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JAMES V. WRIGHT, *General Manager.*

TORONTO, OCTOBER 14, 1886.

MR. HOUSTON'S vigorous letter on women's education and women's health will be interesting to many of our readers—indeed the subject is one of the most interesting and important of the day.

Neither Dr. Withers-Moore nor Mr. Houston are altogether right, nor are they altogether wrong. Dr. Withers-Moore says higher education unfits women for maternal duties, and quotes high authorities to prove it. Mr. Houston says higher education does not unfit them (whether maternal duties are women's "proper function" or not we need not here discuss), and quotes statistics to prove his position. No doubt a higher education could be so conducted as that it would improve rather than injure the health of women; but no doubt also higher education does sometimes affect the health of many women, and both Dr. Withers-Moore and Mr. Houston can point to instances to support each of these positions.

Where both are wrong, we venture to think, is in failing to recognize a most important element of the problem.—Have not the women of the upper classes led for generations a life very different from that of the men of their own rank? a less wholesome life? The men have walked, ran, jumped, rowed, played football and cricket, contested in annual athletic sports till they were seventeen or eighteen, perhaps till they were twenty-four or twenty-five. And after this, even if they entered close offices or engaged in wearing vocations, at all events they dressed fairly sensibly, went out in all weathers, and indulged in a certain amount of out-door exercise. The women, on the contrary, at fifteen or sixteen had to give up their skipping, and climbing, and "cross-tag"-playing, and take to those two dreadful occupations, with the equally dreadful names—deportment and calisthenics. And as to their dress—appearance seems the only thing to be considered.

It is this that has unfitted women for higher education. It is not the higher education that ruins them for maternal duties.

It is a fact as lamentable as it is undeniable that, in the vast majority of cases, the women of our best classes of society sacrifice health to appearance. Any work on Gynecology will be found to uphold the assertion, and our Gynecologists are the best judges of these matters. Assuredly their tastes are high and refined; their sensibilities delicate; feelings exquisitely sensitive; their intellects cultured in the best sense of the term. And to all these attributes the men of the present day owe perhaps all those finer traits by which they differ from the men of barbarous ages. But the fact remains: physically women are not as strong as Nature intended they should be.

"MORE than half the population of Canada," says an exchange, "get a living by cultivating the land. The whole population by the census of 1882 was 4,324,810, which, at a rate of 5 persons to

a family, would give 864,962 adult males. Of these 464,025 are classed as occupiers of land, 403,491 being owners, 75,245 tenants and 3,289 employees. The occupiers of 10 acres and under numbered 75,286, between 11 and 50 acres, 93,325; between 51 and 100 acres, 156,672; between 101 and 200 acres, 102,243, and over 200 acres, 36,499. Although more than half the people are farmers and the families of farmers, we never heard any complaint about an over production of wheat, or potatoes, or butter, or eggs."

There is an argument concealed in the last sentence. It is practically impossible that there should be an over-production of wheat. Wheat is a necessity of life, and the market for wheat is the whole civilized world. The supply can practically never exceed the demand. The more wheat there is, the cheaper it becomes, and the more people are supplied with more and better food. The price of wheat is the chief controlling factor of the price of all other commodities. Too low it could not go.

It would be hardly necessary to state these facts—facts to be found in some form or another in any work on Political Economy—if the sentences quoted above did not contain an important truth for us from an educational standpoint. The fact is Canada can afford to give up far more than fifty per cent. of her population to agricultural pursuits. It is because so many are tempted from these pursuits that we find the learned professions overcrowded. There cannot be an over-production of wheat, potatoes, etc.; but there can be an over-production of clergymen, lawyers, doctors, and teachers. These latter can cater for the wants of only some four million people; farmers can cater for the wants of all Europe in addition to all America. Two hundred millions of people are ready to buy wheat—Canadian wheat if they can get it; only four millions of people can use Canadian clergymen, lawyers, doctors, or teachers. But on this subject we shall have much to say in a future issue.

Contemporary Thought.

ATTENTION has also been called in the *Times* to a matter which arouses interest in some Canadian circles. In reviewing editorially the report of the Minister for Foreign Affairs of the kingdom of Hawaii, the *Times* dwells upon the fact that Canada will now become a formidable competitor for the trade of the Pacific, which has hitherto been almost monopolized by the United States. It states that negotiations have been begun by the Hawaiian Government, through the Colonial Office, with the Government of the Dominion, and proposals for a treaty of reciprocal free trade between Canada and Hawaii were not unfavourably entertained both by the Colonial Office and the Dominion Government.

THE history of education from the early Christian centuries through the middle-age period is the expression of a one-sided development starting from a misunderstood Christianity. The new religion was contra-natural, contra-earthly; its training was for heaven. Though some may claim that this teaching did not lie fairly in the authoritative records of the Church, there was much in these records to favour it, and much more still in the situation of the first Christians. Persecution would force attention from things temporal to things eternal. The present would be but a trial, a testing. This misinterpretation was laid upon the early Christians even as it seems to be laid upon many unfortunate souls to day. Those for whom life is a ceaseless curse need such power as may well be said to come from on high to place the blame where it belongs, on broken law and wasted opportunity. The gospel of a heaven on earth, of a heaven in and by law, of a heaven in and by the present sight life, is not even now fully come, though we give thanks for its presence here and here.—*Popular Science Monthly*.

No child should be allowed to speak incorrectly. If you do not teach your little one to enunciate clearly at first, it may be impossible later on; but not only be careful as to enunciation, but as to use of words. Take pains to explain why one word is correct, another incorrect. Teach your child how to open the lips well; do not allow him to talk together in one key, and take care that any nasal twang is carefully corrected. If a boy talks in a high, effeminate voice, cultivate his chest tones patiently but firmly—he will bless you in later years for what at present sorely tries his patience. Be careful that your girl has that "most excellent thing in woman"—a soft voice. Any inclination to stammering should be watched; the child should be trained to read aloud very slowly and deliberately. As it may prove helpful to some one, I will quote a set of rules given by Charles Kingsley to cure stammering, only promising that a child could be made to hold the upper lip down with his finger during his half hour of practice. Open your mouth. Take full breaths and plenty of them, and mind your stops. Keep your tongue quiet. Keep your upper lip down. Use your lower lip. Read to yourself out loud. Read and speak slow, low, slow.—*Brooklyn Magazine*.

CARLYLE said its translators* were honest men who indulged in no vagaries, but have literal ren-

derings, under pain of eternal damnation. Hence it is absolutely the best translation in the world. He spoke of the Bible as the Grand Old Book, crammed full of all manner of practical wisdom and sublimity—a veritable and articulate Divine message for the heavenward guidance of man. Referring to the New Version of the Scriptures, then being prepared, he said that, of course, but for such revision, we would not have had our present translation, so that he could not logically oppose it: but that his whole feeling went sorely against altering of a single word or phrase, for he liked to use the very words his mother had taught him; and that dear old associations should be undisturbed. For long no book had by him been read so much and so often. It was not only interesting as matter of fact, and unapproachable in style, but entirely satisfactory; because, while glowing with the Divine, it was also intensely human, and, in short, the real thing to which a man could turn for all kinds of need. He often read through a whole prophet or epistle at a time so as to take in the scope; and again, at other times he liked to dwell lovingly and thoughtfully on a single utterance, till its light entered the soul, like a morning sunbeam streaming in through the chink of a closed window-shutter.—*The Christian Leader*.

SIR HENRY THOMPSON thinks that our forefathers did not sufficiently consider this great subject [diet]. Like Mr. Squeers they have been, he admits, very particular of our morals. He sees a wise and lofty purpose in the laws they have framed for the regulation of human conduct and the satisfaction of the natural cravings of religious emotions. But those other cravings equally common to human nature, those grosser emotions, cravings of the physical body, they have disregarded. "No doubt," he says, "there has long been some practical acknowledgement, on the part of a few educated persons, of the simple fact that a man's temper, and consequently most of his actions, depend upon such an alternative as whether he habitually digests well or ill; whether the meals which he eats are properly converted into healthy material, suitable for the ceaseless work of building up both muscle and brain; or whether unhealthy products constantly pollute the course of nutritive supply. But the truth of that fact has never been generally admitted to an extent at all comparable with its exceeding importance." Herein were our ancestors unwise. The relation between food and virtue Sir Henry maintains (as did Pythagoras before him) to be a very close relation. His view of this relationship is not the view of Pythagoras, who, as Malvolio knew, bade man not to kill so much as a woodcock, lest haply he might dispossess the soul of his grandam. Plutarch also was averse to a too solid diet, for the reason that it does "very much oppress" those who indulge therein, and is apt to leave behind "malignant relics." Sir Henry, in his turn, would not have men to be great eaters of beef, though he holds with Plutarch rather than with Pythagoras, being (so far as I can judge) no believer in the doctrine of metempsychosis. But on the influence man's diet has on his conduct no less than his constitution he is very sure: "It is certain that an adequate practical recognition of the value of proper food to the individual in maintaining a high standard of health,

in prolonging healthy life (the prolongation of unhealthy life being small gain either to the individual or to the community), and thus largely promoting cheerful temper, prevalent good-nature, and improved moral tone, would achieve almost a revolution in the habits of a large part of the community.—*The Popular Science Monthly for October*.

THERE is a new kind of school and there are new lessons and new teachers coming. Books we must have. To learn, we must read. But we may read all about boats, and yet we can never learn to sail a boat till we take the tiller in hand and trim the sail before the breeze. The book will work wonderfully in telling us the names of things in the boat, and, if we have read about sailing, we shall more quickly learn to sail; but we certainly never shall learn till we are in a real boat. We can read in a book how to turn a heel in knitting, and may commit to memory whole rules about "throwing off two and purl four," and all the rest; yet where is the girl who can learn to knit without having the needles in her hands? This then is the idea of the new school—to use the hands as well as the eyes. Boys and girls who go to the ordinary schools, where only books are used, will graduate knowing a great deal; but a boy who goes to one of these new schools, where, besides the books, there are pencils and tools, work-benches as well as writing-books, will know more. The other boys and girls may forget more than half they read, but he will remember everything he learned at the drawing-table or at the work-bench, as long as he lives. He will also remember more of that which he reads, because his work with his hands helps him to understand what he reads. I remember long ago a tear-stained book of tables of weights and measures, and a teacher's impatience with a stupid child who could not master the "tables." And I have seen a school where the tables were written on a blackboard—thus: "two pints are equal to one quart," and on a stand in the school-room was a tin pint measure and a tin quart measure, and a box of dry sand. Every happy youngster had a chance to fill that pint with sand and pour the sand in the quart measure. Two pints filled it. He knew it. Did he not see it, did not every boy try it? Ah! Now they knew what it all meant. It was as plain as day that two pints of sand were equal to one quart of sand; and with merry smiles those six-year old philosophers learned the tables of measures; and they will never forget them. This is, in brief, what is meant by industrial education. To learn by using his hands—to study from things as well as from books. This is the new school, these are the new lessons. The children who can sew, or design, or draw, or carve wood, or do joinery work, or cast metals, or work in clay and brass, are the best educated children, because they use their hands as well as their eyes and their brains. You may say that in such schools all the boys will become mechanics, and all the girls become dressmakers. Some may, many will not; and yet whatever they do, be it preaching, keeping a store, or singing in concerts, they will do their work better than those who only read in books.—From "*The Children's Exhibition*," by Charles Barnard, in the *St. Nicholas for October*.

* Of the Old Version of the Bible.

Notes and Comments.

We notice that in the list of books given in our issue of September 30th as suitable for a high school course, the name of Mr. I. J. Birchard, one of the authors of "The High School Algebra," was inadvertently omitted. A work which has received such high encomiums (in our own columns as well as elsewhere) as "The High School Algebra," should have been more accurately described. We hasten to rectify the mistake.

MESSRS. J. W. QUEEN & CO., of Philadelphia (whose advertisement appears in this issue) are making a specialty, we hear, of sets to be used to illustrate different textbooks, and are prepared to furnish sets to illustrate the course recommended by the Educational Department for Canadian schools. This firm are large dealers in scientific apparatus, including physical, chemical, and physiological instruments and appliances, such as are used in universities as well as those intended for high schools and academies.

