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THE CANADA
EDUCATIONAL MONTHLY

MARCH, 1899.

A "SOCIETY" GIRL'S EDUCATION.

BY "ORLECOIGNE."

What constitutes a "Society" girl's education? And of what use will it be to her should she suddenly be thrown, as is often the case, upon her own resources?

These questions naturally suggest themselves to our minds; and especially so when we hear of the frequent failures either of banks or of well-established and apparently safe and influential companies, which very often result in the total wreck of many homes; families being plunged in dire distress and poverty. Although, of late years, the system of educating girls has undoubtedly improved, and is improving constantly, it is chiefly the working and what may be termed the "middle" classes who are availing themselves of the opportunities offered to them, and not the "Society" girls. Should one of these, having only received an education suited to fit her for social life, find it incumbent upon her to earn her own living, she will find, although many hundreds of dollars may have been expended in sending her to "fashionable" schools, that the ordinary finishing-off education she has received will be of little benefit to her when she wishes to turn it to practical account, unless, indeed, she happens to possess some very decided talent, which has been properly cultivated; but, as these are exceptional cases, it is wiser to deal with the commoner ones.

The education usually given to so-

called "society" girls is generally of such a superficial nature, a mere smattering of many things, by which they glean such slight knowledge of each subject, as to be almost worse than learning nothing at all of it. At present a girl is usually taken from school at the age of 18, or even younger, just at the age she is becoming interested in her studies, and is launched into society, where too much thought is concentrated on her personal appearance and dress, and too little is expended on her mental development; until then the parents of this class of girls will realize that the education they are receiving is not the right or adequate one, and will aid and abet in altering the present state of things, it will not in itself be sufficient that our colleges and universities are little by little opening their portals to admit within them our girls and women to share in the advantages offered to men. Would it not be infinitely better and wiser in every way that girls should not have their studies interrupted until they are 21 years of age, and specially cultivate the subjects to which their minds most incline, rather than waste time and money instructing them in various subjects and accomplishments for which they show no special taste. It would be better they should receive a good sound Normal School education to fit them for teachers or up-to-date governesses, should occasion require it, or

it should be their inclination to have an aim and purpose in life, instead of leading a wholly frivolous one. By remaining at school till 21 years of age instead of being launched in social life at 18, a girl would be better qualified to judge for herself the sort of life she prefers to lead; she is likely to be more sensible and more likely to know her own mind, and can at least have the choice of availing herself of privileges now offered or of deciding to live merely a frivolous life. For at present it cannot be denied that the ordinary society life of a young girl, plunged at the age of eighteen into the whirl of gaieties which make up the vortex of social life, the excitement of which, coupled with the wish to take part in all that is going on—dancing, skating, attending teas, lunches, toboggan parties, or whatever the season's whim may be, absolutely unfits her for anything else. She must rest herself in the mornings and recruit her strength for the next dissipation or excitement!

In retrospection how frittered away one's days seem, and how one longs now to recover the precious time one might have done good work in. From the standpoint of a regretted past in that particular, therefore, I would urge the necessity of keeping girls longer at their studies, and of giving them the same advantages as boys and young men; of studying in what direction their special aptitude lies and then having it cultivated—if for languages, they should specially study to become proficient linguists; for business, why should they not have a business education, that they may be competent to fill positions either of bookkeeper, clerk or accountant—if they have decided taste or talent for music or art, these should be cultivated and studied thoroughly, instead of wasting time and money on a heterogeneous mass of accomplishments for which no aptitude is evinced; or for those who, when

first standing on the threshold of womanhood, prefer at once to have an aim and purpose in life, and determine not to lead a wholly frivolous one, why should they not, on leaving school, take their University course, and study to enter any of the professions they may desire? Of course there are already thousands of women who have been, and are being educated to help themselves, but they are to be found chiefly among the working or middle classes. But it is to the class generally known as society girls I would direct these remarks, knowing full well how little use they can make of the "fashionable finishing off" school education should they desire to do so. The uncertainty of fortune is such that one never knows who may not have to put their "hand to the plough." How often terms such as "strong-minded" or "masculine" are misapplied to most womanly women, who prefer an independent life, who, for various reasons, do not wish for the ties of matrimony, and yet do not care to be dependent on others? If, however, a girl who has taken up and followed some favorite pursuit, be it either a profession or business, should decide to marry, her work will not at all unfit her for married life; in fact, the systematic way of living will aid her in managing her household, and she will be the better wife, companion and mother for the discipline she has undergone. Wherever a girl or woman attempts to enter the field of work with or against man there will always be found some small, petty-minded men who will cry out about women taking their work, or object on some ground; but fortunately there are many men, and these are to be found amongst those most richly endowed themselves, both mentally and morally, who will most willingly help her endeavors towards self-support. This mode of educating women to be more the comrade of man will, too, do much

to help dispel that relic of barbarism so revolting to many nice girls and women—the idea, still to a certain extent prevalent—viz., that matrimony is the sole end and aim of a girl's and especially of a "society girl's" existence'

TALKS TO TEACHERS ON PSYCHOLOGY.

PROF. WILLIAM JAMES.

EDUCATION AND BEHAVIOR.

Education in the last analysis consists in the organizing of *resources* in the human being, of powers of conduct which shall fit him to his social and physical world. An "uneducated" person is one who is nonplussed by all but the most habitual situations. On the contrary, one who is educated is able practically to extricate himself, by means of the examples with which his memory is stored and of the abstract conceptions which he has acquired, from circumstances in which he never was placed before. Education, in short, cannot be better described than by calling it *the organization of acquired habits of conduct and tendencies to behavior*.

To illustrate. You and I are each and all of us educated, in our several ways, and we show our education at this present moment by different conduct. It would be quite impossible for me, with my mind technically and professionally organized as it is, and with the optical stimulus which your presence affords, to remain sitting here entirely silent and inactive. Something tells me that I am expected to speak, and must speak, something forces me to keep on speaking. My organs of articulation are continuously innervated by outgoing currents, which the currents passing inward at my eyes and through my educated brain have set in motion, and the particular movements which they make have their form and order determined altogether by the training of all my past years of

lecturing and reading. Your conduct, on the other hand, might seem at first sight purely receptive and inactive, leaving out those among you who happen to be taking notes. But the very *listening* which you are carrying on is itself a determinate kind of conduct. All the muscular tensions of your body are distributed in a peculiar way as you listen, your head, your eyes, are fixed characteristically. And, when the lecture is over, it will inevitably eventuate in some stroke of behavior, as I said on the previous occasion. You may be guided differently in some special emergency in the school-room by some word which I now let fall. So it is with the impressions you will make there on your pupil. You should get into the habit of regarding them all as instrumental to the acquisition by him of capacities for behavior, emotional, social, bodily, vocal, technical, or what not. And this being the case, you ought to feel willing, in a broad, general way, and without hair-splitting or further ado, to take up with the biological conception of the mind, as of something given us for practical use. That conception, at any rate, will conveniently cover the greater part of your own educational work.

If we reflect upon the various ideals of education that are prevalent in the different countries, we see that what they all aim at is to organize capacities for conduct. This is most immediately obvious in Germany, where the explicitly avowed aim of the higher education is to turn the student into

an instrument for advancing scientific discovery. The German universities are proud of the number of young specialists whom they turn out every year—not necessarily men of any original force of intellect, but men so trained to research that when their professor gives them an historical or philological thesis to prepare, or a bit of laboratory work to do, with a general indication as to the best method, they can go off by themselves and use apparatus and consult sources in such a way as to grind out in the requisite number of months some little peppercorn of new truth worthy of being added to the store of extant human information on that subject. Little else is recognized in Germany as a man's title to academic advancement than his ability thus to show himself an efficient instrument of research.

In England, it might seem at first sight as if what the higher education of the universities aimed at were the production of certain static types of character, rather than the development of what one may call this dynamic scientific efficiency. Prof. Jowett, when asked what Oxford could do for its students, is said to have replied, "Oxford can teach an English gentleman how to be an English gentleman." But if you ask what it means "to be an English gentleman," the only reply is in terms of conduct and behavior. An English gentleman is a bundle of specifically qualified reactions, a creature who for all the emergencies of life has his line of behavior distinctly marked out for him in advance. Here, as elsewhere, "England expects every man to do his duty."

THE NECESSITY OF REACTIONS.

If all this be true, then immediately one general aphorism emerges which ought by logical right to dominate the entire conduct of the teacher in the class-room. *No reception without reaction, no impression without correlative*

expression—this is the great maxim which the teacher ought never to forget. An impression which simply flows in at the pupil's eyes or ears, and in no way modifies the active life, is an impression gone to waste. It is physiologically incomplete. It leaves no fruits behind it in the way of capacity acquired. Even as mere impression it fails to produce its proper effect upon the memory; for, to remain fully amongst the acquisitions of this latter faculty, it must be wrought into the whole cycle of our operations. Its motor consequences are what *clinch* it. Some effect, due to it in the way of an activity, must return to the mind in the form of the sensation of having acted, and connect itself with the impression. The most durable impressions, in fact, are those on account of which we speak or act, or else are inwardly convulsed.

The older pedagogic method of learning things by rote, and reciting them parrot-like in the school-room, rested on the truth that a thing merely read or heard, and never verbally reproduced, contracts the weakest possible adhesion in the mind. Verbal recitation or reproduction is thus a highly important kind of reactive behavior on our impressions, and it is to be feared that, in the reaction against the old parrot recitations as the beginning and end of instruction, the extreme value of verbal recitation as an element of complete training may nowadays be too much forgotten.

