the vendor's Books and accounts (clearly expense. kept) may be seen at Mr. Bisson's Office, extending over a period of 10 years.

- 229A. MIDDLESEX.—A Boarding and Day School for Gentlemen's sons, situate in a healthy locality in the N.W. district of London. A capital house, well adapted for school purposes, large playground and garden adjoining, all held upon lease (9 years unexpired) at the low rental of £60. There are 25 Boarders, averaging from 25 to 40 guineas each, 3 day boarders, and 3 day pupils, paying good terms. The gross income for past year was £800. Terms for goodwil £200; household furniture or part can be taken, if desired, at a valuation.
- 295*. STAFFORDSHIRE.—A Boarding and Day School for Boys, established 10 years. There are at present 20 boarders. Terms 28 to 30 guineas, with extras, and 50 day pupils, paying £5 and £6 a year, besides extras. There is a good play-ground with outbuildings. Rent £60, taxes about £10. The gross receipts the past year were £900. Terms of sale, goodwill £300, (a year's purchase). School and household furniture at a valuation.
- 240. MIDDLESEX.—The nucleus of an old established School, with a splendid and commodious Mansion, in thorough repair, to be obtained on most advantageous terms. The house is an elegant building, and can accommodate 50 to 60 Boarders; it is situate in a favourite

No. in Register.

- suburb. Held on lease, 14 years unexpired, at a very low rental. The rent of the mansion is only £150 (worth £250). Price for this valuable lease, £550; fixtures and fittings at valuation. Full particulars, with view of house, on application at 70, Berners Street.
- 299. MIDDLESEX.—A high class School for Gentlemen's sons; numbering 75 Boarders. The premises are delightfully situate not far from Town, and are his ownfreehold property, comprising a commodious house, with dormitories, schoolrooms, out-houses, master's residence, covered play-ground, fives-court, a cricket-field of 5 acres, gardens, &c. The terms for pupils were originally from 60 to 80 guineas, but they have been raised to 80 and 100 guineas. Rent only £200 per annum, goodwill £3,000 to be spread over a number of years. Furniture at valuation.

SCHOOLS AND PARTNERSHIPS WANTED.

Mr. Bisson calls the attention of intending purchasers to his Bi-monthly List No. 4, issued gratis, on the 2nd inst. The successful result of a large number of negotiations (see page 8) has reduced the school properties at present in the market to a very small number.

- 271. A B.A. of Dublin seeks a partnership, £1000 at command.
- 274. A B.A. of Dublin wants a school near Town.
- 275. A B.A. of Cambridge wishes to join as partner, £500 to invest.
- 276. An M.A. of Cambridge desires a partnership.
- 281. A B.A. of Cambridge in orders will buy a good school.
- 283. A B.A. of Oxford, £300 to invest.
- 284. An M.A. of Cambridge (in orders), £1000 at command.
- 285. A Wrangler. Experienced. £300 to invest.
- 286. A B.A. of Oxford. £500 to invest.
- 272. A Middle class Boarding and Day School wanted.
- 273. An experienced Tutor (age 24) desires a partnership.
- 276. A B.A. of Oxford wishes to purchase a School. £1000 to invest.
- 277. A Clergyman wishes to purchase a good School near London.
- 278. A Clergyman (in high honours) wants a first class School.

Schools, &c., Wanted—continued.

280. An experienced teacher seeks a good Partnership. Capital to invest, £700.

282. A Clergyman wishes to purchase a School in Hants, Bucks, or London.

279. An M.A. of Cambridge seeks a good opening, Partnership or otherwise.

The following are a few Lady Clients, who wish to purchase Schools. 300. A Lady wants a small school, near

London. Capital £150.

No. in Register.

 A small preparatory School for Boys. £250 to invest.

302. A boarding School for Girls. £300 to invest.

303. A School for Ladies, near Town. £500 at command.

300. A boarding and day School. £800 at command.

305. A small School. Capital £300 to invest.
306. A good School, near Town. Capital to invest, £700.

TUTORS SEEKING APPOINTMENTS AT THE MIDSUMMER QUARTER, 1867.

No. in Register.

Graduates.

- 4667. B.A. Oxford (in orders). Classics, mathematics junior, chemistry, French, German and English subjects. Age 27, experience 6 years, salary £120.
- 4738. B.A. Cambridge. Classics, mathematics, French and English subjects. Age 24, salary £100.
 4771. M.A. and B.A. Cambridge. Classics.
- 4771. M.A. and B.A. Cambridge. Classics, mathematics, French, German and English subjects. Age 30, (in orders), Salary £180.
- 4778. B.A. Cambridge, (Senior Optime) Classics, mathematics, French, German, Drawing and English subjects. Age 24, salary £100.
 4887. M.A. Dublin. Classics, mathema-
- 4887. M.A. Dublin. Classics, mathematics, music, organ singing and English subjects. Age 30, salary, £120.
- 5015. B.A. Cambridge (19 Wrangler). Classics, mathematics, English. Age 22. Salary £150.
- 5059. B.A. Durham (in honours). Classics, mathematics junior, English subjects. Age 25, salary £100.
- 5063. B.A. of Cambridge (Wrangler and 2nd Class Classical Tripos). Age 27, salary £200.
- 5074. B.A. Oxford. Classics, mathematics, and English. Age 27, salary £120.
- 5086. B.A. Cambridge (Wrangler). Classics, mathematics, and English subjects. Salary, £150.
- 5135. B.A. Oxford (in orders). Classics, Mathematics, German and English subjects. Age 28, salary £120.
- 5156. B.A. Cambridge (15 Wrangler). Classics, mathematics, French and English. Age 24, salary £150.
 5334. M.A. Cambridge. High Second
- 5334. M.A. Cambridge. High Second Classical Tripos. Classics, French, English. Age 27, salary £150.
- 5346. B.A. Oxford. Classics, mathematics, French and English. Age 22, salary £100.

5361. B.A. Oxford, (2nd class Classical honours). Classics, mathematics, and English subjects. Age 27, salary £150.

English Masters.

- 4710. Classics, moderate mathematics to quadratics, French gram. English subjects. Age 22, salary £25.
- 4883. Classics, mathematics, French and English subjects. Age 28, salary £60.
- 4897. Drawing, all styles, and English subjects. Age 24, salary £60.
- 4912. Classics, mathematics, drawing, music, and English subjects. Age 21, salary £30.
- 5041. Classics, mathematics, French, Drawing and English subjects. Age 36, salary £50.
- 5056. Classics, mathematics, and English subjects. Age 21, salary £30.
- 5107. Classics and mathematics, high, French, German, and English subjects. Age 30, salary £60.
- 5114. Classics and mathematics, high, and English subjects. Age 24, salary £45.
- 5173. Mathematics, English subjects, piano, organ, &c. Age 21, salary £30.
- 5309. Classics, mathematics, French, piano, and English subjects. Age 20, salary £30.

Foreign Masters.

- 136. French and drawing in all styles. Age 30, salary £50.
- 315. French, German, drawing. Age 27, salary £50.
- 277. French, German, classics, piano, organ. Age 29, salary £50.
- 404. French, German, mathematics, drawing. Age 24, salary £40.
- 416. French, German, drawing, music. Age 24, salary £50.
- 418. French, classics, mathematics, music, piano, drawing. Salary £60.
- 150 numbers omitted for want of space.