THE editor of the *Central School Journal* (Keokuk, Iowa) forcibly says: "There are few sights more pitiable than the hack teacher, whose only interest in the work is in her monthly stipend; who sees the morning hour of nine with a shudder, and hails the evening hour of release with unspeakable joy. She hates her work, and possibly herself for doing it. What kind of interest and spirit can such a teacher instil into the minds of her pupils? what kind of a leader is she? A mere time-server—a worse than slave. We would to Heaven that our profession might be rid of these creatures, who, while decrying the work of the teacher, detract from the dignity and worth of the profession."

MR. HORATIO HALE'S "The Origin of Languages, and the Antiquity of Speaking Man," an address before the Section of Anthropology of the American Association for the Advancement of Science, at Buffalo, August, 1886, deserves a long and careful review. If Mr. Hale's theories are valid, a revolution in ethnological and philological investigation will be the result. Mr. Hale approaches his subject from an anatomical or rather physiological point of view, one quite new, we believe, to philologists. He bases his investigation chiefly upon the convolution in the brain the function of which is that of articulate speech—the third left frontal (Broca's). The subject is so important, and the writer so distinguished, that we hope shortly to devote much space to a review of Mr. Hale's address.

WE mentioned recently that Dr. Casswell Hewett, of Lincoln's Inn Fields, had discovered the synthetical or artificial mode of

making quinine, by which the price of that drug will be reduced to something like 3d. per ounce. The importance of this discovery (which was made two or three weeks ago through the accidental breaking of a medicine bottle) is rendered greater by the fact that while hitherto we have been depending for our quinine upon the cultivation of the chincona tree, from whose bark only about 2 per cent. of good quinine can be extracted, 98 per cent. being valueless, the drug can now be manufactured without limit by a very simple process from an article which can always be got in abundance in any part of the world. A few days ago, Dr. Hewett submitted a sample of his preparation to Messrs. Howard & Sons, quinine manufacturers, Stratford, who have expressed surprise at the result of their analysis, the sample being equal to the best quinine in the market. The discoverer is about to communicate with the Government, who annually spend in India alone about £60,000 in the cultivation of the chincona tree.

AN International Congress on technical education, commercial and industrial, was opened on Tuesday, September 21st, at Bordeaux. The Ministries of Commerce, Public Works, and Public Instruction sent representatives to the meeting. There were also present delegates from England, Belgium, Russia, Switzerland, Italy, Servia, Roumania, Spain, Portugal, &c. At the meeting on Wednesday Sir Philip Magnus, president of the Technical Institute of London, read a paper on technical education in England. He stated that the English are no longer so dependent as they were on Parisian artists for industrial designs, and that they now almost exclusively employed English draughtsmen in manufacturing lace, carpets, wall-papers, curtains, and furniture. M. Roy, the delegate of the Chamber of Commerce of Paris, replied to these statements. He admitted that, in consequence of the very meritorious efforts of associations and private persons, the production of articles of luxury had made great progress in England under the direction of Parisian managers, tempted to cross the Channel by the attraction of high salaries. But much was still wanting to elevate the taste of the English to the French level. Especially with regard to tissues, Lyons, Saint Etienne, Rouen, and Roanne maintained an incontestible superiority. It should, however, M. Roy added, be admitted that English competition was in the main a fair one. The case was quite different as regarded German competition. The English strove to equal the French by improving their methods, and getting their work done by good men. The Germans purely and simply appropriated French patterns, and reproduced them in inferior goods, which they sold as French products. M. Roy had no hesitation in saying that, as

regards the greater number of products, France could manufacture more cheaply than England, and with the same cheapness as Germany. The Germans and the English were spreading reports everywhere that the French could not manufacture cheaply. They knew better than anybody that this was a complete error. But they also knew that the best means of closing the markets against rival manufactures was to say that the goods of the latter were dear. By dint of hawking about this calumny in all directions Europe had begun to believe it, and the error had even taken root in France.

IN answer to correspondents we publish the following information:

The special subjects for First Class, Grade C, for 1887, are:—

THOMSON, "The Seasons,"—Autumn and Winter.

SOUTHEY, "Life of Nelson,"—last three chapters.

SHAKESPEARE, "Merchant of Venice," instead of "Timon of Athens."

For Grade A and B the course in English is:—

Composition:

1. History and Etymology of the English Language; Rhetorical Forms; Prosody. Books of Reference: Earle's Philology of the English Tongue; Abbot and Seeley's *English for English people*; Bain's *Composition and Rhetoric*, or Hill's *Rhetoric*; Marsh's *English Language and Literature*, Lectures VI. to XI. inclusive.

Literature:

1. History of English Literature, from Chaucer to the end of the reign of James I. Books of Reference: Craik's *History of the English Literature and Language*, or Arnold's *Literature, English Edition*; Marsh's *English Language and Literature*, Lectures VI. to XI. inclusive.

2. Specified works of standard authors as prescribed from time to time by the Department.

History:

Greece.—the Persian to the Peloponnesian War inclusive; Cox's *History of Greece* (unabridged).

Rome.—From the beginning of the Second Punic War to the death of Julius Caesar; Mommsen's *History of Rome*.

England.—The Tudor and Stuart Periods, as presented in Green's *Short History of the English People*, Macaulay's *History of England* (or Franck Bright's *History of England, Second Volume*), and Hallam's *Constitutional History*.

Canada.—Parkman's *Old Régime in Canada*.

Geography:

So much Ancient Geography as is necessary for the proper understanding of the portions of the Histories of Greece and Rome prescribed.

Literature and Science.

STONYHURST AND ITS SYSTEM.

It will be interesting to examine the course of training and study in Stonyhurst Jesuit College,* which is the same in every Jesuit college, and has scarcely changed since the time of Loyola. It is easily adapted to the requirements of the time, but its spirit is always the same. The breadth of the system is best seen by a glance at the great dictionaries or encyclopedias, such as the "Imago Prima Sæculi," and those three large volumes, double-columned and closely printed, containing an account of all the Jesuit writers, in which their learning and literature are set out at length. Here we find writers in all departments—belles-lettres, poetry, Latin plays, and the graceful application of science, as well as contributors of huge folios, "dungeons of learning" in theology and science. Of all the religious orders this society has alone furnished conspicuous astronomers; and the names of Kircher and Secchi would alone give the Jesuits an honourable place. Some of their class-books have long done duty in English schools; and the "Gradus ad Parnassum" and Alvarez's prosody attest their educational skill. Versatility is a great aim of the system; and much is left to the personal influence of the master, who "goes up" with his scholars, from the bottom through all the classes to the top. Of course there is the objection that the instructor comes new and inexperienced to his duties in each successive class; but it is thought that the disadvantage is counterbalanced by personal influence and knowledge of character.

The routine arrangement for instruction differs little from that of other schools. There are seven classes—forms, as they are elsewhere called; here they are styled schools. The lowest is elements, next follow figures, grammar, syntax, poetry, rhetoric—all significant names. The usual familiar works of the classical writers are read in the lower classes, from Cæsar and Æsop and Lucian up to Cicero; Virgil and Homer are commenced in syntax; in the next class Horace, with Latin verse-making; while in rhetoric, Greek plays, with the course of the university entrance, is followed. Much attention is given to the higher mathematics and the sciences, and their study is stimulated by prizes of scholarships of £25 and upwards. The college observatories, magnetic and astronomical, form one of the recognized seven observatories of the kingdom that register observations. Here the director is Father Perry, whose name is well

* Stonyhurst was founded in Lancashire when the Jesuits were expelled from Liège.—Etu.

known to men of science. The society encourages its cleverest students to study for honours and take degrees in the London University, which fosters a scientific tone.

Here flourishes, too, a department which attracted some attention during the Tichborne trial—the class of "philosophers," who live apart under comparatively luxurious conditions and prosecute their studies after the manner of university life. They are for the most part youths of fortune or incapacity, too old or too idle to go through the classes, and too young to be cast loose on the world. They are under control, yet enjoy a certain liberty, while a modicum of instruction suited to their capacity or needs is supplied to them. Others devote their "ease with dignity" to serious studies preparatory to the army or some other profession. There are plenty of professors and masters, and any one wishing to give himself up to study with ardor finds the most cordial co-operation. Nor must we overlook some minor agencies which have always been largely used by the society in imparting a taste for the graces of literature. The book gatherer and stall-hunter has often lighted on the little stout volume of classical plays written in Latin, by some one of the fathers, and performed by the students on great festivals. Some works of this kind have been brought out in sumptuous fashion; and the well-known *Père de la Rue*, or "Ruffs," as he is known to the readers of the *Delphin* classics, was particularly distinguished as a dramatist of this type. At Stonyhurst the stage for about sixty or seventy years became an almost educational institution, and until very recently was maintained on a rather ambitious scale. The custom was, that about the beginning of December a regular theatre, complete in scenery, traps, etc., was built, and for a whole month careful instruction and rehearsing went on. At Christmas there was a season of about ten performances. These dramatic evenings were much relished; the college band performing between the acts, the whole having quite a "footlights" flavour. From the play-bills I find that the "stock" pieces were "Hamlet," "King Lear," "Merchant of Venice," "Macbeth," "Cure for the Heartache," "Speed the Plough," "Rivals," "William Tell," "Guy Mannering," "Rob Roy," "Castle Spectre," "Castle of Andalusia," and some others. The actors were well trained, while for the audience there was a certain education in poetry, feeling, and character, in spite of the fact that the dramas were presented in a rather maimed way; for by an inflexible rule enforced for centuries all female characters are tabooed. It may be conceived what an appearance was presented by "Hamlet" and "Macbeth" minus Lady Macbeth, the queen, and Ophelia; these personages, ac-

ording to precedent, being ingeniously or clumsily recast in the character of one of the other sex. A traditional receipt was followed; the speeches of the young lady heroine being transferred to a male cousin or brother who acted as a deputy, repeating his sister's or cousin's speeches to an invisible *inamorata*. Mrs. Malaprop thus became an eccentric old bachelor. All this might seem grotesque enough to those familiar with the play; but to those to whom it was utterly unknown it made little difference. The poetical plays were perhaps the most popular. They were set off with the finest dresses; for the green-room wardrobe was fully stocked, and might have set up a country theatre. "Hamlet," a triumph of judicious mangling, was always followed with breathless interest.

Much insistence was laid on public exhibitions or trials renewed periodically; when pieces in English, Greek, and Latin were recited, and examinations invited in specified books. This was done with a view to encourage readiness and dispel shyness. Between the parts the college band performed. Concerts, too, were much encouraged; there was a standing chorus, great in glee, with some sweet voices in it capable of fair solo performances; and, in my time there was a very respectable band.

All these influences duly methodized and controlled, were held to be parts of education. But latterly these have been shaped to "suit the times." The requirements of parents and guardians have proved too strong even for the rule of St. Ignatius. The theatrical season at Christmas has been abolished, owing in part to the disappearance of the audience itself; for in these days of easy travelling parents and guardians have their children with them at home at that season. At particular seasons however—as at Shrove-tide—theatrical exhibitions on a small scale are still given; and in this way all the Gilbert and Sullivan operas have been regularly produced as they came out.

But the most pleasing kind of festival is that of the annual "academies," or "breaking-up day." For the schoolboy there is something almost entrancing in the feeling that his drudgery is over, and that enlargement, long pined for, is at hand. Then there are the special glories of the day; the delightful flutter of exhibition, the crowds of strange faces beaming pleasantly, the good-natured relaxation of laws; and then there is the soft regret at departure and the dissolution of a year's companionship. For the older pupils of the place, returned after an interval of many years, the scene naturally calls up a little tumult of emotions. As they wander through the old halls, it seems like passing into a dream; the old thrill and boyish delight revive in a ghostly way and "walk." This bright and tranquil summer

morning is the morning of thirty years ago, and we see that other self of ours among these lads. It used to be a strict law that ladies should not find admission; and the late Mr. Shiel, one of the earlier students, described in some pleasant sketches the sternness with which mothers and sisters and cousins and aunts were turned from the gates. But the college has "moved with the times;" nowadays nothing can be gayer or more brilliant than the scene when the exercises begin and the handsome spacious exhibition-room is crowded with these fair pertubers. The glories of the day have, however, been somewhat curtailed. Formerly, when trains were few, the pupils departed on the morning after the festival; now it is an object to get home as quickly as possible, and there is an eagerness to catch the afternoon trains. Hence the exercises are hurried, and by three o'clock the great gate offers a bustling spectacle akin to that of a crowded railway station.—*St. James's Gazette.*

(To be continued.)