When we turn to modern pedagogics, we see how enormously the field of reactive conduct has been extended by the introduction of all those methods of concrete object teaching which are the glory of our contemporary schools. Verbal reactions, useful as they are, are insufficient. The pupil's words may be right, but the conceptions corresponding to them are often direfully wrong. In a modern school, therefore, they form

only a small part of what the pupil is required to do. He must keep notebooks, make drawings, plans, and maps, take measurements, enter the laboratory and perform experiments, consult authorities, and write essays. He must do in his fashion what is often laughed at by outsiders when it appears in prospectuses under the title of "original work," but what is really the only possible training for the doing of original work thereafter. The most colossal improvement which recent years have seen in secondary education lies in the introduction of the manual training schools; not because they will give us a people more handy and practical for domestic life and better skilled in trades, but because they will give us citizens with an entirely different intellectual fibre. Laboratory work and shop work engender a habit of observation, a knowledge of the difference between accuracy and vagueness, and an insight into nature's complexity and into the inadequacy of all abstract verbal accounts of real phenomena which, once wrought into the mind, remain there as lifelong possessions. They confer precision; because, if you are *doing* a thing, you must do it definitely right or definitely wrong. They give honesty, for when you express yourself by making things, and not by using words, it becomes impossible to dissimulate your vagueness or ignorance by ambiguity. They beget a habit of self reliance; they keep the interest and attention always cheerfully engaged, and reduce the teacher's disciplinary functions to a minimum. Of the various systems of manual training, so far as woodwork is concerned, the Swedish sloyd system, if I may have an opinion on such matters, seems to me by far the best, psychologically considered. Manual training methods, fortunately, are being slowly, but surely, introduced into all our large cities; but there is still an immense distance to traverse before they shall have gained the extension

which they are destined ultimately to possess.

No impression without expression, then, that is the first pedagogic fruit of our evolutionary conception of the mind as something instrumental to adaptive behavior. But a word may be said in continuation. The expression itself comes back to us, as I intimated a moment ago, in the form of a still further impression—the impression, namely, of what we have done. We thus receive sensible news of our behavior and its results. We hear the words we have spoken, feel our own blow as we give it, or read the success or failure of our reaction; in the bystander's eyes. Now, this return wave of impression pertains to the completeness of the whole experience, and a word about its importance in the school-room may not be out of place. It would seem only natural to say that since after acting we normally get some return impression of result, it must be well to let the pupil get such return impression in every possible case. Nevertheless, in schools where examination marks and "standing" and other returns of result are concealed, the pupil is frustrated of this natural termination of the cycle of his activities, and often suffers from the sense of incompleteness and uncertainty, and there are persons who defend this system as encouraging the pupil to work for the work's sake, and not for extraneous reward. Of course, here as elsewhere, concrete experience must prevail over psychological deduction. But, as far as our psychological deduction goes, it would suggest that the pupil's eagerness to know how well he does is in the line of his normal completeness of function, and should never be balked except for very definite reasons indeed.

NATIVE REACTIONS AND ACQUIRED REACTIONS.

We are by this time fully launched upon the biological conception. Man

is an organism for reacting on impressions; his mind is there to help determine his reactions, and the purpose of his education is to make them numerous and perfect. *Our education means, in short, little more than a mass of possibilities of reaction, acquired at home, at school, or in the training of affairs.* The teacher's task is that of supervising the acquiring process.

This being the case, I will immediately state a principle which underlies the whole process of acquisition and governs the entire activity of the teacher. It is this:

Every acquired reaction is, as a rule, either a complication grafted on a native reaction, or a substitute for a native reaction which the same object originally tended to provoke.

The teacher's art consists in bringing about the substitution or complication, and success in the art presupposes a sympathetic acquaintance with the reactive tendencies natively there.

Without an equipment of native reactions on the child's part, the teacher would have no hold whatever upon the child's attention or conduct. You may take a horse to the water, but you cannot make him drink; and so you may take a child to the school-room, but you cannot make him learn the new things you wish to impart, except by soliciting him in the first instance by something which natively makes him react. He must take the first step himself. He must *do* something before you can get your purchase on him. That something may be something good or something bad. A bad reaction is better than no reaction at all; for, if bad, you can couple it with consequences which awake him to its badness. But, imagine a child so lifeless as to react in *no* way to the teacher's first appeals, and say how you can possibly take the first step in his education.

To make this abstract conception

more concrete, assume the case of a young child's training in good manners. The child has a native tendency to snatch with his hands at anything that attracts his curiosity; also to draw back his hands when slapped, to cry under these latter conditions, to smile when gently spoken to, and to imitate one's gestures.

Suppose now you appear before the child with a new toy intended as a present for him. No sooner does he see the toy than he seeks to snatch it. You slap the hand; it is withdrawn, and the child cries. You then hold up the toy, smiling, and saying, "Ask for it nicely—so!" The child stops crying, imitates you, receives the toy, and crows with pleasure—and that little cycle of training is complete. You have substituted the new reaction of "asking" for the native reaction of snatching, when that kind of impression comes.

Now, if the child had no memory, the process would not be educative. No matter how often you came in with a toy, the same series of reactions would fatally occur, each called forth by its own impression: see, snatch; slap, cry; hear, imitate; ask, receive. But, with *memory* there, the child, at the very instant of snatching, recalls the rest of the earlier experience, thinks of the slap and the frustration, recollects the asking and the reward, inhibits the snatching impulse, substitutes the "nice" reaction for it, and gets the toy immediately by eliminating all the intermediary steps. If a child's first snatching impulse is excessive, or his memory poor, many repetitions of the discipline may be needed before the acquired reaction comes to be an ingrained habit; but in an eminently educable child a single experience will suffice.

One might easily represent the whole process by a brain-diagram; but such a diagram would be little more than a symbolic translation of the immediate

experience into spatial terms, so I omit it.

The first thing, then, for the teacher is to understand the pupil's native reactive tendencies—the impulses and instincts of childhood—so as to be able to substitute one for another, and turn them on to artificial objects.

It is often said that man is distinguished from the lower animals by having a much smaller assortment of native instincts and impulses than they; but this is a great mistake. Man, of course, has not the marvelous egg-laying instincts which some articulate have; but, if we compare him with the mammalia, we are forced to confess that he is appealed to by a much larger array of objects than any other mammal, that his reactions on these objects are characteristic and determinate in a very high degree. The monkeys, and especially the anthropoids, are the only beings that approach him in their analytic curiosity and width of imitativeness. His instinctive impulses, it is true, get overlaid by the secondary reactions due to his superior reasoning power; and thus man loses the *simply* instinctive demeanor. But the life of instinct is only disguised in him, not lost; and when the higher brain functions are in abeyance, as happens in imbecility or dementia, his instincts sometimes show their presence in truly brutish ways.

I will therefore say a few words about those instinctive tendencies which are the most important from the teacher's point of view.

WHAT THE NATIVE REACTIONS ARE.

First of all, *fear*. Fear of punishment has always been the great weapon of the teacher, and will always, of course, retain some place in the conditions of the school-room. The subject is so familiar that nothing more need be said about it. And the same is true of *love*, and the instinctive de-

sire to please those whom we love. The teacher who succeeds in getting herself loved by the pupils will obtain results which one of a more forbidding temperament finds it impossible to secure.

Next, a word may be said about *curiosity*. This is perhaps a rather poor term by which to designate the *impulse toward better cognition* in its full extent; but you will readily understand what I mean. Novelties in the way of sensible objects, especially if their sensational quality is bright, vivid, startling, invariably arrest the attention of the young, and hold it until the desire to know more about the object is assuaged. In its higher form, the impulse toward complete knowledge takes the character of scientific or philosophic curiosity. In both its sensational and its intellectual form, the instinct is more vivacious during childhood and youth than in after life. Young children are possessed by curiosity about every new impression that assails them. It would be quite impossible for a young child to listen to a lecture for more than a few minutes, as you are now listening to me. The outside sights and sounds inevitably carry his attention off. And for most people in middle life, the sort of intellectual effort required of the average school-boy in mastering his Greek or Latin lesson, his algebra or physics, would be out of the question. The middle-aged citizen attends exclusively to the routine details of his business, and new truths, especially when they require involved trains of close reasoning, are no longer within the scope of his potentiality.

The sensational curiosity of childhood is appealed to more particularly by certain determinate kinds of objects. Material things, things that move, human actions and accounts of human action, will win the attention better than anything that is more ab-

stract. Here again comes in the advantage of the object-teaching and manual-training methods. The pupil's attention is spontaneously held by any problem that involves a new material object or an activity on any one's part. The teacher's earliest appeals, therefore, must be through objects shown, or acts performed or described. Theoretic curiosity, curiosity about the rational relations between things, can hardly be said to awake until adolescence is reached. The sporadic metaphysical inquiries of children as to who made God, and why they have five fingers, need hardly be counted here. But when the theoretic instinct is once alive in the pupil, an entirely new order of pedagogic relations begins for him, a fact with which all teachers are familiar. And both in its sensible and in its rational developments, disinterested curiosity may be successfully appealed to in the child with much more certainty than in the adult, in whom this intellectual instinct has grown so torpid as usually to require quickening by entering into a sociation with some selfish personal interest. Of this latter point I will say more anon.

Imitation. Man has always been recognized as the imitative animal *par excellence*; and there is hardly a book on psychology, however old, which has not devoted at least one paragraph to this fact. It is strange, however, that the full scope and pregnancy of the imitative impulse in man has had to wait till the last dozen years to become adequately recognized. M. Tarde led the way in his admirably original work, "Les Lois de l'Imitation"; and in our own country Professors Royce and Baldwin have kept the ball rolling with all the energy that could be desired. Each of us is in fact what he is almost exclusively by virtue of his imitativeness. We become conscious of what we ourselves are by imitating others. The consciousness of what the others are precedes; the

sense of self grows by the sense of pattern. The entire accumulated wealth of mankind—languages, arts, institutions and sciences—is passed on from one generation to another by what Baldwin has called social heredity, each generation simply imitating the last. Into the particulars of this most fascinating chapter of psychology I have no time to go. The moment one hears Tarde's proposition uttered, however, one feels how supremely true it is. Invention—using the term most broadly—and imitation are the two legs, so to call them, on which the human race historically has walked.

Imitation shades imperceptibly into *emulation*. Emulation is the impulse to imitate what you see another doing, in order not to appear inferior; and it is hard to draw a sharp line between the manifestations of the two impulses, so inextricably do they mix their effects. Emulation is the very nerve of human society. Why are you, my hearers, sitting here before me? If no one whom you ever heard of had attended a "summer school" or teachers' institute, would it have occurred to any one of you to break out independently and do a thing so unprescribed by fashion? Probably not. Nor would your pupils come to you unless the children of their parents' neighbors were all simultaneously being sent to school. We wish not to be lonely or eccentric, and we wish not to be cut off from our share in things which to our neighbors seem desirable possessions.