Special Papers.

CONSERVATISM AND REFORM IN EDUCATIONAL METHODS.

(Read before the Ontario Teachers' Association, July 23th, 1886.)

"EVERYWHERE there is a class of men who cling with fondness to whatever is ancient, and even when convinced by overpowering reasons that innovation would be beneficial consent to it with many misgivings and forebodings. We find also everywhere another class of men, sanguine in hope, bold in speculation, always pressing forward, quick to discern the imperfections of whatever exists, disposed to think lightly of the risks and inconveniences that attend improvements, and disposed to give every change credit for being an improvement. In the sentiments of both classes there is something to approve. But of both the best specimens will be found not far from the common frontier. The extreme section of one class consists of bigoted dotards; the extreme section of the other consists of shallow and reckless empirics." Thus does England's great historian characterize the two great political parties which for 250 years have alternately held sway in British politics. And thus may we aptly characterize the two great parties in the educational world which are to-day struggling for supremacy. Everywhere we find schoolmasters in the bonds of prescription, uttering with confidence the famous dictum of the preacher, "The thing that hath been it is which shall be; and that which is done is that which shall be done; and there is no new thing under the sun." And everywhere we find schoolmasters who, like the Athenians of old, "spend their time in

nothing else but either to tell or to hear some new thing." And in the domain of education, as in that of politics, we shall find the best specimens not far from the common frontier; and perhaps after diligent search we may find in some remote corner of the land the bigoted dotard and the reckless empiric. But a strange thing is to be noticed here in passing—conservatives in politics are often reformers in education, and radical politicians often cling with tenacity to the educational tenets of their fathers. Why conservatives do not conserve in all things and why reformers are not always anxious for reform is a question interesting but quite foreign to the present topic of discussion. The theme of this paper leads us to a brief examination of the most striking differences between what have been styled "The Old Education" and "The New Education"—differences not in the subjects of education but in the processes of education, not in educational curricula but in educational methods. Methods and curricula, however, are so interdependent that in dealing with the former one must frequently make reference to the latter.

At the outset we must be careful not to be misled by phrases. "The New Education" is a phrase now on the lips of all educationists: Its meaning is not indefinite, but the appellation itself is a misleading assumption. The "New Education" is new in its widening sway, but it is as old as Plato and Socrates in some of its leading principles, and it owes to the Baconian philosophy its spirit of investigation. The "New Education" is largely new in its practical application in the school-room, but a century ago Pestalozzi was engaged in his philanthropic labours. There are those who with reverence actually regard Col. Parker as the great apostle of the new ideas; but when Col. Parker was in his cradle the forces were silently at work which are now causing such a stir on this continent. The Pestalozzian principles took root in America many years ago, principally through the labours of Mr. Page and Prof. Agassiz. Col. Parker is the leading, because the most enthusiastic advocate of the "New Education" in America, but to call him the founder of a new scheme of things is to discredit the unselfish labours of many earlier and silent workers in both hemispheres, and to check the advance of the new methods by exciting the antagonism of those who are repelled by the dogmatism and extravagance of the leading disseminator of the reputedly new doctrines. To glorify any one man for having discovered such pedagogic laws as, "Proceed from the known to the unknown," "Put ideas before words," "Never do for a child what he can do for himself," is to display dense ignorance and to throw ridicule on the cause of advancement.

Although the new ideas had their first practical application in the schools of Ger-

many, still even in Britain, the land of educational conservatism, there have been for many years spasmodic yearnings for educational reform. Milton and Locke, Goldsmith and Addison, uttered feeble protests against prevailing follies. In more recent times Scott and Thackeray and Dickens spoke with ridicule and contempt of the typical pedagogues of their times. Dr. Arnold, of Rugby, was the first English schoolmaster to declare that leading principle of the "New Education," "It is not knowledge but the means of gaining knowledge that we have to teach." Macaulay thus describes the pedagogism of twenty centuries. "Words and mere words and nothing but words had been the fruit of all the toil of all the most renowned sages of sixty generations, during which time the human race instead of marching merely marked time." And now we are done with marking time and have begun to march again. It took a century to make preparations for the advance, but "Forward" is now the word "all along the line."

With the old methods of education we are all perfectly familiar, for it has fallen to our lot to live in the transition period of educational thought, and most of us were reared in the reign of Rod and Rote. Some of us were so fortunate in the days of our youth as to be able to say, "The lines are fallen unto us in pleasant places," but ill was the heritage of the many twenty years ago. Even now many of the old methods are in full swing in hundreds of schools all over the land, and they exercise their baleful influence to a greater or less degree in every school from the humblest to the highest throughout this broad Dominion. The curriculum of every Public School, of every High School, of every academy, of every college, of every university in the land imposes upon its students such studies, and shackles them with such tests that it is simply impossible to carry out the new principles in all their fulness. The old studies, and the old order of attacking those studies, and the old methods of testing progress in those studies produce limitations so confining that the new ideas necessarily have a sluggish growth. But they are growing, nevertheless.

Let us now briefly compare the "Old Education" and the "New Education," with special reference to guiding principles, and to the methods employed in working out these principles; and you will allow me to describe these systems in a series of contrasts. Although almost all rhetorical antithesis are unfair, as they contain an element of hyperbole, still they are invaluable for purposes of this kind. The "Old Education" was not entirely vicious; nor can we suppose that the "New" is entirely excellent; but the former embraced so many defects, and the latter offers so many advantages,

that for the sake of a clear presentation (even at the risk of being misunderstood), I may seem for the moment to rob the "Old" of all its saving graces, and to clothe the "New" in a too attractive garb.

The motto of the "Old Education" is "Knowledge is power." And so it is. But the experience of centuries has proven that knowledge is not the greatest power. The omniscient man is not always the omnipotent man. In the realm of mind the scholar is often distanced by his inferior in knowledge. The motto of the "New Education" is "Activity and growth are power." A good saying it is, too, but not entirely novel. Its essence was one of the apothegms of Comenius, the distinguished educational reformer of the seventeenth century, "We learn to do by doing." The "Old Education" stored the mind with knowledge, useful and useless, and only incidentally trained the mind. The "New Education" puts training in the first place and makes the acquisition of knowledge incidental.

The "Old Education" was devoted to the study of books. Too often the text-books were used as an end rather than as a means. "How far have you been in Sangster's Arithmetic?" and "How far have you learned in Bullion's Grammar?" were common queries of the schoolmaster in the old days, and these queries betrayed the educational aims of the questioner. Quantity was everything; growth was little or nothing. The "New Education" is devoted more to things than to books. Text-books are used, but only as repositories of knowledge to be consulted as occasion requires—that is, they are used not as an end but as a means of acquisition and improvement.

The "Old Education" was fond of *memoriter* recitation. In fact, "learning the lesson" was the be-all and the end-all of the schoolroom. How many a woe-begone victim has felt the weight of some martinet's wrath because of ignominious failure in reciting some precious morsel like this: "A Relative Pronoun, or, more properly, a conjunctive pronoun, is one which, in addition to being a substitute for the name of a person or thing, connects its clause with the antecedent, which it is introduced to describe or modify." To repeat words correctly was everything; to understand them was of secondary importance. In all branches of study definitions had to be carefully memorized as a basis for future work. The "New Education" reverses all this. What Coleridge calls "parrotry" is reduced to a very comfortable minimum. Definitions have their place, but if they are memorized it is at the final rather than at the initial stage in the pursuit of a study or topic. Original human thought takes the place of imitative jargon. Intelligible facts displace unintelligible rules and definitions.

The "Old Education" was eminently sub-

jective, dealing largely in abstractions. The "New Education" employs objective methods, preferring the presentation of truth in the concrete.

The "Old Education" began its work with the unseen and the unfamiliar, and dangerously taxed the weak reflective faculties. The "New Education" begins with the seen and the common, and gradually develops the reflective faculties by reference to knowledge already obtained by the strong and active perceptive faculties of the child. The former system initiated the tyro in geography by forcing him to commit to memory the names of the countries and the capitals of Europe; the latter leads him on a happy jaunt over his immediate environment. The former asks the little head to carry the names of all the bones in the skeleton of a rhinoceros; the latter shows to fascinated investigators the anatomy of a leaf. The former taught our infant lips to lisp the dimensions of ancient Babylon, and the name of Jupiter's grandmother; the latter opens dull ears to the melody of birds, and unfilms dim eyes to behold the glory of the heavens. The wail of Carlyle will find an echo in many hearts: "For many years," says he, "it has been one of my most constant regrets that no schoolmaster of mine had a knowledge of natural history so far at least as to have taught me the grasses that grow by the wayside, and the little winged and wingless neighbours that are continually meeting me with a salutation which I cannot answer, as things are. Why did not somebody teach me the constellations, too, and make me at home in the starry heavens which are always overhead, and which I do not half know to this day?"

The old system of tuition was marked by mechanical routine; the new boasts of almost complete absence of machinery, of infinite variety of programme, of multiplicity and attractiveness of devices. On the one hand joyless thralldom and lifeless monotony; on the other continual novelty and an exhilarating sense of freedom.

In the old order of things each subject in the curriculum was regarded as a distinct entity, and was entirely isolated. The new order of things requires that the subjects should be so co-ordinated and studied together, that each as far as possible may be the ally of some other. Thus geography is the handmaid of history. Thus reading, writing, spelling and composition go hand in hand as far as possible. The spelling-book is discarded as a useless educational tool; and English composition, which had its fortnightly terrors in the past, has become the most seductive of school occupations and is practised every day in the year.

In the old days among teachers there was common a most pernicious though benevolent vice, the vice of talking too much—called by someone "the didactic disease." The teacher was prone to tell everything, to explain every-

thing, leaving the pupil little to do but everything to learn. The new method—if I may call it new—a method practised so persistently and successfully by Dr. Arnold—is, that the pupil should do the maximum of original work and that the teacher should give him the minimum of assistance; in other words, the pupil must think and show results, the teacher must study to hold his own tongue as much as possible.

The "Old Education" was not only faulty, it was also one-sided. Certain faculties of the mind were exercised, while the body and the heart were neglected. One of the ruling principles of the "New Education" is, "Harmoniously develop the whole being, the mental, the moral, the physical."

The "Old Education" carried the military idea into the schools and taught by squads, and companies, and battalions; and the "boding tremblers" were apparently under good discipline, but it was the discipline of subjection and fear, not the discipline of freedom and love. The "New Education" carries the method of the Great Teacher into the schools and pays much attention to individuals. The former system attended to the aggregation and almost neglected the unit. The latter studies the peculiarities of each child and adapts its teachings to his past experiences and his existing attitude; and thus the dull pupil receives, as he should, more attention than the brilliant pupil.

The "Old Education" made much of examinations. The passing of examinations was the goal in all grades of schools. The preparation for examinations was the constant and debasing toil. The examinations, like the text-books, instead of being kept in their proper place as a useful means for a desirable end, usurped the exalted place of the end itself. The "New Education" puts written tests in their proper and secondary place. Examinations and promotions are not continually before the pupil's mind; and when written examinations are held, their old use is abandoned. The questions are such as test not so much the pupil's knowledge as his power of doing. And I suspect that those departmental examiners who last month incurred the wrath of so many teachers had good intentions. They doubtless desired to test not so much the erudition of candidates as their creative power, ingenuity and skill.

From the days of the ancient pedagogue, the flogging Orbilius, who flagellated Greek knowledge into the poet Horace, down to times within the memory of persons now living, it was almost universally supposed that new ideas made their way to the brain through the avenue of the finger tips. The traditional schoolmaster was always represented with ferule in hand, and the representation in many cases was not a caricature. But the reign of force has ceased and the reign of good-will and cheerfulness has begun. Teacher and pupil are not now sworn foes; they are linked together by mutual confidence, respect and courtesy. The old relationship of antagonism has by a wonderful metamorphosis developed almost into comradeship.

J. E. WETHERILL.

(To be continued.)

Educational Opinion.

MATTHEW ARNOLD ON FOREIGN SCHOOLS.

ALONG with the fuller programme and longer course of German schools, I found, also, a higher state of instruction than in ours. I speak of what I saw and heard, and of the impression which it made upon me after seeing English schools for more than thirty years. The methods of teaching in foreign schools are more gradual, more natural, more rational than in ours; and in speaking here of foreign schools, I include Swiss and French schools as well as German. I often asked myself why, with such large classes, the order was in general so thoroughly good; and why, with such long hours, the children had in general so little look of exhaustion or fatigue; and the answer I could not help making to myself was, that the cause lay in the children being taught less mechanically and more naturally than with us, and being more interested. In the teaching of Arithmetic, Geometry, and Natural Science, I was particularly struck with the patience, the clinging to oral question and answer, the avoidance of over-hurry, the being content to advance slowly the securing of the ground. This struck me the more, because in these matters, in which I am not naturally quick, I always had, as a learner, the sense of being over-hurried myself by my teachers; and in the foreign schools I constantly felt that, if I had been taught these matters in the way in which I heard them taught there, I could have made progress. I am told that young men studying for Woolwich, who go to Germany to learn the German language, are at first struck, in the schools there, with the Mathematics being much less advanced than at home; but presently they find that the slower rate of advance is more than compensated by the thoroughness of the teaching and the hold gained upon the matter of study. I speak with hesitation, however, on these matters, and often I wished for some of my more competent colleagues to be with me, that I might have pointed out to them what struck me, and have asked them if they could help owning that it was so. At any rate, the impression strongly made upon me was such as I have described.

The same thing in teaching the elements of writing and reading, and in training children to answer questions put to them—the same patience, the same care to make the child sure of his ground. A child, asked a question, is apt to answer by a single word, or a word or two, and the questioner is apt to fill out the answer in his own mind and to accept it. But in Germany it is a regular exercise for children to be made to give

their answers complete, and the discipline in accuracy and collectedness which is thus obtained is very valuable.

But the higher one rises in a German school, the more is the superiority of the instruction over ours visible. Again and again I find written in my notes, *The children human*. They had been brought under teaching of a quality to touch and interest them, and were being formed by it. The fault of the teaching in our popular schools at home is, as I have often said, that it is so little formative; it gives the children the power to read the newspapers, to write a letter, to cast accounts, and gives them a certain number of pieces of knowledge, but it does little to touch their nature for good and to mould them. You hear often people of the richer class in England wishing that they and their children were as well educated as the children of an elementary school; they mean that they wished they wrote as good a hand, worked sums as rapidly and correctly, and had as many facts of Geography at command; but they suppose themselves retaining all the while the fuller cultivation of taste and feeling which is their advantage, and their children's advantage, over the pupils of the elementary school at present, and they forget that it is within the power of the popular school and should be its aim, to do much for this cultivation, although our schools accomplish for it so very little. The excellent maxim of that true friend of education, the German schoolmaster, John Comenius, "The aim is to train generally all who are born men to all which is human," does in some considerable degree govern the proceedings of popular schools in German countries, and now in France also, but in England hardly at all.

In the specially humanising and formative parts of the school work, I have found in foreign schools a performance which surprised me, which would be pronounced good anywhere, and which I could not find in corresponding schools at home. I am thinking of Literature and Poetry and the lives of the poets, of Recitation and Reading, of History, of Foreign Languages. Sometimes in our schools one comes across a child with a gift, and a gift is always something unique and admirable. But in general, in our elementary schools, when one says that the Reading is good, or the French or the History, or the acquaintance with Poetry, one makes the mental reservation—"good, considering the class from which the children and teachers are drawn." But in the foreign schools, lately visited by me I have found in all these matters a performance which would be pronounced good anywhere, and a performance, not of individuals but of classes. At Trachenberg, near Dresden, I went with Mr. Grulich, the Inspector, into a schoolroom where the head class were read-

a ballad of Goethe, *Der Singer*; Mr. Grulich took the book, asked the children questions about the life of Goethe, made them read the poem, asked them to compare it with a ballad of Schiller in the same volume, *Der Graf von Habsburg*, drew from them the differences between the two ballads, what their charm was, where lay the interest of the Middle Age for us, and of Chivalry, and so on. The performance was not a solo by a clever Inspector; the part in it taken by the children was active and intelligent, such as would be called good if coming from children in an altogether higher class of school, and such as proved under what capable teaching they must have been. In Hamburg, again, in English, and at Zurich in French, I heard children read and translate a foreign language with a power and a pronunciation such as I have never found in any elementary school at home, and which I should call good if I found it in some high-class school for young ladies. At Zurich, I remember, we passed from Reading and Translating to Grammar, and the children were questioned about the place of pronominal objects in a French sentence. Imagine a child in one of our popular schools knowing, or being asked, why we do not say *ou me le rend*, but *on le lui rend*, and what is the rule on the subject!

The instruction is better in the foreign popular schools than in ours because the teachers are better trained. But that they are better trained come from a cause which acts for good upon the whole of education abroad—that the instruction, as a whole is better organized than with us. Indeed, with us it is not, and cannot, at present, be organized as a whole at all, for the public administration which deals with the popular schools stops at those schools, and takes into its view no others. But there is an article in the constitution of Canton Zurich which well expresses the idea which prevails everywhere abroad of the organization of instruction from top to bottom, as one whole,—"Die hohern Lehranstalten sollen mit der Volksschule in organische Verbindung gebracht werden"—the higher establishments for teaching shall be brought into organic connection with the popular school. And men like Wilhelm von Humboldt in Germany, or Guizot or Cuzon in France, have been at the head of the public administration of schools in those countries, and have organised popular instruction as a part of one great system, a part in correspondence of some kind with the higher parts, and to be organized with the same seriousness, the same thorough knowledge and large views of education, the same single eye to its requirements, as the higher parts.

KNOWLEDGE is no part of an education.—
Prof. Stanish.

TORONTO:

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RELIGION AND EDUCATION.

UNDER this title the *Evangelical Churchman* contained in a recent issue, one of the most liberal toned articles on this vexed question which we remember to have seen in any denominational paper. "Education," it says, "—by which is not meant merely the instruction of youth in the usual and necessary facts and fancies which the term usually calls to mind, but something infinitely more wide and far-reaching than a mere effect upon individuals,—education is development of the best that is in humanity, and the constant reaching out towards the attainment of the highest ideal of life and conduct. This constitutes its relation to religion, which is nothing more than development in the same direction. The term education is popularly applied to mental, religion to moral and spiritual, growth. But each is an expression of a different phase of one and the same truth. Each is so closely identified with the other, that they cannot be divorced or disassociated unless by a misconception or perversion of the meaning of each."

It goes on to explain the source of the misconception which it conceives to have arisen by saying: "The common notion of a religious life is one made up of an almost ceaseless round of devotions, the giving up of every natural desire for pleasure and amusement, and an austere and puritanical observance of rites and ceremonies. But it is not so. The devotional is but one phase of the religious life; pleasure and amusement are not under its ban; and austerity and Puritanism was not the 'Gospel preached in the Sermon on the Mount.'"

"And now," it concludes, "the real point at issue is reached. The great need of the day is instruction in morality and in the duties of citizenship. And the Sermon on the Mount contains the best ideal code of national and individual morals that can be found anywhere. It is true this code sets up an ideal perfection. But does not the grand and ultimate end of human existence consist in the endeavour to realize the highest ideals? The precepts of the divine moral code are the indispensable conditions of a future state of happiness, the realization of which would make a heaven of earth. This is the tremend-

ous meaning of life and of human existence, and herein consists the supreme importance of true education. The responsibility resting upon the individual and upon the nation is of the gravest character. And thus it is that the educational policy of our country—involving such a momentous issue as that of helping to realize the end to which the whole creation moves—should never lose sight of control of the moral instruction of youth. The primary duty of the Church and the Home is to take care of the religious side of life, and of the State to aid the church, by enforcing the moral elevation of its future inhabitants, and by instructing them in the sacred rights and privileges of citizenship. By morality is not meant simply social purity and temperance, but the widest and most generous meaning that can be given to the term. Morality and the rights and duties of citizenship—understood in the light of the Sermon on the Mount—contain as much and more vital religion than average humanity in this era can hope even to strive after. Theology, as such, cannot be successfully and profitably taught in our schools; but what can be taught is a system of individual and national morals upon which all can agree, and which all those who have the best interest of the state at heart, do agree, must be a feature of our educational policy. If our stability as a nation is to be permanent, and if we desire to aid in the grand purpose, and participate in the glorious consummation, of human life,—the re-uniting of it with the divine."

And yet we think that this article, despite its evident advocacy of religious instruction, supports the views frequently brought forward in these columns. The *Evangelical Churchman* rightly draws a line of demarcation between education and religion. "Education," it says, "is development of the best that is in humanity, religion is nothing more than development in the same direction, but on other lines." These "other lines," we have always contended, are not the proper sphere of the school master or mistress, but of the parent, the pastor, and the Sunday-school teacher.

Where the *Evangelical Churchman* errs is in failing to discriminate carefully between morality and religion. In its closing paragraph it unconsciously uses these words interchangeably. Morality—the principles of right and wrong, the neces-

sity of always following the right and avoiding the wrong—such things do come within the province of the teacher. Incessantly, in every lesson, during every hour of school-room routine, he ought, both by precept and by practice, inculcate moral lessons. But "spiritual growth" he has nothing to do with.

STATE INTERFERENCE.

THE following article from the St. John, New Brunswick, *Daily Telegraph*, is one which touches upon so vital a problem, and touches upon it so clearly and straightforwardly, that we think it well-deserves republication in a prominent place:

"In our time the State interferes, and ostensibly to aid, almost every form of business enterprise. It has interfered with the natural development of industries by providing for their protection high import duties on the products of other countries. The natural result was the creation of too many factories of certain kinds, with consequent overproduction and financial ruin. The State builds railroads, and provides bonuses for other railroads to take away the business of the first. The State has undertaken to erect buildings, build piers, erect and maintain lighthouses, dredge rivers and harbours, carry the mails, make roads, and, among a hundred other services, to provide for the education of the children. For every one of these services as carried on by the State a pretext can be found. He would be a bold Reformer who would undertake to establish that the State ought not to aid at least some of these things. But, obviously, there is no logical stopping place for this sort of thing, if the State may properly do such things as it is doing to-day in Canada and other countries. In England the telegraph system is made a government service, attached to the post office. There is an essential connexion between the two. A plausible pretext could be found for the State acquiring the express business in connexion with the railway, postal and telegraph services. From State railways carrying passengers and freight there is but a step to State steamships carrying people and merchandise across the seas. Where then is all this to stop? Certainly the tendency of the times is for the State to acquire more and more of the business formerly left to individual enterprise. And there are many thoughtful and observant publicists who

think we have gone too far in that direction already.

"Our public school system is one of which we boast. It has done and is doing a vast work in training our youth, eradicating ignorance and disseminating knowledge. But on the other hand it is as surely alienating the tastes of young men from the agricultural pursuits which it is desirable that most of them should follow. We have reached a state of things in which the young men of the rural districts will not stay on the farms their fathers tilled. Say what we may the education of the day breeds dislike for manual labour. The farms go wanting their needed culture while the farmers' sons crowd the ranks of clerkships, the overcrowded professions, or the equally thronged avenues of business callings, or seek for petty government offices, or leave the country. Where will the end be? The important industry of the country is agriculture, the one for which the State does least; the one which the State burdens to find the money for the ever increasing services which the State assumes. No one conversant with farm life now and a quarter of a century ago, but will see that as a result of changes brought about by the State (federal and provincial), farm property has been depreciated at least twenty per cent., and stripped of the workers to whom farming must look for continuance.

"This is not politics but it is bigger than politics."

Upon this subject we shall have more to say in our next issue. Meanwhile we invite the most serious attention of our readers to this topic.

REVIEWS AND NOTICES OF BOOKS.

"MODERN PETROGRAPHY," by George Huntington Williams, of Johns Hopkins University, is an interesting monograph upon the application of the microscope to the study of geology. The author only professes to give the reader a general outline of the scope of this, the latest branch of the science of geology, with a brief *résumé* of what has been accomplished by its most distinguished masters. This, however, is done in a clear and concise manner, with an evident appreciation of the important position this department of science now holds.

The application of the microscope to the study of minerals is not a thing new to scientists, although no practical results were obtained until the investigation of Zirkel and Vogelsang, carried on in Germany between the years 1862 and 1873. So brilliant, however, were these discoveries that a new impetus was given to the microscopical investigation of rocks, and to-day it may be safely

said, that in German universities the microscope is considered as important an adjunct to the science of mineralogy and geology, as it is to that of biology. These discoveries, by bringing to light their very intimate structure, has revolutionized the former classifications of a large number of rocks. This is especially true of the class commonly called *Eruptive*.