In the school-room, imitation and emulation play absolutely vital parts. Every teacher knows the advantage of having certain things performed by whole bands of children at a time. The teacher who meets with most success is the teacher whose own ways are the most imitable. A teacher should never try to make the pupils do a thing which she cannot do herself. "Come and let me show you how" is an incomparably better stimu-

lus than "Go and do it as the book directs." Children admire a teacher who has skill, and are inspired with emulation. It is useless for a dull and devitalized teacher to exhort her pupils to wake up and take an interest. She must first *wake* one herself; then her example is effective as no exhortation can possibly be.

Every school has its tone, moral and intellectual. And this tone is a mere tradition kept up by imitation, due in the first instance to the example set by teachers and by previous pupils of an aggressive and dominating type, copied by the others, and passed on from year to year, so that the new pupils take the cue almost immediately.

(To be continued)

THE RELATION OF AGRICULTURE TO OUR SCHOOL SYSTEM.*

"Perfect agriculture is the true foundation of trade and industry—it is the foundation of the riches of states."

These are the words of the great Liebig, one of the founders of the modern science of agriculture. They were uttered half a century ago, but they are more pregnant with truth at the end of the nineteenth century than they were in the middle of the century when Liebig was carrying on his agricultural investigations, or than at the beginning of the century when Sir Humphrey Davy was unfolding for the first time his memorable proposal for agricultural investigation before the learned societies of England. They are applicable to all civilized, to all semi-civilized, countries, but they have a special significance when applied to Canada; for while our fisheries add annually to our wealth to the amount of about \$20,000,000, and our mines nearly \$30,000,000, and our forests about \$80,000,000—agriculture adds no less than \$600,000,000, or nearly five times as much as the other three sources of wealth combined.

Such a tone changes very slowly, if at all; and then always under the modifying influence of new personalities, aggressive enough in character to set new patterns and not merely to copy the old. The classic example of this sort of tone is the often quoted case of Rugby under Dr. Arnold's administration. He impressed his own character as a model on the imagination of the oldest boys, who in turn were expected and required to impress theirs upon the younger set. The contagiousness of Arnold's genius was such that a Rugby man was said to be recognizable all through life by a peculiar turn of character which he acquired at school.

The perfect agriculture of Liebig implies, of course, a class of agriculturists well equipped, thoroughly trained and rationally educated.

Now let us quote a more modern educationist as to the workers in this field:

"Identified as I am by birth and early education with the agricultural population of this country, I regret to see so many of our agricultural youth leave the noblest of earthly employments and the most independent of social pursuits for the professions, the counting-room, the warehouse, and even for petty clerkships and little shops. I know that persons in public offices, and inhabitants of cities and towns, who have no farms, must, for the most part, bring up their sons to other employments than that of agriculture; personal peculiarities and relations may prompt to the same course in regard to some farmers' sons; and a divine call may select from the farm, as well as from the shop and the college, for a divine vocation; but that, as a general rule, the sons of farmers,

*An address by C. C. James, M A, Deputy Minister of Agriculture, before the National Science Department of the Provincial Teachers' Association, April 14, 1898.

as soon as they begin to be educated, leave the farm is a misfortune to the parties themselves, a loss to agriculture and to the country. A boy's leaving the farm because he has, or is acquiring, a good education is an assumption or admission by all consenting parties that a farmer does not need such an education; and as long as this error is admitted, by farmers not being educated, agriculture will be looked down upon, instead of being looked up to, as a pursuit for educated men.

"Politicians are accustomed to call farmers, by way of compliment, the bone and sinew of the land; and bone and sinew they will remain, and never be anything else, without education. It is a supreme law, illustrated by all history, that head rules muscle; and all farmers who educate only their muscles, and not their heads, must occupy the inferior relation of muscle. It is true that such farmers, as well as mechanics, may be and feel themselves quite as good as other people; but if they are not as intelligent—that is, as well educated and informed—their goodness will be associated with ignorance, and their social position will necessarily be one of inferiority. But let the boy be educated to make him a better farmer, as well as a better citizen; let it be assumed, and become a recognized fact, that a farmer must be educated to be a good farmer, as a lawyer, doctor, or clergyman must be educated to be master of his work, and agriculture will hold a rank equal to, if not above, law or medicine. Educated farmers, educated merchants, and educated manufacturers and mechanics will not only develop and advance the material interests of the country, but its civil and social interests, by enabling the people to select chiefly intelligent and well-to-do men from these classes as their representatives—men not needing an office for support, or making politics a trade—

affording the best chance of practical wisdom and honesty in legislation and government, and the hope of producing the great public desideratum—a generation of honest politicians and patriotic statesmen."

One might reasonably assume that this is an extract from an address before one of our Ontario farmers' institutes, or has been taken from a lately issued report of the Ontario Department of Agriculture, and that they are the words and opinions of some leading agriculturist. Not so, however. These are the words of Egerton Ryerson, taken from the introduction to his text-book on agriculture for use in Ontario Public Schools, and written in 1870.

Were these statements true and applicable in 1870? Then they are even more so in 1899.

I can well believe that twenty-five years from the present some student of the educational and economic history of this province will be hard at work studying out and trying to explain why so little progress was made in general agricultural instruction in this province during the years from 1870 to 1898. During the period four text-books at least were available, the one by Dr. Ryerson already referred to, one by Prof. Henry Youle Hind, one by Dr., now Sir, Wm. Dawson, that first appeared in 1864, and the "First Principles of Agriculture," by Dr. Mills and Prof. Shaw, that appeared in 1890.

An interesting discussion might be made on the subject of why the trustees of rural Public Schools at least have not insisted upon having instruction given on this subject, based upon the book prepared by Messrs. Mills and Shaw.

It is not my purpose in this short address to take up this subject—instead of looking backward we should examine the present situation and lay plans for the future.

At the present time the subject of general instruction in Public Schools is being carefully worked out in France, Germany, Italy, and even in darkest Russia. Many of the most progressive of the States to the south of us are also discussing the question, and in some cases at least a promising start has been made.

In the Province of Manitoba a course of agricultural instruction has been laid down, and a text-book prepared adapted to the conditions of that province.

In Quebec more has been done in the way of editing and publishing text-books in various departments of agriculture than in any other province, and a continued effort has been made to make the instruction as general as possible.

In Ontario, however, we shall have to work out our system on the lines that are best adapted to this province, and it will not do to try to copy very closely the system of any other country or any other province. We can have our own system if we desire it, and we can have a system adapted to our own conditions of agriculture and suited to the mental capacity of our pupils.

So much for what may be called the introduction to my paper. Let me now briefly state my views under three heads :

1. Should agriculture be taught in our schools?
2. When and where should it be taught in our school programme?
3. What can be taught, and how can it be taught?

1. *Should Agriculture be Taught?*

If agriculture can be taught in our schools, that is, if there is time and place for it, and if it can be presented in a form adapted to school pupils, the more reasonable form for this question, it seems to me, is, "Should agriculture not be taught?"

The agriculture of this province is

in a critical condition. We certainly have not yet reached the most acute conditions that have come to the farmers of Great Britain, France, and Germany, but we have reached a point which, compared with these conditions of the newer farming communities of Manitoba, the North-west Territories, and other sections similarly situated, can be expressed by no better term than the one I have used, viz : *critical*.

The building up of the pure-bred live stock interests of this province and the development of our dairy industry have been the two main factors in saving us from a condition that could be described only by the term "desperate."

Just at the present time the conditions are more favorable than they have been for some time. Prices have improved for us, mainly because of the temporary misfortunes of agriculturists in other parts of the world. One consequence of this is seen in the great rush at present in progress for the cheap productive lands of Manitoba and the North-west Territories. If nothing be done to give a decided upward movement to our Ontario agriculture, however, we may soon find ourselves approaching the conditions now prevalent in the older farming lands of Europe. Let me give you a statement of that condition from the pen of one who is in authority. M. Tisserand, the late Director-General of Agriculture in France, speaks as follows in a report to the Recess Committee of the British House of Commons dealing with the question of the industries of Ireland :

"In this extraordinary century, when everything has been profoundly modified by steam, when distances have disappeared, and the Australian with his wool, the Indian with his corn, * the American with his cattle and his

*Reference is made here to the native of British India, and the word "corn" includes grain of every kind, with special reference to wheat.

dead meat, can reach the markets of Europe at less cost than it took the farmer of Yorkshire at the beginning of the century to get produce to London, old methods and paternal traditions have become insufficient for the struggle which has to be carried on against foreign competition. It is no longer the struggle for life between man and man which is in question; it is the struggle for existence between industry and industry, between agriculture and agriculture, between country and country.

"The struggle which agriculture has to sustain is all the more intense and severe because it has been less prepared for it. The formidable transformation brought about by the progress of railways, navigation, and the telegraph has had a greater effect on agriculture than on any other industry, because it has been surprised, so to speak, in the midst of the calm and quietude which it had been enjoying. It is no doubt a great boon to humanity that the products of the earth may overflow with an extreme facility from the regions in which they abound to the countries that need them; that every individual is assured his daily bread, and has no longer to fear the horrible famines which in other times periodically decimated the population; that, thanks to the Australian wool and vast pasturages of the new world, the workingman can obtain cheap clothing and cheap food to protect him against infirmity and give him health and strength. But, if these are results to be thankful for from the humanitarian point of view, it is nevertheless true that they have had upon agriculture, through the general lowering of the prices of produce, an action which has placed it in a critical situation, and which has thrown the cultivators into confusion and brought discouragement and despair among the rural population. All thoughtful minds, the public powers, and Governments, are

occupied with these considerations. In all directions it is felt that the agriculture of Europe is like an old and leaking ship, tossed and buffeted about upon a sea of breakers, and that, to save it from foundering, it needs to be steered by abler hands and navigated by pilots who will join to a thorough practical training a profound and extensive scientific knowledge."