To these the change in classification has been quite as radical in its nature as that which obtained amongst the vertebrate animals when classified by Cuvier with reference to their anatomical structure, and not as formerly with regard only to their superficial peculiarities and likenesses.

But, more valuable than all this, by means of the microscope a flood of light is being thrown upon the origin and history of the primitive crystalline rocks, regarding which the books are filled with conjectures and hypotheses without number. Indeed, the researches of scientists in this hitherto unexplored region, have been already so extensive that we may shortly hope to have as thorough a knowledge of the origin of the early igneous and metamorphic rocks, as we have long had of the more recent sedimentary strata, by the investigations of Sir Charles Lyell.

In some few of the American universities, most notably at Johns Hopkins, instruction is given in the science of petrography, but we believe it forms no part of the course in Toronto University, or the School of Practical Science, a fact much to be deplored.

THE recent uncovering of the mummy of Rameses II., "king of Egypt and oppressor of the Jews in the time of Moses"—in a word the Pharaoh of the Old Testament—is to be commemorated by Cupples, Upham & Co. in an illustrated broadside giving in full Professor Maspero's report and the letter of Brugsch-Bey, with three engravings from photographs of the mummy stripped of its coverings and displaying the strongly marked, masterful features.

THE *Atlantic Monthly* for October contains a goodly list of articles, both heavy and light. Mr. Henry James' "The Princess Casamassima" reaches its forty-sixth chapter; Mr. Bishop's "The Golden Justice" its thirteenth; "Charles Egbert Craddock's" "In the Clouds" its twenty-fifth. Mr. Hayward speaks of "Christopher North" under the title of "A Literary Athlete;" N. S. Shaler writes on "Race Prejudices;" Edward Hungerford on "The Rise of Arabian Learning." In addition to these the principal papers are "Abraham Lincoln," "Bacon's Dictionary of Boston," and "Hutchinson's Diary: Second Volume."

Of "The Sacred Books of the East, Translated by Various Oriental Scholars," and edited by F. Max Müller, a writer in the *Quarterly Review* says: "It is not for the artistic merit of the works it contains, nor for the value of its direct and easily intelligible statements of either ethical or religious thought, that the project of this series of translations demands our hearty sympathy. It is because it brings together for the first time, and in a shape and manner which make their use easy to students, a number of the most valuable ancient records of the early ideas, and customs, and beliefs of mankind, because it gives the authoritative texts which are the only means by which scholars of the requi-

site training will be able to explain to us some of the most interesting phases of that latter, though still ancient, thought which grew out of those early beliefs, and because it thus affords the very greatest possible aid to the comparative study of the history of ideas, and especially of religious ideas. It is only by means of such connected effort that so magnificent a result as has been here achieved would be attainable. We may regret that there are at present no trained men set apart for the study of such records. Perhaps before long there may be professorships of the comparative study of the history of religious beliefs at both of our old universities. Meanwhile we rejoice to notice that a second series of these translations has been announced and has actually begun to appear.

D. C. HEATH & Co. have ready "Dr. G. Stanley Hall's Select Bibliography of Pedagogical Literature," a volume of over 300 pages made up of lists of books—the best books—covering every department of education. "Studies in Greek and Roman History," or "Studies in General History," from 1000 B.C. to 476 A.D. By Mary D. Sheldon, recently Professor of History in Wellesley College. "Illustrations of Geology and Geography." For use in schools and families. By N. S. Shaler, Professor of Paleontology, assisted by Wm. M. Davis, Asst. Prof. of Physical Geography, and T. W. Harris, Assistant in Botany, Harvard University. "The Study of Latin in the Preparatory Course." By Edward P. Morris, M.A., Professor of Latin, Williams College, Mass. "Progressive Outline Maps of North America, South America, Europe, Central Europe, Asia, Africa and the United States. Printed on substantial drawing paper, adapted to lead pencil or to ink. The "Desk Outline Map of the United States." Prepared by Edward Channing, Ph.D., and Albert Bushnell Hart, Ph.D., Instructors in Harvard College. "Hauff's *Märchen: Das Kalte Herz*." Edited, with Notes, Glossary, and Grammatical Appendix. By W. H. van der Smitten, M.A., Lecturer on German in University College, Toronto, and editor of the admirable edition of Grimm's *Märchen*. "Elementary Course in Practical Zoology." By B. P. Colton, A.M., Teacher of Science, Ottawa High School, Ill. "How to Teach Reading, and What to Read in the Schools." By G. Stanley Hall, Professor of Psychology and Pedagogy, Johns Hopkins University. "An Introduction to the Study of Robert Browning's Poetry." By Hiram Corson, M.A., LL.D., Professor of Rhetoric and English Literature in the Cornell University.

BOOKS RECEIVED.

Intermediate Problems in Arithmetic for Junior Classes. By Emma A. Welch, Montgomery School, Syracuse, N.Y. Syracuse, N.Y.: C. W. Bardeen, publisher. 1886.

Pedagogical Biography. No. IV. Jean Jacques Rousseau. By R. H. Quick. Syracuse, N.Y.: C. W. Bardeen, publisher. 1886.

Pedagogical Biography. No. III. John Locke. By R. H. Quick. Syracuse, N.Y.: C. W. Bardeen, publisher. 1886.

Topics and References in American History. With numerous Search Questions. By Geo. A. Williams, A.M. Syracuse, N.Y.: C. W. Bardeen, publisher. 1886.

Mathematics.

PROBLEMS IN ARITHMETIC

SUITABLE FOR CANDIDATES PREPARING FOR THE ENTRANCE EXAMINATIONS.

1. TWO-THIRDS of A's money is equal to $\frac{3}{4}$ of B's, and $\frac{1}{2}$ of B's is equal to $\frac{1}{3}$ of C's. Altogether they have \$2,468; how much money has each?
 2. Find total cost of 1,275 feet of lumber at \$7.25 per M.; 6,743 feet of lumber at \$12.50 per M.; 7,295 feet of lumber at \$7.75 per M.; 7,329 feet of lumber at \$9.25 per M.; 8,753 feet of lumber at \$5.25 per M.; 725 feet of lumber at \$24 per M.
 3. What will it cost to purchase bricks for a wall 160 ft. long, 6 ft. high, and 18 inches thick; bricks being \$6.25 per thousand, and each brick (including mortar), being 8 inches by $4\frac{1}{2}$ inches, and 3 inches thick?
 4. A boy hops on an average 1 yard 3 inches. How many hops will he make in $\frac{3}{4}$ of $\frac{1}{2}$ of a mile?
 5. A man sold a farm for \$7,500, gaining \$700 and $\frac{1}{3}$ of cost. Find cost.
 6. What number must you add to 73 $\frac{1}{2}$ that the sum may be exactly divisible by $3\frac{3}{4}$?
 7. A can do a piece of work in $\frac{1}{2}$ a day; B in $\frac{2}{3}$ of a day; C in $1\frac{1}{2}$ days. Find the time in which all working together can do it.
 8. The average of five numbers is 444 $\frac{1}{5}$; the first number is 756, the second 234, the third 512. If the last two are equal, find them.
- Answers will be given in a future issue.

HURON.

(To be continued.)

FACTORING.

To the Editor of the EDUCATIONAL WEEKLY.

SIR,—The factoring of symmetric expressions of the 5th, 6th and 7th degree I find to be somewhat interesting. The "Hand Book" of Algebra shows very nicely how to find a factor of two dimensions; but I have not seen any method of finding factors of higher dimensions. The following method I have found to work well:

Required the factors of $a^2(b-c) + b^2(c-a) + c^2(a-b)$. Here $a-b$ is found to be a factor, and consequently $b-c$ and $c-a$. The remaining factor is of three dimensions and must be of the form $m(a^2 + b^2 + c^2) + n(a^2b + b^2c + c^2a) + l(b^2a + c^2b + a^2c) + sab$ when m, n, l and s are independent of a, b and c ; consequently $a^2(b-c) + b^2(c-a) + c^2(a-b) = (a-b)(b-c)(c-a) + m(a^2 + b^2 + c^2) + n(a^2b + b^2c + c^2a) + l(b^2a + c^2b + a^2c) + sab$. Now since the values of m, n, l and s do not depend on the values of a, b and c , we may let $c=0$, then we have $a^2b - b^2a = -ab(a-b) + m(a^2 + b^2) + na^2b + lb^2a$.

$\therefore a^2 + b^2 + a^2b + b^2a = -m(a^2 + b^2) - na^2b - lb^2a$, now equate coefficients.
 $\therefore m = -1; n = -1$ and $l = -1$.
 To find s ,
 $a^2(b-c) + b^2(c-a) + c^2(a-b) = -(a-b)(b-c)(c-a) + m(a^2 + b^2 + c^2) + n(a^2b + b^2c + c^2a) + l(b^2a + c^2b + a^2c) + sab$.

Let $a=1, b=2, c=3$, and we get $s = -1$.
 Consequently the factors are $a-b, b-c, c-a$, and $-(a^2 + b^2 + c^2 + ab(a+b) + bc(b+c) + ca(c+a) + abc)$.
 The following may be solved in a similar way: $a^2(b-c)^2 + b^2(c-a)^2 + c^2(a-b)^2; a^3b^2(a-b) + b^3c^2(b-c) + c^3a^2(c-a); ab(a-b)^2 + bc(b-c)^2 + ca(c-a)^2$.
 Pefferlaw. Wm. W. IRELAND.

FIRST YEAR IN ARITHMETIC.

AIMS.

I. To teach all the facts in every number from one to ten inclusive.

This means to teach a number, for example 4, as a whole; the equal numbers in it, $4 \div 2 = 2$ (division); the equal numbers that make it, $2 \times 2 = 4$ (multiplication); the equal parts of it, $\frac{1}{2}$ of 4 = 2 (partition); any two equal or unequal numbers that may be found in it $4 - 2 = 2$, or $4 - 1 = 3$ (subtraction); and any two equal or unequal numbers that form it $2 + 2 = 4$, or $3 + 1 = 4$ (addition).

II. To teach the figures that represent the numbers taught.

Pupils should not only be able to tell the nine digits and the cipher, but should, also, be carefully taught to write them upon their slates. The order of difficulty in writing figures has been found to be as follows: 1, 4, 7, 0, 9, 6, 5, 3, 2, 8. After the Arabic figures have been learned, the Roman numerals to ten may be taught.

III. To teach the use of the signs +, -, x, ÷, and =.

At first, + can be called and; - less; x taken; ÷, contains, or in; and = is, or are, according to the sense. For example, let the oral expression for $3 + 1 = 4$ be, three and one are four; for $3 - 2 = 1$, three less two is one; for $3 \times 2 = 6$, three taken twice is six, or, three twos are six; for $4 \div 2 = 2$, four contains, or holds, two twice, or two in four twice; and for $\frac{1}{2}$ of 4 = 2, one-half of four is two.

IV. To teach pupils to arrange work on their slates both neatly and quickly.

Too much pains cannot be taken in training pupils to write the figures and signs taught upon their slates. The teachers should never receive any work that is carelessly done. Special lessons in making figures and signs, and in arranging work on the slate, should be given.

STEPS.

1. Giving the number in a group of objects without counting, as how many I I I do you see?
2. Adding groups at sight without counting, as, how many are I I and I I I?
3. Separating a group into two groups, and subtracting each from it, as I I I into I I and I; I I I less 1 is I I, and I I I less I I is I.

4. Multiplying groups of objects, as two I I I are I I I I.
5. Dividing groups of objects, as I I I I contains I I twice.
6. Separating a group into equal parts, as one-third of I I I is I.
7. Teaching the figures and signs.

METHODS.

1. Develop the operations by means of objects.
2. Have what has been done expressed with marks and figures.
3. Go through the same operations with abstract numbers.
4. Fix the operations by giving many practical problems.
5. Form tables illustrating the operations taught; for example, the table for four would be: $3 + 1; 1 + 3; 4 - 1; 4 - 3; 2 + 2; 4 - 2; 4 \times 1; 1 \times 4; 4 \div 1; \frac{1}{4}$ of 4; $2 \times 2; 2 \times 4; 4 \div 2; \frac{1}{2}$ of 4; $3 \times 4; 4 \div 4; \frac{1}{3}$ of 4.

DIRECTIONS.

1. Use objects the children can handle.
2. Have a great variety of objects on the table.
3. The teacher and pupils should work together.
4. Encourage the class to make original examples.
5. Allow beginners to use their own language.
6. Always keep the pupils up to their best efforts.

CAUTIONS.

1. Lead the children from the concrete to the abstract.
2. Pupils learn by seeing, doing and talking.
3. Be careful to teach numbers, not simply figures.
4. Have the pupils discover every new fact for themselves.
5. The pupils should do most of the talking.
6. Master each number before passing to the next.—*Southwestern Journal of Education.*

In London, England, and Bremen, Prussia, the longest day has sixteen and a half hours. In Stockholm, in Sweden, the longest day has eighteen and a half hours. In Hamburg, in Germany, and Dantzic in Prussia, the longest day has seventeen hours. In St. Petersburg, Russia, and Tobolsk, in Siberia, the longest day has nineteen hours, and the shortest five. In Torneo, in Finland, the longest day has twenty-one hours and a half, and the shortest two hours and a half. In Wardhuys, in Norway, the day lasts from the 21st of May to the 22nd of July, without interruption; and at Spitzbergen the longest day is three and a half months. In New York the longest day, June 19th, has fourteen hours and fifty-six minutes; at Montreal, fifteen and a half hours.—*School Supplement.*

Methods and Illustrations

AIMS AND METHODS IN TEACHING ENGLISH LITERATURE.

FOR clearness and definiteness I present this work under the two heads above; viz., Aims and Methods. Aims antecede and in a degree determine Methods,—hence, in logical order, we consider

I.—AIMS.

1. *Negatively*.—In a true system of teaching literature, it must not be the aim to teach merely the biographies of authors. This has its place, but a subordinate one; and it is not English literature, only biography. It is needed to give a setting to literature as geography is needed in the study of history; but geography is not history, and biography is not literature in the sense used in this paper.

2. Nor is it enough to read fine eulogies on authors or their works. These are attractive and instructive, but they are not English literature in the sense before us. Study *about* literature is one thing, and the study of literature quite another.

3. Nor is it enough to study a few short extracts from a few leading authors. These represent the style and thought of an author much as the pendant represented the style of his house by showing a single brick. The aim, therefore, is not biography only, nor eulogies only, nor tid-bits of poetry, the mere sweetmeats of literature, but *mastery*,—mastery of the thought and style of a few of the masters in English literature. (By mastery of a style, I mean the ability to use it in writing; e. g., to write in it with a reasonable degree of ease, when the occasion demands, and the writer wills it.) This, then, is the aim, as I understand it, in teaching and studying English Literature in colleges, normal, and high schools. The broader and remoter aim is to improve the style of those taught, and through them in a limited but positive degree, our language and its literature. This brings us to the other branch of our theme.

II.—METHODS.

1. The first step in this work should be the study of a good text, giving authentic biographies of authors with choice selections and a few gem quotations from writings of same. The quotations should be committed to memory and the selections studied in connection with the biographies. This study should include both matter and style,—style being chief. The latter should include various elements; as words, long, short, familiar, Anglo Saxon, or Latin derivatives.

2. Sentences, long, short, balanced, juridic, loose, direct or inverted, simple or involved, and the like.

3. Style in general; as figurative or

plain, smooth or rough, condensed or diffuse, clear or obscure, elegant or crude, strong or weak, and the like. All this must be brief, rapid, and attractive, so as to sharpen the critical sense and awaken a desire for larger and more thorough attainments. The number of authors to which this analysis can be applied must be small.

If but one term,—e. g., one-third of year,—be given to this work, I recommend that not exceeding one hundred or one hundred and twenty-five authors be studied, and the other five, six, or seven hundred presented in some texts be relegated to the reserve library to be hunted up when occasion demands. This excessive fullness now beginning to crowd this department is tending to a mere stuffing of the memory rather than to the development of either literary taste or critical ability.

Second Step, or second general division of the work.—After one term in the above work comes the study of literature proper, called in some institutions "English classics." This term, as I understand it, means the writings of the masters, and holds the same relation to English literature that the ancient-classics hold to Greek and Latin literatures. The authors chosen in English vary in different schools and colleges as they do in Greek and Latin. Perhaps no five out of ten institutions in the land exactly agree as to authors and amounts studied in ancient classics; so in English; while some take Chaucer and Spencer, I would take Addison and Junius, or Macaulay and Emerson. Almost all take Shakespeare and Milton. These latter are studied more for matter than for style; Shakespeare for brilliance and human nature; and Milton, in "Paradise Lost," for theology and sublimity.

For method in this second division of the work I submit the following:

FIRST STEP.—(a) Read and examine the outlines of a piece; (b) each member of the class point out at least one excellence in either matter or style; (c) in next lesson, two or three, and thus on, as time and ability of pupils will allow. If the excellence be in matter, let it be stated whether in clearness, brevity, force, wit, humour, imagination, passion, or what? If in style, let it be stated whether it is in the words, or in their arrangement, or both. If in the word, is it in the letter or in the idea? The teacher must show that some words have a literal or intrinsic beauty irrespective of the idea,—as *Hia-watha*, *Minnehaha*, *Patagonia*, *Nova Zembla*, *Alhambra*, and the like. Here we study the sounds of the letters separately, and in combination, and decide some of them pleasing and some of them otherwise, and for reasons. He should show that certain other words have a functional or associate beauty because always expressive of ideas, delicate, pure, or exalted,—as *fairy*, *seraphic*, *angelic*, *celestial*,

and the like. Further, is the word long, short, generic, specific, technic, and the like?

Sentences.—The treatment of the sentence is much as that given under biography, only more extended.

General.—Is the style concise or diffuse, clear or obscure, strong or weak, abrupt or smooth, and wherein? Is it plain or figurative? If figurative, what class of figures, simile, metaphor, personification, or what; and for what,—i. e., for clearness, beauty, or force? Is the author didactic, argumentative, humorous, witty, grand, sublime? If sublime, point out some of the elements, whether in power, velocity, loudness, darkness, and the like.

Caution.—The teacher should not accept the cheap platitudes, *fine*, *beautiful*, *admirable*, *grand*, and the like. These are long, showy passages, leading nowhere.

SECOND STEP.—Take two or three or five pages, according to strength and time of class, and apply two or three of these *criteria*; next lesson, another set; next, another; and thus on until all are applied.

THIRD STEP.—At times, class should point out (1) all superfluous words; (2) any word for which a better can be substituted; (3) any construction affecting either elegance or force; (4) any imperfection in thought which they can improve.

FOURTH STEP.—It will be well for the teacher, or the teacher and pupil jointly, to make an analysis of the style of each author studied. This analysis should contain at least the following: (1) Words; (2) sentences; (3) general. Example in Addison as follows:

1. *Words*.—Choice often elegant; full average length; many open vowels, hence smooth; above the average of Latin derivatives.

2. *Sentence*.—Full average length; direct,—i. e., non-inverted; plain,—i. e., non-figurative; simple,—i. e., non-insolvent; often rhythmic, hence musical, hence pleasing.

3. *General*.—Usually not condise, even at times diffuse; i. e., often ten words where one would do,—often a relative clause when a participle could take its place, Seidom bold, strong, or impassioned, and scarcely ever grand. No stateliness as in Johnson; no sabre-thrusts, as in Junius; no flashes of brilliance, as in Shakespeare; no flights of sublimity, as in Milton.

FIFTH STEP.—After this analysis, have the class write portions of the story, chapter, or piece in their own words, but so nearly as may be in the style of the author. This exercise should be continued through several lessons, or until the pupil catches the author's style and spirit.

SIXTH STEP.—After all the preceding is well done, have the pupil write original productions in the style of the author, or as

nearly in his style as possible. This is the crowning step of the whole,—the brightest, topmost flower in this field of work. This is the ultimate end set forth under the head of *Aims*. It is the crown and reward of the student's efforts in this department of literature. 'Tis the mastery of the style of one of the masters. The student is now able to write in this style, and so does when occasion demands and he so wills. This author mastered, we take another and another, till three or four or more are mastered,—one presenting the easy elegance of Addison; one the didactic simplicity of Bacon; one the epigrammatic terseness of Emerson; another the condensed forcefulness of Junius.

Caution.—It is not intended that the student shall write in all of these styles on all occasions, nor even some of them on all occasions. No; his individuality is to be preserved. When in an Addisonian mood, with an Addisonian theme, he is Addison; and when in a Junian mood, with a Junian theme, he is Junius; and thus on. But his prevailing mood is his own, and then he is essentially himself in his truest and fullest individuality. So his prevailing style is self, while his richer style is self plus others when needed. If, however, it be objected that this training in other styles will impair individuality, we answer "No." But if the objection be urged, we answer that it proves too much. On the same ground, the study of Latin, Greek, French or German, one or all, instead of developing the student's lingual ability, impairs his individuality, and so harms his use of English. We are of the opinion that no one will contend for this; surely no linguist will.

In conclusion, I desire to state two other propositions, which I hope will commend themselves to the approval of the reader.

1. A mastery of either the English language or its literature does not come by absorption nor by intuition, but as other branches of learning,—by study, systematic and protracted.

2. A mastery of Latin and Greek does not of necessity give a mastery of English.

3. The lack of extended training in Latin and Greek does not of necessity prevent skill and power in the use of English.

4. As a rule, we master any given science or art by studying that science or art, rather than by studying another. (a) When when we want to master botany, we do not study geology or astronomy. (b) In conformity to this law, the Greeks, when they wanted to master Greek, studied Greek, and not Sanscrit or Hebrew. In view of this law and this example, what is to be inferred concerning the study of English?

5. The English language is the vehicle of the ablest diplomacy in the world; is the instrument of the largest commerce in the

world; is the depository of the richest literature in the world; is the happy medium of the largest dissemination of the Gospel; and is spoken by a larger number of people than any other language of earth. Added to this, a voice of prophecy,—not loud, but clear,—is heard saying, "This is yet to be the language of all civilized men."

In the light of the above and kindred facts, the question appropriately comes,—Should not the English language and its literature have a larger place in our courses of study than they are at present, even if other languages and literature shall be compelled to have less?—*Journal of Education*.

A VALUABLE LESSON.

A GOOD story is told of the late Professor Morren, which carries with it a valuable lesson in school management. He had a high-strung Beacon Hill damsel as one of his pupils, who made herself particularly obnoxious by her haughty and even insolent bearing, displaying her contempt for all about her so markedly that it became at last unbearable.

"I knew her mother in France," said the professor, whose broken English there is no need of producing here, "and she was a most exquisitely modest and unassuming woman. But the daughter was so insolent that she had to have a lesson; so I said to her: 'Will you be so good as to remain after the lesson? I have something to tell you.' She stays, and in her haughtiest manner she says: 'You wish to speak to me?'"

"Yes. You are Miss So-and-so?"

"Yes."

"And you live at No. — Beacon St.?"

"Yes."

"And your father is Mr. So-and-so?"

"Yes."

"And your mother is the lovely and sweet Mrs. So-and-so I have met in France?"

"Well?"

"Oh, I said, 'you are sure there is no mistake?'"

"No mistake! What do you mean?"

"I am exceedingly surprised that you come of such a family and so well born."

"Sir!"

"I am much surprised. I have been sure you came of new-rich family, some parvenu—"

"Sir!"

"You think, Mademoiselle," I said, softening my manner, "that haughtiness is aristocratic. Now you will pardon an old man if I remind you that the contrary is true. I have known your mother so long that I dare to be frank with you. You have been very insolent in the class."

"Insolent, Monsieur?"

"Yes, Mademoiselle. You have mistaken this for a mark of aristocracy. So does the daughter of the Jew money-lender. You had much better copy your mother, your gentle, lady mother."

"And I made her my best bow and left her to think about it. And she was a good girl afterward; a very good girl."

Concerning this story, the *Boston Courier* well says: "It is a pity this wise and shrewdly worded reproof could not sink into the hearts of many a young girl to-day who foolishly fancies she is asserting the loftiness of her social position by an insolence which only proves that she is not sufficiently sure of her standing to cease to be troubled about it. It takes a good many generations to set one socially so high that one does not need to condescend to any human being."—*New York School Journal*.