The authorities of France are thoroughly awake to the situation, and are now carrying on the most thorough system of general agricultural instruction in order to provide trained men to man the "ship" in her perilous career.

Two things especially are, in my opinion, of prime importance now to save the agriculture of this Province and the agriculture of Canada from being reduced to the level of cheap lands, cheap labor, and cheap mental calibre. The first is the rapid development of our deep waterway systems, so that the advantage may be maintained of the very lowest transportation rates on all farm products for export to Europe, and the completion of a perfect system of transportation, so that our fruits, including peaches and grapes, butter, eggs, poultry and other perishable products may be safely and cheaply transported to the consuming markets of Europe. It may be advisable to divert some of the rushing American tourists for Europe from New York and Boston to Montreal, St. John, or Halifax, but it means vastly more wealth to this country to be able to send our valuable and perishable farm products to London, Liverpool, Bristol, Glasgow, or Manchester in perfect condition.

The second requirement is that our agriculturists shall receive some grounding in the scientific principles underlying their work, so that farm practice may be more intelligently directed, and that some of the great waste of time and labor may be saved to this important industry.

One of the distinguishing features of the agriculture of to-day is the rise of co-operative associations. In Ontario we have had agricultural societies ever since the Province was organized, and for nearly seventy years legislative grants have been made for their encouragement. But the societies for discussion of agricultural topics, for interchange of ideas, and for teaching or instruction by experts are of recent origin. We have associations of the owners and breeders of all the leading breeds of live stock. We have a Fruit Growers' Association, associations also of the poultry keepers and of the bee-keepers, an association of experimenters, two associations of the dairymen, and an Entomological Society. All these, through their many meetings, and the hundreds of meetings of Farmers Institutes, have quickened the minds of the workers. Supplementing these meetings, reports and bulletins have been distributed by the hundreds of thousands in the past ten years. But the point that I wish to make here is that the persons principally benefited by this work are the men and women of mature years. This is all very well in its way. These men appreciate thoroughly what is being done; they recognize the importance and the necessity of this instruction—but is it not beginning at the wrong end? Why should the farming class of this country have to wait until they become men before they learn that there is a science underlying their practice? If it is a good thing to educate a grown man or a grown woman in the principles of agricultural work, it is still more important, as far as practicable, to give the boy and the girl some training in these principles early in life, at the time when these principles are most easily acquired, and when they will be of most permanent benefit. I, therefore, have no hesitation in answering my first question by saying that agriculture in some form

should be taught to the pupils of our schools.

2. *When and Where should it be Taught?*

Most persons, I think, are of the opinion that some instruction in agriculture should be given to pupils in rural schools, since they assume that these pupils are to be the future farmers. They are not, in general, of the opinion that the teaching should be given in towns and city schools, because the pupils of such schools are likely to move out into professional pursuits, become school teachers, enter mercantile life, or follow some one of the many manufacturing lines of life. They are not quite sure that all pupils in rural schools even should be taught agriculture, as so many are yearly coming from the country to the town to reinforce the struggling city classes with new blood and new physique. Right here I would present a deplorable statement. If agriculture can be taught in our schools in a manner such as I will suggest in my next division, I am of the opinion that it should be on the course of study for town and city pupils as well as on the course for rural pupils. Perhaps in city and town schools it might be made optional, but in rural schools it should be obligatory. The present situation is that, with very few exceptions, all town and city pupils will remain in city and town pursuits, and the country schools are also being annually drained of the majority of the brightest and most promising. But this, I contend, is not a very promising feature of our country's growth. It may be due in some part to the very nature of our present system. That I shall not here discuss. If we can, by altering or rearranging our system, keep more of the best rural pupils in touch and work with agriculture, and if we can at the same time arouse in some of the towns and city pupils a sympathy for agri-

cultural methods and agricultural life, we shall be looking to the best interests of the pupils and the country as a whole. I am of the opinion that a course of agriculture can be given in town and city schools that will be interesting and beneficial, and that will be in harmony with the best educational methods or system. I would put a course in the science of agriculture within the reach of every pupil in all of our schools, and I would therefore begin the work in the public schools, rural and urban alike. In the schools of France, where agricultural education has been most fully taught, instruction in this work begins in the primary schools in the elementary course, with pupils from seven to nine years old, and is followed out through the middle course, nine to eleven years, and the superior course, with pupils from eleven to thirteen years old. It might be best to begin the work here by making agriculture a compulsory subject in the 4th form of our Public Schools, and from this as a starting point work out in time a system of instruction adapted to our conditions, prefacing it first by a simpler course in the third form, and adding an advanced course to our High School work.

I believe that agriculture can be taught just as well to the Public School pupils as are some of the subjects at present on the course, and I believe that the pupils themselves will come to the subject with as much eagerness. I do not care to particularize or to make comparisons, but perhaps you will permit one remark, viz. : If Public School pupils can master the subjects of physiology, hygiene and temperance, they are well able to take hold of the subject of agriculture, and I think it can be made more intelligible to them.

3. *What can be Taught and How should it be Taught?*

This is the most important of the three questions ; it is that upon which

the whole argument turns. I think that delay in introducing agriculture into our schools has occurred principally because of the difficulty, in fact, the present impossibility, of introducing into our schools instruction as to how to farm. Our schools could not be equipped for training in the practice of agriculture except at an enormous cost, and our Public School teachers could not be expected to teach the young how to farm even in the crudest manner. Here is the point—any instruction now given in our schools should deal simply with the *science* of agriculture ; the practical application of the scientific principles may be left to the home training and to such specially equipped institutions as our Agricultural College. It is quite possible that in time something may be done for our rural schools, as has been done in France and other European countries in the way of adding small gardens and plots wherein some of the lessons of the schoolroom may be applied, and where illustrations may be found in the growing trees and shrubs and the development of seeds sown by the hands of the pupils themselves.

This mistake of confusing the science and the practice of agriculture is quite general, and some of the textbooks placed in the hands of young pupils have no little responsibility for continuing the mistake.

I consider the science of agriculture eminently adapted for school instruction, and a future student of natural science could not lay a better foundation for his future work than by first mastering the general principles of the various sciences which together form what we call the science of agriculture. Let us note briefly what it includes.

Agriculture consists mainly in the growth of plants, the feeding of these plants to animals, and the working over of the animal products resulting

First of all we have the air and the soil. A study of these gives us an introduction to chemistry, geology and meteorology.

The growth of plants brings in the study of botany, and closely follows an introduction to entomology.

The study of the animals at once calls for some of the simplest principles of zoology, anatomy and physiology.

Even bacteriology comes in when we study the diseases of the plants and animals, and the making of cheese and butter.

And so we might sum up by saying that a study of the science of agriculture implies a beginning in the study of all the natural sciences that are afterwards found in our High Schools and colleges. The study of the science of agriculture is to a large extent a course in "nature study," and, since the illustrations are taken from plants, soils, insects and animals which all boys and girls are more or less familiar, the subject may be made to appeal to the everyday observations of the pupils. What should be done, then, is to give the pupils an insight into the first principles of the various sciences, laying stress upon these laws and principles that have an application to the work of agriculture. Let me put it in the form of a few questions.

1. What is the atmosphere, and how does it affect the soil?
2. What are the causes and effects of rain?
3. How is soil originated?
4. What are the principles underlying tillage and drainage?
5. What changes take place in the sprouting of seed?
6. How do plants feed and grow and mature seed?
7. How are new varieties of plants produced?
8. How do animals digest food?
9. What is the life history of a butterfly, a beetle, an aphid or a honey bee?

10. What are the causes of fermentation in the soil, in the silo, and in milk and cream?

A thousand and one other questions might be put, the answers to which would be given by a knowledge of the first principles of the sciences of chemistry, botany, entomology, geology, physics, physiology or bacteriology. An acquaintance with such would be useful and interesting to all classes of students, whether coming from the farm or not, and to all classes, whether going to the farm or not.

What I am trying to lay before you as my idea of how agriculture might and should be taught in our schools has been more clearly and forcibly put by that master teacher, Huxley, who, in addressing a farmers' club in England on this subject, spoke as follows:

"There are some general principles which apply to all technical training. The first of these, I think, is that practice is to be learned only by practice. The farmer must be made by thorough farm work. I think I might be able to give you a fair account of a bean plant, and of the manner and condition of its growth, but if I were to try to raise a crop of beans your club would probably laugh consummately at the result. Nevertheless, I believe that practical people would be all the better for the scientific knowledge which does not enable me to grow beans. It would keep you from attempting hopeless experiments, and would enable you to take advantage of the innumerable hints which Dame Nature gives to people who live in direct contact with things.

"And this leads me to the general principle which I think applies to all technical training of all schoolboys and schoolgirls, and that is that they should be led from the observation of the commonest facts to general scientific truths. If I were called upon to frame a course of elementary instruction preparatory to agriculture, I am not sure that I would attempt chemistry,

or botany, or physiology, or geology as such. It is a method fraught with the danger of spending too much time and attention on abstraction and theories, on words and notions instead of things. The history of a bean, of a grain of wheat, of a turnip, of a sheep, of a pig, or of a cow, properly treated—with the introduction of the elements of chemistry, physiology, and so on as they come in—would give all the elementary science which is needed for the comprehension of the processes of agriculture, in a form easily assimilated by the youthful mind, which loathes anything in the shape of long words and abstract notions, and small blame to it."

I have already mentioned one misconception that has retarded the introduction of agriculture as a permanent part of our school system, viz., the idea that it was intended to give some instruction in the practice of agriculture, whereas nothing should be attempted but the first principles of the various sciences that are connected with or underlie agriculture, taking up the application of these sciences to agriculture.

Another fault is the attempt on the part of some persons *to try to do too much*. We must not crowd too much on the young mind, or mental dyspepsia will result, followed by a loathing of all forms of mental food. The work, when first begun in the Public Schools, should be very simple, very restricted, and should call into activity the open eyes and open ears of the pupils.