DON'T.

DON'T snub a boy because he wears shabby clothes. When Edison, the inventor of the telephone, first entered Boston, he wore a pair of yellow linen breeches in the depth of winter.

Don't snub a boy because his home is plain and unpretending. Abraham Lincoln's early home was a log cabin.

Don't snub a boy because of the ignorance of his parents. Shakespeare, the world's poet, was the son of a man who was unable to write his own name.

Don't snub a boy because he chooses an humble trade. The author of the *Pilgrim's Progress* was a tinker.

Don't snub a boy because of physical deformity. Milton was blind.

Don't snub a boy because of dullness in his lessons. Hogarth, the celebrated painter and engraver, was a stupid boy at his books.

Don't snub a boy because he stutters. Demosthenes, the greater orator of Greece, overcame a harsh and stammering tongue.—*Ex.*

EVERY teacher in the land, who is doing thorough work in any line, no matter how simple, who in every recitation is to be satisfied only with the truth, as far as the child can know it, and nothing but the truth, is the most tremendous teacher of pure honesty that the child can have,—and her silent, persistent demand, day by day and hour by hour, on the child and on herself for real thorough work, is worth to the future man or woman more in inculcating a reverence for the truth than all the sermons he could hear preached on the subject if he sat and listened from January to December.—*New England Journal of Education*.

Correspondence.

WOMEN'S EDUCATION AND WOMEN'S HEALTH.

To the Editor of the EDUCATIONAL WEEKLY.

SIR,—As you reprint without comment the remarks of Dr. Withers-Moore on this subject, permit me to take exception to some of his positions.

Dr. Withers-Moore assumes that the demand of women for a higher education of the kind formerly confined to men implies competition between men and women in all spheres, including the military one. That I am not misstating his opinion is plain from his express assertion that "this higher education will hinder those who would have been the best mothers from being mothers at all, or, if it does not hinder them more or less, it will spoil them," and from his implied assertion that the "proper function" of women is the bearing and rearing of children. There is no necessary connexion between the demand of some women for higher education and the demand of some women to be allowed to practice medicine or law, to vote at political elections, to serve on juries, or even to command armies. The desire of a woman for intellectual culture may be quite legitimate and even laudable, if all these other demands are found to be the reverse. The craving for knowledge is natural; it is not limited by sex, and it ought to be gratified, if the gratification cannot be shown to be detrimental to the physical, intellectual or moral nature of the individual, without regard to sex.

Assuming that the proper function of woman is maternity, how does Dr. Withers-Moore know that higher education tends to unfit women for the discharge of this function? No one can dogmatize *a priori* on such a subject. The appeal must be to experience, and fortunately there is now experience of the most practical and varied kind to appeal to, though Dr. Withers-Moore seems not to know of its existence. In the United States women have been admitted in large numbers, and for many years, to colleges of a high class. Some time ago the Massachusetts Statistical Department made exhaustive inquiries for the purpose of ascertaining the effect of collegiate work on the women themselves, and on their offspring. The statistics collected were carefully "reduced," under the superintendence of the most expert statist on this continent, and the result was more satisfactory than surprising to those who felt confident from their own observations that college courses tend to improve the health of women rather than otherwise. College trained women make on the average more healthy wives and mothers than women who have had a different training.

Curious to say, the authorities and facts cited by Dr. Withers-Moore in support of his contention, make directly against it. Take that Oxford tutor, for instance. If a man's fate depends more on his mother's character than on his father's—and it does—how important that the mother's training should be liberal! She should have enough of scientific knowledge to be able to make her children take a scientific interest in their physical environment. She should have enough of literary culture to be able to guide their literary

training, and to know whether their professional teachers are worthy of the trust reposed in them. She should have enough of philosophical capacity to be able to give her children a glimpse of their own marvellous mental and spiritual organization. If she has these qualifications for maternity she has the "higher education" to which Dr. Withers-Moore objects. Would Bacon, and Buffon, and Cuvier, and Goethe have been less great than they were had their mothers been educated more highly than they were? What would have made them so?

But all this discussion keeps the question on far too narrow a ground. The "proper function" of woman is not maternity, but the discharge of whatever duty she may find imposed on her by Providence. Many women never marry; are they all superfluous? Many married women become widows, and if they happen to be childless are they also superfluous? Woman, as woman, owes duties to herself, to her relatives, to society, apart altogether from the marriage relationship, duties which she neglects at her peril whether she is married or not, duties which she can discharge more effectively the more liberally she is educated.

Dr. Withers-Moore's ideal of woman is that of the "clinging vine," and he feels restive and angry because women show a growing desire for an education that will make them less dependent. Perhaps it would be more correct to say that his ideal is that of Tennyson's "fat-faced curate" in "Edwin Morris":

"I take it, God made the woman for the man,
And for the good and increase of the world.
A pretty face is well, and this is well
To have a dame indoors that trims us up
And keeps us tight; but these unreal ways
Seem but the themes of writers, and indeed
Worn threadbare. Man is made of solid stuff.
I say, God made the woman for the man,
And for the good and increase of the world."

One of the best features, to my thinking, of the social tendencies of the present day is the progress that has been made, is making, and is likely to be made toward the realization of a totally different ideal. It would be better for Dr. Withers-Moore to accept the situation and devote himself to impressing on women the necessity of carefully guarding their health whatever their calling in life may be.

WM. HOUSTON.

October 4th, 1886.

Educational Intelligence.

ALMA COLLEGE.

AT the last meeting of the board of management of this college, the chief matter considered was the proposed new building. The board expressed great satisfaction with Mr. Balfour's last plans and considered it desirable to erect the new buildings after these plans, although they would necessitate a larger outlay than at first contemplated. Yet it was better to delay than mutilate the plans by trying to diminish the cost on them. The following resolution unanimously adopted will explain the situation fully. A vigorous effort will be made to secure the additional \$5,000 at an early date, that the new building may be proceeded with in early spring. It was moved by Rev. J. C. Sanderson, M.A., seconded by Rev. A. M. Phillips, B.D.,

agement has authorized and directed an extension of the college buildings, setting a limit of \$14,000 to cover the entirety of building, heating and furnishing, and requiring at least \$5,000 to be raised on good subscriptions for the building fund, and whereas, on careful examination the board finds that acceptable plans cannot be realized on the limit of \$14,000 previously set, while on the other hand the amount of the subscription required has been raised, and there is reasonable expectation and carried, That inasmuch as the board of management that the improved plans will call forth larger subscription, thereby not increasing the obligation of the board much, if, any, above the original intent, therefore resolved on reconsideration of the action of the board hitherto taken, that the above limit of \$14,000 be enlarged to \$20,000, and the former requirement of subscription be increased to \$8,000; that the building committee be authorized to make arrangements preparatory to building on the new plans in the spring of 1887, provided the limit of \$8,000 be reached in subscription, the arrangements to be reported to the board as soon as the limit of subscription shall have been reached.

SCHOOL ATTENDANCE IN GERMANY AND FRANCE.

WHEREVER I inquired, in Germany and Switzerland, inspectors and teachers assured me that they had not to complain of the parents; that the children were sent to school regularly. By looking at the registers I was able to assure myself how few of the absences were entered as contumacious. A contumacious absence, I was told, was never passed over; and on one occasion I was myself present when the school officer was despatched to fetch an offender—a girl—and fetched her. But in general the children have the habit of coming to school as a matter of course, and the parents have the habit of acquiescing, as a matter of course, in their children's going. This is the great matter. I was told that the magistrates, when cases came before them, were apt to be lenient; and, indeed, a local landowner and magistrate in a Silesian village, when I asked him, pointing to a passing villager and his boy, "But if that man was summoned and declared to you that he kept his boy from school because he was too poor to do without his labour, what would you say?" answered me in English: "I would remain silent." But in that very village the master of the school told me that not a case for summoning a child had arisen for the last ten years. Even more palpable was the evidence of regular attendance in the little Zurich school already mentioned by me. I arrived there wholly unannounced and unexpected, and asked to see the registers. I found forty-eight children entered, I counted forty-six present in school before me, and learned that the two absentees were kept away because of the infectious fever in their family. In great cities there is less regularity of attendance than in the country: the Berlin municipality in 1884, with 134,411 children in school, inflicted penalties on 1,181 heads of families. In France the attendance is a good deal less regular than in Germany; in the country, I am told, especially. The established habit of school-going has not yet had time to be formed there. But the law itself, in France, gives a surprising license for periodical

absences from school. At the age of eleven the child can leave school if he has obtained the certificate of being up to the mark in the work of a primary school; but, moreover, before that age, the law of 1882 allows managers to give three months' leave a year, besides the holidays, to a child living at home, and to permit a child employed away from home to come to school for half the day only. In Germany the school obligation is much more serious.—From *Mr. Matthew Arnold's Report*.

MISS WILDEKN, of Vienna, has taken charge of S.S. No. 8, South Dorchester.

MR. SIMPSON has assumed the head mastership of the Markham High School.

MR. TWOHEY, classical master at the Chatham High School, goes to Brockville to take a similar situation at \$1,000 per annum.

HON. G. W. ROSS, Minister of Education, with Mayor Rae, visited Demill College, Oshawa, on Sept. 28th, when the Hon. Mr. Ross gave an excellent address to the students and faculty of the college.

MESSRS. MILLER, SANDERS & MIDGLEY, the special committee appointed by the St. Thomas School Board to arrange for the visit of the Minister of Education, decided to hold a public meeting in the opera house.

PLANS for the gymnasium for the St. Mary's Collegiate Institute have been prepared, and tenders are advertised for the erection of a frame structure, 25x50 feet. The building is to be erected on a part of the grounds to the east of the main building and will cost in the neighbourhood of \$300.

THE pupils of Mrs. Farrar, in the girls' central school, Winnipeg, presented their teacher with a very handsome butter cooler; and the teachers of the central presented her with very richly bound copies of Hood's poems and American poets. These souvenirs are given to Mrs. Farrar on the occasion of her retiring from the school. She leaves next week to join her husband in Florida, where he has been engaged in business for a few months past.

OSHAWA High School held "Graduating Exercises" on September 28th, and despite the rain, the hall was crowded. Diplomas and certificates were presented to the successful candidates at the late examinations. The Hon. G. W. Ross, Minister of Education, was present and delivered an address fully setting forth the object of the recent changes in the School Law. Oshawa Collegiate Institute contemplates holding a similar entertainment some time next month.

AT an adjourned meeting of Convocation of the University of Manitoba, it was moved by Rev. Father Drummond, seconded by Mr. J. A. M. Aikins, that it may be considered advisable that enlarged powers be given to the council as to the mode of election and as to an increased number of representatives of convocation in said council, such powers to be used whenever the council shall consider that a change is imperative; and that the registrar transmit such resolution to the council.

M. JULES SIMON has contributed to the *Revue Illustrée de Bretagne et d'Anjou* an account of his

schooldays at Vannes in 1830, where he supported himself entirely out of the prizes he won and the tuition he was permitted to give to younger boys. He prides himself with having been head of the school, with the title of "Imperator," for three years in succession; but on entering the Ecole Normale, the first discovery he made was "*que je ne savais rien au monde, excepté un peu de Latin*."

THE report of the property committee of the Peterborough Board of Education at the board's last meeting concluded as follows: "Your committee have complied with the requirements of the Educational Department as near as possible and at a low cost, considering the numerous changes asked for; we are pleased to learn that the Government grant, due in September, has been paid without any comment, from which we may infer that the Institute is now satisfactory."

BEFORE the Minister of Education began his inspection of the Tilsonburg schools, Mr. Wilson, the clever principal of the public school, was greatly surprised by the entry to his room of his lately graduated class, headed by G. W. Hare, reeve of the town. But he was still more surprised when the leader of the deputation called him to the front and, after a well-worded address had been read by Mr. Hare, he was presented with a handsome gold watch and chain and pendent.—*St. Thomas Times*.

MR. BARTON EARLE, English Master in the Peterborough Collegiate Institute, having had the misfortune to break his leg, the board has found it necessary to obtain a substitute for two months. At its last meeting Dr. Tassie said that as an experienced man was needed it would be best to write to Victoria University, which he thought would supply one. Mr. Errett asked which position was most easily filled—the modern languages and English department, and on Dr. Tassie's referring that modern language master would be the most readily had, recommended that Mr. Long take Mr. Earle's place for the time being. Mr. Dumble said that the English department was undoubtedly the most important in the school. Mr. Earle was a man of fifteen years' experience in this department, and was of acknowledged ability. He urged that no so-called economy be practised in getting a man to fill the position for the time being, as two months of bad teaching would upset the school for the whole term. It was a well-known fact, and one that could not be denied, that scores of men could be had to teach French, German or Russian, while there were but few who could teach our mother tongue efficiently. Dr. Tassie said that English and mathematics were certainly the most important departments in the institute. On motion, the committee on appointments was given power to arrange for the filling of Mr. Earle's position till he recovers.

WE take the following from the Leeds and Grenville *Independent*: "Rev. Mr. Blair, school inspector for this county, arrived at his home here on Sept. 15th, having come by one of the Cunard steamers to Boston, from which he found his way to Prescott via Portland and the picturesque route of the White Mountains. He speaks of his trip as a mere picnic excursion, which he enjoyed amazingly, having found the Atlantic so smooth, both in going and returning, that he had really no op-

portunity of enjoying the luxury of sea-sickness. He spent about a week in Scotland, visiting Glasgow, Perth and Edinburgh, and the remainder of his limited time chiefly in London perambulating the courts of the Colonial and Indian Exhibition, hearing the great preachers and renewing his acquaintance after many years with Westminster Cathedral, the British Museum, Greenwich observatory and objects of interest in or near the great world-metropolis. He visited also Windsor Castle and Eton College, and spent some days in Birmingham and Liverpool. Of the extent and magnificence of the London Exhibition he says it is impossible to give any idea to those who have not seen it with their own eyes; but that Canada stood out conspicuously in all the departments, and especially in the Ontario Educational Court, which was under the superintendence of Dr. May as Commissioner of Education, and which far excelled all others. He adds that Dr. May was most kind and obliging to Canadian visitors, and gave him much useful information, which he hopes to be able to turn to good account in his future visits to the schools."

THE Paris correspondent of the *Globe* draws attention, in the following words, to the nature of the school and college prizes which are expected to satisfy the aspirations of French students: "The alien who sees the French lad of about six strut about with a leaden cross, suspended from a red or blue ribbon, on his breast, suspects that the child's vanity led him to buy, for a penny or so, an imitation of the Legion of Honour at a toy-shop. Not so. The thing has been duly awarded by the authorities of the elementary schools. If the lad were to dare sport the laudible without such authority, he would expose himself to severe punishment indeed. Hence his appetite for the distinction has been whetted; and, should it elude his grasp a few years later on at the annual prize distribution of his college, his own grief will be very heartfelt, though mute, while his parents' disappointment will vent itself in remarks the reverse of complimentary. Space fails to describe such a ceremony at length. It is theatrical in the extreme. The successful pupil is conducted to the platform, where sit the university professors and the delegates of the Minister of Public Education, if not that dignity himself. The laurel wreath is set upon his young brow, to a military fanfare; the dispenser of fame takes him into his arms, and salutes him on both cheeks; the Swiss, resplendent in gold lace, cocked hat, and sword, escorts him back to his seat, amid the thundering applause of the audience, and the next day his name figures in all the Paris, and in a good many of the provincial papers. This very day the examinations for the B.A. diploma of the Sorbonne begin. There are no fewer than 3,100 candidates inscribed for the honour. From experience, I am safe in predicting that not 300 of them will be plucked. In another fortnight 1,500 youngsters will display on their cards the title of 'Bachelier-ès-Lettres.' The affix will be sufficient to bar their entrance to any commercial or industrial career, for in the merchant's and manufacturer's eyes it is tantamount to a certificate of absolute imbecility, so far as practical knowledge goes. Nevertheless, the affix will be maintained to the end of their days, for it is a distinction, and that is everything."

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO.

JULY EXAMINATIONS, 1886.

FIRST CLASS TEACHERS—GRADE C.

[The two following papers contained so many typographical errors that we re-print them with examiner's corrections.]

ENGLISH GRAMMAR.

Examiner—J. F. WHITE.

NOTE.—So% will form a full paper, but special importance will be attached to the answering of 1, 6, 8, 10. The literary form of the answers will be considered.

1. That *day* Sir Lancelot at the palace craved Audience of Guinevere, *to give* at last The price of half a realm, his costly gift, *Hard-won* and hardly won with bruise and blow, With deaths of others, and almost his own, The nine-years-fought-for diamonds; for he saw One of her house, and sent him to the Queen bearing his wish, *where* to the Queen agreed With such and so unmoved a majesty She might have seem'd her statue, but that he Low-drooping till he well nigh kiss'd her feet For loyal awe, saw with a sidelong eye The shadow of a piece of pointed lace, In the Queen's shadow, *vibrate* on the walls, And parted, *laughing* in his courtly heart.

All in an oriel on the summer side, Vine-clad, of Arthur's palace *toward* the stream, They met, and Lancelot kneeling utter'd, 'Queen, Lady, my liege, in whom I have my joy, Take, what I had not won except for you, These jewels, and make me happy, making them An armlet for the roundest arm on earth, Or necklace for a neck to which the swan's Is tawnier than her cygnet's.'

(a) Divide into propositions, showing their kind and relation, l. 10 to end.

(b) State the relation, and part of speech of the words in italics.

(c) Give clearly the relation and function of the following phrases:—'At the palace'; 'almost his own'; 'in the Queen's shadow'; 'except for you'; 'on earth'; 'to which the swan's.'

(d) Show the difference between 'hard-won' and 'hardly won,' l. 4; why 'deaths,' l. 5? Write note on compound word, l. 6; compare meanings of 'for' in ll. 6 and 12; classify '*summer side*,' '*sidelong eye*.'

2. Give the meaning and history of the remaining endings of the personal and demonstrative pronouns.

What is the difference as to number between

{	I	{	man
	and		men?
	we		men?

3. State concisely your views on each of the following:—

(a) "The verb need not, and generally does not agree with its nominative case (subject) in person and number."

(b) "English may almost be said to have no distinctive parts of speech."

(c) "Conjunctions do not necessarily connect the same moods and tenses of verbs."

(d) "Once English had three genders, but as it now is, if we except one or two words, it has none."

4. Account for the peculiarities of pronunciation or of orthography in these words:—cupboard,

gossip, receive, debt, frontispiece, island, could, who, clerk, pea, parliament.

5. Write brief notes, with illustrations, on:—
(a) The conveniences of the passive construction.

(b) The unnecessary use of the feminine gender.
(c) The use or the omission of the article.

(d) The distinctions gained in using the subjunctive mood, and the "tendency" in regard to this form.

6. How is it that in English there are strong and weak preterites, and that in certain verbs the two forms exist? In this connection remark upon the following:—did, was, taught, light, should, had, led, went, put.

7. State your views as to the desirability of a spelling reform in English, and of the extent to which it should be carried. Illustrate your answer.

8. (a) Write brief notes on the *structure* of the following words:—direful, reliable, preventative, talented, speciality, educationalist.

(b) Contrast the past and the present meanings of influence, pagan, religion, tribulation, sacrament, acre, caprice, treacle. Explain how these changes were brought about.

10. Correct, with reasons, the following sentences:—

Whenever education is logical in its methods, the smallest interference is like a stone thrown into a machine.

They here began to breathe a delicious kind of ether, and saw all the fields about them covered with a kind of purple light, that made them reflect with satisfaction on their past toils.

The actual deprivation of freedom is a sentimental luxury with which the negro can easily dispense.

He always preferred to have his own views sustained by the failure of his opponents' argument than by the success of his own.

After the delivery of this speech, which, being translated by M. de Stael, was read with admiration not only in England but on the continent.

The mootings of this question will form a fertile plain for military critics to exercise their hobbies on for many years to come.

ENGLISH HISTORY.

Examiner—JAS. F. WHITE.

Not more than six questions are to be answered.

1. Describe the policy pursued towards Scotland by Charles I., its objects and its results.

2. Through what causes was the influence of parliament developed in the reigns of James I. and his successor?

3. Describe the condition of the country at the accession of James II.

4. What were the causes of the great literary activity of the Elizabethan period? Give some account of the works of Spenser, Bacon, Ben. Jonson.

5. Show clearly the objects and the results of the foreign policy of Charles II.

6. What was the condition of Ireland under the Stuart rule?

7. Give an account of the origin and purpose of the Territory Bill, Act of Grace, Petition of Right, Triennial Bill, Solemn League and Covenant.

8. In the Act of Settlement what limitations

were put to the Royal Prerogative? Show what need existed for such limitations.

9. "If Strafford embodied the spirit of tyranny, John Pym stands out for all time as the embodiment of law."—Green.

Fully explain this statement.

BOARD OF EDUCATION, MANITOBA (Protestant Section.)

Examination of Teachers, July 1886.

BOOK-KEEPING—FIRST CLASS.

Examiner—D. MCINTYRE.

Time—two and a half hours.

WINNIPEG, June 2nd, 1886.

June 1. Commenced business with the following resources: Cash, \$7,300, Mdse, \$3,000; due me on notes, \$3,000; Wm. Hay owes me \$3,000; I own house and lot on Fort St. valued at \$8,000; I owe J. Jonas \$1,400, S. Sims, \$1,100, I owe on notes \$300.

June 2. The following transactions occurred: Bought of Taylor & Co. 50 bbls. of sugar \$1,000. Accepted their draft at ten days in favour of Reed & Co.

June 3. Bought of Marnel & Co. 400 sacks of flour, \$900; paid them their own note in my favour for \$400, on which, as it does not fall due for two months, I allow them discount for that time at 10%; balance in cash.

June 4. Sold Thos. Edwards mdse. \$2,000, taking my note in favour of James Thompson for \$200; Edward's note at 30 days for \$800, and the balance in cash.

June 5. Bought of J. Walters mdse. worth \$1,600, giving in payment cash \$200, my note a 30 days \$500, balance on account.

June 7. Paid J. Jonas' order in favour of Henry Harding in mdse. \$750.

June 8. Paid cash for repairing house on Fort Street, \$150.

June 9. Exchanged notes with Thos. Harrison for our mutual accommodation, each note drawn at 30 days for \$600, and discounted Harrison's note at Merchants' Bank, receiving proceeds, \$595.60.

June 10. Received 3 months' rent house on Fort St. \$96.

June 11. Wm. Hay having failed compounds with his creditors at 65 cents on the dollar. I receive my share of the compromise in mdse.

June 12. Paid taxes on house and lot on Fort St., \$25.

June 14. Received of Henry Hart, of St. Paul, 500 crates of peaches, invoiced at \$450 per crate. Paid freight, \$100; customs, \$200.

June 15. Paid my acceptance of Taylor & Co.'s draft in favour of Reed & Co. at Merchants' Bank, \$1,000.

June 16. Sold J. Walters 100 sacks flour, \$265; 15 bbls. sugar, \$315. Mdse. Hart's consignment.

Sold balance of Hart's consignment for \$1,050 cash. Closed consignment. Rendered acct. sales. Commission on sales 3 per cent. Sent draft on N.Y. for acct. due Hart, paying \$1.25 for draft.

June 17. Paid store expenses, \$80.

Mdse. on hand on 15th June, valued at \$5,400. House and lot on Fort St. valued at \$8,100.

Journalize and post.

Find net worth on 17th June.

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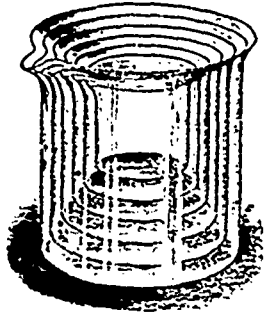
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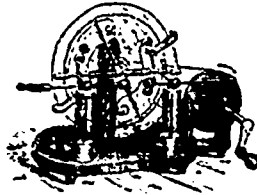


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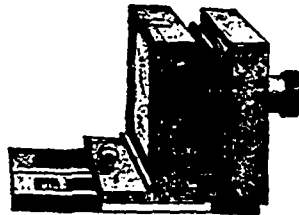
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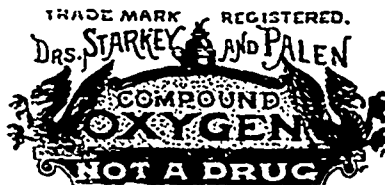
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