Every rain that falls, every tiny stream by the roadside, the shooting of the green blade in the spring, the nodding buttercups, the goldenrod, the tall bull thistle, the early dropping apple with its worm hole, the ball of black knot upon the cherry, the jumping grasshopper and the hundred of nature's children, should attract the attention of our children out of doors,

and arouse in them a love that is not born of ignorance but of true knowledge. Nature in the country, in the village, in the town, and, to a limited sense, even in the city, lies before our children as a great unnoticed, unmeaning book. Our children by their natural sympathy with nature, and by their God given faculties, appeal through us to the great Creator of nature. "Open thou mine eyes that I may behold wondrous things out of thy law."

Another objection that comes up in the minds of some, and that even finds expression, is that agriculture is not on a high enough plane, that there is more dirt than diamonds in it, that there is lacking the æsthetic element. Those who think and speak thus have evidently not given an honest consideration to the subject or are not aware of the marvellous progress of agricultural science in the past fifty years. I have, I think, answered this by saying that the science of agriculture is nothing else than a comprehensive grouping and intermingling of the other sciences that are now studied in our schools and colleges.

I could, had I time, discuss the possibilities of increasing our agricultural wealth by a general dissemination of agricultural information among the rural classes. Our annual agricultural product is now about \$250,000,000 in the Province of Ontario alone. I could prove even to those of you who are not farmers that this can easily be increased by twenty five per cent., and a sum added to our annual product that would cause the tales of the Yukon to sink into insignificance.

In 1892 I addressed the Provincial Teachers' Association upon this subject, and my opinions of that year are stronger and more decided in 1898. I shall close this paper with the concluding paragraph of that address:

"Instruction in agriculture in our schools may be very limited, but if

nothing more be done than to start our rural pupils thinking, to give them an impetus or a turn in the right direction, to develop in them a taste for agricultural study and investigation, to arouse in them a desire to know more and to read more about agricultural affairs, and especially to increase in them a respect for their work and a pride in their calling, then the most important end of their education will have been attained."

SOME SCHOOLMASTERS OF FICTION.

IN "Westward Ho!" Charles Kingsley has given a picture of a man who was probably a typical pedagogue of Queen Elizabeth's days. Viudex Brimblecombe was a man whose bark was worse than his bite, whose outward exterior was coarser than his inner being. His only argument was force. He believed in the potent virtue of the rod, and, to borrow a word from the "Day Dreams of a Schoolmaster," tattooed his pupils with wisdom and knowledge. Yet, at bottom, he was kindly, good and well-disposed. But the continual infliction of physical punishment had weakened his self-control, so that he may have almost learned to take delight in the pain he caused. Look at his exclamation: "Come hither, sirrah, or I'll flay you alive!" and the evident joy he felt in flogging Amyas after Sir Richard Grenville had sent him back. One cannot help laughing as heartily as the latter gentleman at the shrewd stroke on the pate that laid him low. In the prevailing fashion of the time, he bestrewed his speech plentifully with Latin phrases and classical quotations. Indeed, it is a puzzle that one so learned had to seek the help of Mr. Franc's Leigh in writing the short Latin epigram. It may be inferred that the rough-and-ready method of teaching which Mr. Brimblecombe used had not only weakened his self-control, but also somewhat impaired his moral character: for he seems to have listened to his son's tales, even if he did not, as Sir Richard thought, employ him directly as an

"eaves dropper and favor-currer." As is usual with men who are haughty to their inferiors, he was excessively afraid of his superiors. The moment he thought that his patron was blaming him, he went on his knees, and talked as no self-respecting schoolmaster could talk nowadays. As a natural result of his general character, he was not held in any high esteem by the townspeople, else they would not have saluted him in the procession with the cry, "Who stole Admiral Grenville's brooms because birch-rods were dear?"

On turning to the pages of that wonderful romance, "John Inglesant," we find slight sketches of two men far different from the above in character, though not so far removed in time. Though they were clergymen in parishes also, it is a relief to picture the contrast between them and their fore-runner. The second of the two had an easy and attractive way of teaching. Either from deep interest in his pupil, or from true humility, he used to read to him the treatises which he wrote in Latin. Instead of filling him with useless grammar rules, he gave him that facility in classical translation which is so useful a thing, but which is so often found lacking even in a classical scholar. The present lack of this power is deplored by Professor Miall in his "Thirty Years of Teaching": "I think I am not putting the case too strongly in saying that you will hardly get a page of Latin or easy Greek read at sight, except by a man who has taken classical honors, or has

followed classical studies for several years after leaving college." This clergyman also instilled into John the charm of Plato's philosophy, and gave to a mind already dreamy a bias in favor of mystical studies. This, perhaps, was not the highest wisdom. Yet, who to-day could improve on his last advice: "Hear what all men say, but follow no man; there is nothing in the world of any value but the Divine Light—follow it. Attach yourself to the King and the Church party, because you are not placed here to reason, but to obey. Remember it is the very seal of a gentleman—to obey." The previous clergyman, who had taught John Terence and grammar, must have been an equally worthy man, to judge from the esteem in which his people held him. His large melting eyes marked the inward soul that leaped out to meet those who needed help. His words show that his influence must have been altogether in the direction of training his pupil's character. "Earth becomes to us, if we thus think, nothing but the garden of the Lord, and every fellow being we meet and see in it, a beautiful and invited guest." Would that all schoolmasters to day were as full of devout thoughts!

In the "Choir Invisible," there is a picture of a Kentucky school and master of a hundred years ago. Some of the touches in it are wonderfully true to life. When John Gray was ill after his fight with the cougar, the boys and girls came to inquire how he was, but "there was no disguising the dread they all felt that he might soon be well." "Wee Jennie even came up with her slate one day and asked him to set her a sum in multiplication. He did so; but he knew that she would rub it out as soon as she could get out of sight." Again, most vivid of all, "a toiling slate pencil grated on its way as arduously as a waggon up a hill." John Gray had the character

needful for the true schoolmaster. "It was this religious purity of his nature and his life, resting upon him as a mantle, visible to all eyes, but invisible to him, that had, as Mrs. Falconer believed, attracted him to her so powerfully." See how he joined in his children's games—the mimic representation of backwoods life, with all its perils from Indians—and the more real game of turning the schoolroom into a fort and leaving him to force an entrance by sheer strength. There is much to be learned from his history lesson. He made it real and lifelike by taking his boys into the open country and letting the places they could see stand for the places he wished to describe. He applied it to their future lives by drawing therefrom the moral lesson that they would never do anything in the world without courage, but that courage must also be used in a good cause. His little speech when he bade farewell to his school was just as manly and full of advice. He told his children what their parents had won for them, how proud they should be of them, and how they should strive to be worthy of them. He told them to be both brave and grave. "And the best thing I have to say to you is: Be good boys and grow up to be good men."

The old schoolmaster in "Adam Bede" is a favorite character with those who study human nature in the pages of novels. His opinions on women were peculiar to himself; but there may have been pages in his life that would have formed a complete vindication if they had been opened. How well we know his little room—almost as well as Adam Bede himself did—with its faded map, its ear of Indian corn, and its specimen of the master's handwriting. But more interesting than the room were its inhabitants, those laboring men striving to improve themselves. What patience Bartle Massie showed with their strug-

gling efforts to do their best! "It was almost as if three rough animals were making humble efforts to learn how they might become human. And it touched the tenderest fibre in Bartle Massey's nature: for such full-grown children as these were the only pupils for whom he had no severe epithets and no impatient tones. He was not gifted with an imperturbable temper, but this evening his eyes shed their mildest and most encouraging light on Bill Downs, the sawyer, who is turning his head on one side in the desperate sense of blankness before the letters d, r, y." Yet he could be outspoken and tell some plain truths to those who needed them. He was severe on the two youths who were learning how to do bills of parcels, but gave no heed to them in their spare time. "You think knowledge is to be got cheap—you'll come and pay Bartle Massie sixpence a week, and he'll make you clever at the figures without your taking any trouble. But knowledge isn't to be got with paying sixpence, let me tell you. If you're to know figures, you must turn them over in your own heads, and keep your thoughts fixed on 'em." With all his crochets and whims, he was a very kindly man, and concealed the truest of hearts under a somewhat gruff exterior. How many men would have done and cared for Adam Bede as he did during the trying time of the trial.

In the "Shadow of the Sword" yet another type of schoolmaster is pictured for us. Master Arfoll had passed through the terrible scenes of the French Revolution, and was now spending the latter part of his life in teaching. He was lean and stooping; his limbs were shrunken; and his face was weird and uncanny. But when he smiled on those he loved, it lit up, and "you would have said then, a beautiful face, as one who looked upon angels." He had no fixed place of residence, but wandered about the

country, teaching wherever he could, but generally in the open air. He was a welcome guest in the houses of his pupils, and received presents in kind, though not often of money. Still, he was quite happy and contented with his mode of life. An air of mystery hung around him, for none knew aught of his early life, and his face was the face of one who had passed through great troubles. He was not a worshipper at the shrine of Napoleon, like his contemporaries, and tried to instil into his pupils the gospel of love and peace. How interesting is the picture of his little class—a peasant of twenty-five, a youth of eighteen, two girls of fourteen, two boys, and two small children! How ill-assorted they are, and yet how patient he is with them all! His whole treatment of his oldest and dullest pupil is the following of Ascham's words that there is no such whetstone of wit as praise. His little prayer showed that he valued the opportunity of influencing his pupils' characters. His last words to Rohan showed his inner strength and the secret of the magnetic power he possessed over those about him: "It is wrong to acquiesce in evil, even to save one's life; it is accursed to draw a sword for that man, even though France itself is threatened. I weep for thee as for my own child, to see thee so troubled, so pursued; but I say in my heart, 'God bless him! he is right—he is a brave man; and, were I indeed his father, I should be proud of such a son.'"

In George Macdonald's "Alec Forbes of Howglen," there is a Scotch dominie who was near akin to Mr. Squeers and Mr. Brimblecombe in the methods he used. He brings to one's mind involuntarily the words of Channing, that the boy condemned to hear the voice and undergo the régime of a harsh and cruel man is placed in a school of vice. Fancy a really refined man using the following instrument of

punishment. "A thick strap of horsehide, prepared by steeping in brine, black and supple with constant use, and cut into fingers at one end, which had been hardened in the fire." The tender souls of his little children must have sunk within them every time they saw such a ferocious looking weapon. There was a pale-faced, delicate boy who blundered in reading, and each slip he made brought it about his legs. That was alluring to the bright fields of wisdom. Murdoch Malison, the master, was a hard man, with severe, if not cruel, temper, and possessed by a savage sense of duty. Yet he wished to be just. "He did not want to punish the innocent, it is true, but I doubt whether the discovery of a boy's innocence was not a disappointment to him." Not to boys only, but even to girls, was he rough. He once gave Annie Anderson, the little girl round

whom the first part of the story centres, a push that nearly threw her on her face. "It was days before she recovered from the shock." The boys of Malison's school were well able to read the barometer of his face and appearance. Black stockings instead of white were regarded as a bad omen, and generally foreboded an unhappy day. The most curious trait in him was the utter difference between his school character and his private character. "The moment he was out of school—the moment, that is, that he ceased for the day to be responsible for the moral and intellectual condition of his turbulent subjects—the whole character, certainly the whole deportment, of the man changed. He was now as meek and gentle in speech and behavior as any mother could have desired."—*Educational Times*.

ARE WE GOING RIGHT?

Last week we referred to a danger menacing the moral well being of Canada in the "namby pamby" legislation so often thrust on us. We now desire to come down to facts, and to deal with some of the mischievous methods of the present day. Our school system has been so "cribbed, cabined, and confined" by laws and regulations that a teacher is a mere machine, doing everything by rule; the children are all treated as machines of exactly one pattern, without the slightest idea of individuality, and woe betide teacher or scholar who dares do or say anything not allowed or provided for in the manual of several hundred classes of instruction and guidance. One of the most curious sights in Toronto is to watch one day's proceedings in a Public School. Every movement of every child is carefully watched and ordered according to the manual. The dull child, the smart

child, the funny little fellow, and the sober, old-fashioned fellow are all compelled to walk, talk and learn exactly alike. It may read like a joke, but it is an absolute fact that if a child accidentally allows a pen, pencil or other article to fall, he or she must not stoop to pick it up except in the manner provided for by a cast-iron rule, and children have been punished for picking up articles they had dropped in violation of some of these rules. The only other institution in Toronto where such cast-iron rules exist and are enforced is the Central Prison. The amount of red tape and the number of cast-iron rules connected with our Public Schools give us inferior teachers, inferior teaching, and is largely responsible for the increase of insanity and the amount of juvenile crime in Ontario.

Insanity is often caused by the constant cramping and restraining of

energy which should have been allowed freer course and directed into proper channels. One of the very worst evils of our day is the want of proper care on the part of parents and teachers in dealing with children, and the practice of training, or at least attempting to train, all in one groove. Mediocrity must result, and idiocy frequently results from this.

Akin to this evil is that of parents deciding off hand what their children are to be and setting about the training of them for some profession or calling for which they are utterly unsuited. These unfortunates turn out miserable failures in life, and often become criminals, except in a few rare cases where they have sufficient force of character to strike out new lines for themselves. The remedy must begin with the school system, for we are training generation after generation in the machine style, and it is difficult to get the people so trained out of the groove.

The first step is to liberate the teachers. They must have the right to use the gifts God has given them in the best way they can. The only rules by which they should be guided are those of plain, ordinary common sense. The children would then be under teachers possessed with the spirit of teaching, inspired by the knowledge that he or she was training for eternity, and knowing that the measure of success was not the amount of mere book knowledge which could be crammed into one little skull without bursting it, but the preparing and training of the scholar to seek knowledge in the right direction, to love knowledge, and to fill the pupil with the desire to continue to learn even if at the close of any lesson he or she should pass out of the schoolhouse never to enter its portals again.

We will be told that we are placing our ideal too high. That is impossible; but our ideal is in practice in the great public schools of England and Scotland, and has produced the men who rule the Empire, the men who in peace and in war have upheld the honor of Britain everywhere. When these men were boys at school there was no sentimental humbug then, nor is there now, about the use of strap or cane for punishing the wrongdoer. There were and are no notes sent home to parents asking for permission to punish, and no debates among the managers or governors of the school, on the question, such as have made us ridiculous, and given the roughest element in the schools of Toronto and Ontario the rule in the classes, and allowed them to drift into crime, dragging with them the children of respectable parents. There are in every city and country district a class of boys who at a certain age are deaf to all arguments but a birch rod. These boys defy teachers, defy parents, and are taken to the police court. There they are first given a nominal sentence, or a caution, and in a few hours they are to be found in some shed or open space surrounded by an admiring group of other boys. The culprit has become a hero, and boasts of his escapade. Had he got a sound caning by a sturdy police officer, he would have been no hero, but a salutary warning to all other delinquents.

When a child does wilful or accidental damage to the property of any one the parent should be made to pay the cost. Should a boy grow up a mischievous-lad, or mix in evil company, his only chance of safety lies in the judicious use of the birch rod. At school the pupil of evil disposition will be tamed by a wise teacher, who uses the rod on proper occasion, and with proper severity. The boys, too, might be put under male teachers the moment they leave the junior classes. These are, briefly, some of the remedies which must be applied in

our school system if we are to check tyranny and juvenile crime and have our Dominion inhabited by a race of brave, manly people, and not by a

namby pamby, smooth-faced set, who will sink below the level of true men.—*Orange Sentinel*, Toronto, Feb, 1899.

PRINCIPAL KIRKLAND

The late principal of the Toronto Normal School, Thomas Kirkland, M.A., was born in Ireland, and received there his early education, partly in the Normal School established in Dublin in connection with the national school system. In 1854 he came to Canada while still a young man, and commenced his professional career as assistant master in the Oshawa Public School of which he became head master in the following year. After filling similar positions for some time in Whitby and Toronto, he taught till 1863 as mathematical master of the Barrie Grammar School, and in that year became head master of the Grammar School in Whitby. His success in this sphere of educational work was so marked that, on the recommendation of the late Professor Young, formerly Grammar School Inspector, in 1871 he was appointed science master in the Toronto Normal School, the late Rev. Dr. Davies being principal. On the retirement of Dr. Davies, in 1884, he was promoted to the principalship, which he occupied till his death on December 31st, 1898.

Throughout his whole life Mr. Kirkland was characterized by an insatiable desire to add to his own fund of scholarly information, and he was to the last unwearied in his acquisition of knowledge. As he had not an opportunity of obtaining in early manhood the advantage of a University training he applied himself to secure a University degree by private study. He graduated B.A. in the University of Toronto in 1870, and in the following year took the higher degree of M.A. He was a zealous student to

the last, keeping himself abreast of the most progressive of the physical sciences, and devoting most of his time to the study of English literature. He filled for many years the chairs of Chemistry and Botany in Trinity Medical College.

When Mr. Kirkland joined the staff of the Toronto Normal School, and for several years afterwards, the course prescribed for the students in that institution was academic quite as much as pedagogic. Subsequently, the system of Departmental examinations was so modified as to secure on the part of each student at entrance the standing of a second-class teacher in all non-professional subjects, and the work of the session became more strictly a training in Psychology, Methods, and the Theory and History of Education. On this new line Mr. Kirkland kept pace with the requirements of the position, and to the very last familiarized himself with the most modern aspects of such subjects as "Educational Values" and "Child-Study."

The educational activity of Mr. Kirkland was by no means limited to the efficient discharge of his professional duties. In 1873, when representation on the Senate of the University of Toronto was granted to the graduates of that institution, he was one of those chosen to the position. In that capacity he devoted himself zealously and effectively to the work of reforming and modernizing the Arts curriculum, particularly in the requirements for matriculation. He became largely instrumental in securing from the Senate recognition, by means of

local examinations of culture work done extra-murally by women, who were not at that time permitted to acquire full university standing. The beginning thus made was by him and others persistently followed up, until more than a decade ago all disabilities based upon difference of sex were removed, and the advantages of the University thrown open to all on the same terms and conditions. At an earlier period, Mr. Kirkland strove earnestly for the abolition of the discrimination against girls in the secondary schools and his influence was always exercised for the repeal of social restraints formerly imposed on students of the Normal School. It was a fitting recognition of his breadth of view, earnestness of purpose, devotion to duty, and thoughtful kindness to his students, that he was unanimously elected last Easter to the Presidency of the Ontario Educational Association, a position which he filled at the time of his death.

It is not out of place in this sketch of Mr. Kirkland as an educationist to call attention to his unwearied efforts to promote the welfare of his fellow men in ways outside of but not incompatible with the teacher's calling. He

was during the whole of his life in Canada identified with the Presbyterian Church. Throughout his long residence in Toronto he was a member of the session of St. James' Square congregation, and he was for much of that time the teacher of one of the Bible classes. He was for many years a member of the Senate of Knox College, and in that capacity he was able to render useful service, on account of his long and varied pedagogical experience, his enlightened educational views, and his scholarly attainments within as well as outside the sphere of religious education.

Mr. Kirkland was married early in life to a daughter of the late Rev. Dr. Thornton, pastor of the Presbyterian church at Oshawa, and sister of the Rev. Dr. Thornton, formerly of Glasgow, and now of London, England. Successive classes of Normal School students do not need to be reminded how much she did in the way of unostentatious hospitality to make their sojourn in a strange city pleasant to them. Their heartfelt sympathy will be extended to her, along with that of the wider circle in which she moved with her late partner in life.

SIGMA.

THE NORTH-WEST—CANADA.

Oh would ye hear, and would ye hear
Of the windy, wide North-West?
Faith! 'tis a land as free as the sea,
That rolls as far and is as free,
With drifts of flowers so many there be,
Where the cattle roam and rest.

Oh could ye see, and could ye see
The great gold skies so clear,
The rivers that race through the pine-shade
dark,
The mountainous snows that take no mark,
Sun-lit and high on the Rockies stark,
So far they seem as near.

Then could ye feel, and could ye feel
How fresh is a western night!
When the long land breezes rise and pass
And sigh in the rustling prairie grass,
When the dark blue skies are clear as glass,
And the same old stars are bright.

But could ye know and forever know
The word of the young North-West!
A word she breathes to the true and bold,
A word unknown to the false and cold,
A word that never was spoken or sold,
But the one that knows is blest.
Blackwood. —*Maira O'Neill*

EDITORIAL NOTES.

Deliver not the tasks of might
To weakness, neither hide the ray
From those, not blind, who wait for day,
Tho' sitting girt with doubt full light.

"That from Dis. sion's lips may fall
With Lite, that working strongly, binds—
Set in all lights, by many mine's,
So close the interests of all."

In the Bill introduced this session by the Minister of Education there is reference made to the Continuation Classes in Public Schools in places where there is no High School. There has been an uneasy feeling about these classes ever since they have been started. We have been asked to look into the question, but have so far refrained, because the history of their career is so short. It is alleged that the old evil of payment by results is in operation in connection with these classes. Also that payments are made direct to the parties interested by the Education Department.

It would be to the satisfaction of all concerned if more and fuller information were given to the country about these classes. It has always seemed to us that more conditions than the absence of a High School should be applied before the formation of one of these classes. Would the friends who have some experience of these classes let us hear from them?

How has it been about that, of all workers in whatever field you may select, no worker receives so much advice, wise and not so wise, from persons not in the profession of teaching, and even, unkindest of all, from his co-workers, as the teacher does. To keep the teacher in his proper place, and in a proper humbleness of mind and spirit, he is frequently reminded that it is only quite recently that if a soldier lost an arm or foot, or an eye, or if a man or woman were incapable of digging potatoes rightly or in sufficient quantity, or, finally, to

keep a fellow subject off the poor-rates, the ready remedy was to make a teacher of him. We have no time just now to discuss the probabilities of a soldier, who lost an arm in defence of his country, becoming an efficient teacher, for the obvious reason that cases of this kind are not likely now to offer for our consideration. The educators who appeal to INTEREST as the chief if not the only force to use in teaching never tire of reciting the cases of masters who perhaps unduly emphasized the coercive force in the conduct of school, and by so doing, in so far as in them lies, weaken unnecessarily the hands of the brethren, and therefore hurt the cause of true education. We much doubt if the cause of education was really helped or benefited by Mr. Charles Dickens' representation of such a man as the teacher in *Our Mutual Friend*. We hope and believe that it would be exceedingly difficult to find such a man anywhere in actual life, not to speak of an approach to such an one in teaching not only now but at any time.

The social standing of the teacher is not generally a matter of much worry to the members of the profession, if profession it is to be called. Ever since the days when the Athenians sent a schoolmaster to train the Spartans out of some of their intellectual deficiencies, there has been a tell-tale light in some people's eyes against the ascendancy of the schoolmaster in the higher walks of social life, and even against his very admission to these walks; and we do not think our liter-

ary men have done ve much to remove the prejudice, as may be seen from one of our selections for the present month. In Canada there is

much of this prejudice still lingering—much more than in the United States—and when an attempt is made to trace it to its origin, there seems to be little in it, save the money element. A schoolmaster (and were we to say in more general terms a *teacher* the truth would become even more palpable)—a schoolmaster seldom, if ever, becomes wealthy directly from the emoluments of his office, and the secular professions that are not productive of wealthy men are not nowadays held in very high repute anywhere and possibly held in less repute than elsewhere on this North American continent, where everyone seems to be in the rush and tumble of it to make money, whatever may happen to them and theirs. This seems to be the main cause of the social disability to which the schoolmaster is too often subjected, and even the MONTHLY, eager as it is to help the teacher, is unable to suggest a remedy, saving to mention incidentally that integrity of conduct which is able to make for the man who exercises it the highest kind of respectability.

There are, however, ready to hand means enough to elevate the social standing of the teacher, if that be really a consummation devoutly to be wished. Thousands of our citizens began life as teachers, and those of them who have reached the higher walks in life should not forget how much easier their climbing up would have been but for the supercilious neglect of those who could not have possibly injured themselves by accepting honest worth at its "face value." In their success they should not turn their backs upon those who are now filling their places. But surely in educational circles themselves there ought to be no "let or hindrance" to the

due recognition of the teacher as an important social factor. The custom of granting honorary degrees to men of money or political influence, who possess no tittle of scholarship that can honor the gift, is one which is fast detracting from the dignity of the University, and the sooner it is discountenanced the better. For her Majesty to confer knighthood upon the millionaire who has liberally given of his wealth to foster some university or other has in it no element of unfitness, no matter how the money has been made nor how far the donor may be from the standard of the higher intellectualities, since it is the act of generosity that has chiefly been recognized; but for the University to follow this up by granting a degree, which ought to carry with it the stamp of the higher intellectualities, on one who does not possess them nor ever will, is surely to infringe upon the fitness of things to the point of absurdity. But as if that were not far enough to go, on the part of institutions that have been created to protect society from going to decay in the fripperies of life, some of them have taken upon themselves the task of the drawing-room *grande dame*, to separate the sheep from the goats, with the schoolmaster, as a general thing, classified with the latter. That the Common School should be in line with the University in its course of study is one thing, but to recognize the teacher as an element in the line is another thing. The time was when the University delighted to do honor to the industrious schoolmaster, and very few of these best trainers for the University classes were allowed to pass away without having bestowed upon them some mark of the University in the shape of a degree or a doctorship. But now the doctorships are all for the men of means and influence and wonderfully high standing, while the poor schoolmaster plods

or unrewarded, unhonored and unsung, and so it has come to pass that the schoolmaster whose highest function is to prepare young people for the higher citizenship is to some extent ignored by the very institution that has been created for the sole purpose of preserving the main features of that higher citizenship.

But what need is there to worry over such an unimportant matter as the social standing of the teacher when he or she continues actually to struggle for daily bread. Some person or other is always enlarging upon what the teacher ought to be made do in face of the pressing needs of society, but it is only now and again that we hear of the responsibilities of society towards the teacher. A certain Secretary of Agriculture enlarges in his report upon the need of nature-teaching in the common schools. He says there is a growing interest in education that relates to production, and all classes of intelligent people favor it. More knowledge by the farmer of what he deals with every day would enable him to control conditions, produce more from an acre and contribute more to the general welfare.

And this is how the editor of the *Moderator* replies to him: "Mr. Wilson's report suggests that the greatest difficulties are to overcome the conservatism of boards managing country schools and to get competent teachers. Yes, there's the rub. Conservatism and false ideas of economy! In some of the counties of this state there are wealthy districts that pay the school-teacher but \$16 per month, or from that to \$20. This teacher must board herself, buy her clothes, and fit herself as a character builder. The farm hand that fats the hogs, foddors the cattle, yards the sheep, breaks the colts and cultivates the ground gets better pay in these same counties.

Yes, Mr. Secretary, you have a bigger contract on your hands than the introduction of the sugar beet, viz. Educating the conservative school boards to recognize and pay for the difference between school keeping and school teaching.

An excellent idea comes from across the water in reference to what have been called "evening continuation schools." The night school is not a new thing in Canada, as the friends of the late Hon. Mr. Mercier know, and his detractors too. Even in the cities of Quebec the idea of continuing the school-work of the day-school, after the pupil has been obliged to go to work, has been carried out in the night schools of the Society of Arts and Manufactures, which are subsidized by the local government. But the "evening continuation school" is to become in England a general element of education in every community, if its promoters realize all they look for from it. The *School Guardian*, in an editorial about the matter, says: "Recent figures have revealed an alarming irregularity in ordinary school attendance. Parents and scholars alike in towns, and school authorities in addition in country parishes, are looking forward eagerly to the time when children can be emancipated from the thralldom of by-laws and regulations. It is greatly to be feared that in tens of thousands of cases the little knowledge acquired in school is allowed to be forgotten as quickly as possible. Every friend of education looks with dismay upon the poor, unworthy conception of the value of school work. We do not propose to deliver another homily upon the low standard of interest in agricultural districts, or to repeat the familiar charge against farmers and others who want cheap labor. We think we can better serve the cause of true educational progress by pointing out how defects

may be remedied. In the last generation many clergymen laboured faithfully amid much discouragement in night schools. As a rule, a few could be found who wanted to learn more, and to fit themselves for some better position in life. The work was carried on without recognition and reward by clergy and teachers who had a zeal for the good of the young people. All this is now changed. The grants given are most liberal, and evening schools can be conducted without any financial loss so as to give a welcome addition to the salaries of day school teachers. Nothing more is wanted in any parish than the will to begin. We know how small the demand often is, and that the school may not contain more than half a dozen or ten pupils at first. It is not, however, worth while to try with such humble beginnings. We may wait long before a general spirit of interest is to be found in every parish. It rests with the clergy in most instances to hasten the day, and they best effect this by seeking to carry the education of their young people a little further."

And, in further advocating the system, the same paper says: "In many villages the first necessary work is sufficiently humble, and lies in reviving, rather than in continuing, the knowledge acquired in the Day School. In some towns it has been possible to

make the Evening School a training ground for those seeking commercial life and qualifying for positions in business houses. This will not be possible in most villages. The boys and girls will be found very often to have forgotten much arithmetic and to be wholly ignorant of the meaning of comparatively common words. A pretentious syllabus of botany, political economy, geology, or chemistry is wholly out of place. The young folks must simply be taken as they are, and some time will have to be spent in the old, familiar subjects of reading, writing and arithmetic. In process of time a reward will come to those teachers who will persevere, and there will be less urgent need for instruction in elementary subjects. Indeed, we feel convinced that, in the establishing of such a system of schools, there lies a great opportunity. Children should be encouraged before they leave the Day School to join the Evening School before their desire for knowledge has gone and their books have been forgotten. Where older scholars can be obtained they should be taught, if possible, in another room, because the presence of a younger element lessens the attendance of older pupils. We are convinced that the clergy cannot serve the cause of education better in villages than by giving both time and thought to Evening Schools."

Women figure very prominently in the University of London pass lists just issued. In the examination for the degree of Bachelor of Science fourteen women obtained places in the second division. Their success was even more marked in the examination for the

B.A. degree, twenty-eight securing places in the first division and seventy-three in the second. Out of an aggregate of 303 names in these three divisions 115 are those of women, a proportion of rather more than one in three.

CURRENT EVENTS.

The occupants of the chairs in our best universities and colleges form a considerable portion of the trustees of our intellectual wealth. Upon the wisdom of their leadership depends in no small measure the growth of a whole some interest in the higher ends of existence and the soundness and roundness of our national life. If these institutions of learning are to continue to exercise that marked and elevating influence which is in great part their *raison d'être*, it becomes increasingly necessary that the incentive to devote one's life to this service, to be one of those who maintain the university as a center of intellectual influence, shall appeal strongly to the ablest and most promising young men. It becomes increasingly important to furnish the professor with an environment which shall develop to the utmost the efficiency of his services and his personal satisfaction in his calling. It would be difficult, even with unrestricted means and opportunities, to determine how best to foster and encourage men of intellectual supremacy, and through them to impart to the national life a lofty, intellectual tone, the spirit of a liberalizing civilization; it is fortunately an easier task to indicate some of the unnecessary restrictions and notable deficiencies which at present impede the advancement of learning and prevent the environment of the professor from reaching even a reasonable approximation to the ideal. Among such restrictions three are particularly conspicuous: the professor's lack of a proper income, his lack of proper authority, and his lack of proper leisure. To begin with, the professor is admittedly greatly underpaid. With President Harper as our guide, we may learn that the average income of the professor is approximately sixteen hundred dollars, and that all but a few of the profession have to contend with a serious problem in domestic economy, in devising ways and means for making both ends meet; further, that the professor is on a par financially with conductors, machinists, foremen of works, and other occupations of like grade, and that "there is practically no class of college professors whose pay is on a level with the pay of men in positions of first or second rank of responsibility in the industrial community." As a mere matter of justice, President Harper concludes, the professor's salary should be increased by fifty per cent.—which is indeed a conservative estimate. Hardly less serious than the inadequacy of the professor's income is the inadequacy of his authority. The real government of our colleges is largely in the hands of boards of trustees. In many institutions the professors have almost no voice except in matters of curriculum and student management, and even in these their decision is often subject to revision by other authorities. The essential policy of the university, the vital questions that determine the nature and direction of its growth, are but meagerly and unauthoritatively considered by the faculty; and questions that involve expenditure of funds are regarded as obviously out of the pale of professorial jurisdiction. While fully recognizing the important services rendered by boards of trustees to our colleges and universities, it may none the less be confidently maintained that many of them are sadly "over-trusted." The direction of reform, the side toward which the pendulum must swing, if an equilibrium is to be restored, must be in the direction of an increased authority, a more intimate share in the government of our higher institutions on the part of their faculties. The inadequacy of the American professor's leisure may likewise be traced to some extent to the commer-

cial view of his position. The value of his services is apt to be judged by false standards; the special conditions necessary to the success of his work are apt to be ignored. The commercial conception is that of a certain number of hours engaged in a certain occupation. Moreover, in many colleges work is done which should have been accomplished in preparatory schools, and such work comes as an added load to a heavily burdened worker. But whatever the causes, the fact remains that the professor is as unjustly overworked as he is underpaid; and the most disheartening aspect of his excessive toil is the necessary deterioration of the quality of his service. It cannot be too emphatically urged that the scholar needs leisure, freedom from care, time for contemplation and reflection; time to keep in touch with the progress of the world in the line of his specialty; time to keep bright the sparks of original effort that in him glow; time for his own self-development. The university atmosphere, which is after all the most essential part of the whole, must be an atmosphere of scholarship; the life there led must be dominated by a lofty, leisurely, intellectual tone. The professor should stand at the centre of such influence, by example and by precept, giving and receiving that which lightens the burdens and makes real and earnest the aims of life.—*December Educational Review.*

The recent verdict upon a well-known debutante suggests the possibility in the present age of other doors to "the best society," aside from those opened only by keys of beauty, wealth and pride of birth. That "*best society!*" What is it? In its highest sense based upon culture, refinement, morality, and with the golden rule as its motto, it is with fixed standard, "lovely and of good report." Alas! in vary-

ing grades it must be consented as uncertain, both in quality and quantity, the worst oftentimes ranking as the best through ignorance, or mistaken ideas of what it should be.

To return to the "bud," "without riches or beauty she was *so cultured, well bred and tactful* as to become at once a general favorite," in other words "*a success*," the one thing most coveted by ambitious mothers. In reviewing her specified attractions justice compels that the triumph be credited to herself, rather than as result of inheritance, position, or that all important personage, *grandfather!* "*Culture*" was the first claim, doubtless in a degree to render her a bright pleasant companion in whatever direction conversation chanced to lead. Familiar with books, pictures, localities, and in touch with topics and events of general interest, she was not dependent upon the small talk and gossip so wearisome and worse than profitless.

We are also told that the little blossom of society's approval was also "*tactful*." Blessed be the woman possessed of that rare and admirable quality which means so much of comfort and happiness to others. Uniformly courteous and alike mindful of old and young, she is a source of pleasure to all. How beautifully she turns the awkward corners of life for those about her. The men or women ill-at-ease are drawn into channels of thought and conversation until they are at their best, self-consciousness lost in real enjoyment. The woman of tact says only kind things, avoiding discussion, criticism or condemnation of the words and deeds of others. To wound the feelings of another would, from her standpoint, be inexcusable—even cruel. That she may speak words of cheer and encouragement to others, she put aside her own burden of trial and perplexity. Her standard of true worth is not influenced by money, position or clothes, her closest

friend often the plainest dressed woman of her acquaintance.

In summing up (quoting from an Exchange) "What is the veritable woman of tact?" "She is the best type of Christian, in as much as her loving consideration makes other women long to imitate her. Under all circumstances and in every condition in which she may be placed she is truly courteous. She can receive the unwelcome guest with a smile so bright and handshake so cordial that in the effort to make it so greeting becomes sincere. The woman of tact is one whose love of humanity is second only in her life's devotion and whose watchword is unselfishness in thought and action." Christina Rossetti says "tact is a gift; it is likewise a grace. As a gift it may or it may not fall to our share; as a grace we are bound either to possess or acquire it." Whether hers as "gift" or "grace," the "sweet debutante" possessing this wonderful power for good will unfold into the beautiful flower of perfect womanhood, as "*Heart's ease*" in her home, and in the little world which is her sphere of love and duty. Somebody has said that "uniform politeness may not make a saint, but does make a lovely sinner." Supplemented by culture and tact we may be assured of the "*best society*," and possibly find ourselves enshrined as "saints" in the hearts of those who know and love us best. Who knows? One thing is certain, in cultivating tact right we may make other lives happier and bless our own by a service acceptable in God's sight.—*Table Talk*.

We hear a good deal of talk about the giant strides of science and things like that. I suppose it does seem to be getting over the ground when you look at it from one point of view. But in another way it seems fairly to crawl. For instance, twenty years ago there was in London an exhibition of

cooking by electricity. Now you would think that in twenty years a process like that, one which comes home to every household, would have been adopted everywhere. And seven years ago the papers were full of the descriptions of the Peabody house in Brooklyn, where the lighting, heating and cooling, washing, ironing and cooking were all done by electricity. People predicted then that the finish of the coal ranges and gas stoves was in sight. But I notice that the stove makers are still doing business and they don't seem to have a lean and hungry look.

The invention of a thing isn't all that's necessary. That's only the first step. If you can't make your invention do its work as cheaply as its rivals you will never get the world to use it. Cooking by electricity is hardly any further along than it was five years ago, and it won't be any further along until it gets to be as cheap as gas or coal. That time is coming slowly but surely nearer; in the meantime, though, you won't find many electric kitchens outside of exhibitions. They have one down at the Edison Company's new plant in Duane street, but that doesn't count outside. Every Friday luncheon is cooked there and served to the staff, and the kitchen works all right. The trouble isn't in the working, any way. It's in what the working costs.

It's as hard to push a new device in electrical household appliances as it is for some people to get into society. Take electric curling irons, or rather, the heaters for these irons. Women go into the new hotels, where there are electric lights and the only way in which they can heat a curling iron is to use an alcohol lamp. There is more damage done to furniture and carpets and hangings in this way than would cover the cost of the hotel man of providing the attachment for heating the iron. Yet I know of only one

hotel in this town where a woman will find that convenience.

One trouble in getting private houses to use electricity is that they don't want to tear up the house to have the wires strung. The fine new houses are being provided with electric wires in the building, and many of the old ones have had them put in, but people are slow to make radical changes of any sort. Physicians have been about as ready to avail themselves of the new opportunities as anybody. A great many of them have an office wire which taps the street wire and use electricity in cauterizing and for regular electrical treatment. It does away with any fussing with batteries, and is always ready. Dentists do the same way. But when it comes to really domestic uses we have to admit that electricity has gained ground very, very slowly.

Some novelties in electric lighting arrangements have recently been introduced into the market. One of these is a portable light such as a house-keeper might like to have for making excursions into the cellar, or for rummaging in closets or dark attics where any other sort of light would carry with it a danger of setting fire to the house. It could be used in safety for looking for a gas leak under circumstances where the usual seeker carrying a lamp or lighting matches is apt to be landed in a hospital immediately after finding the leak. The lamp is a little cylindrical affair with an electric glow light at end and the battery which supplies the current hidden in the cylinder. A touch of the finger makes the lamp glow, and it ceases to give light as soon as the finger is removed.

Another handy lamp is one for night use in bedrooms, which is adapted to take its current from the ordinary dry batteries that are in common use for ringing call bells and such purposes. This can be put up permanently be-

side a bed or set in a chair with wires connecting it with the battery. For the workshop a clever new arrangement is a socket for an incandescent lamp, which conceals the windings of an electro-magnet and has its core extending through and beyond it at the top. The current going to the lamp energizes the magnet, and the workman can hang his lamp up anywhere where he can find a rod, a pipe or a plate of iron to press it against. The magnet will hold it there as long as he wishes.

Some manufacturers have begun to make fancy bulbs for the incandescent lamp, ornamenting them with pretty patterns by means of the sand blast or making the lower part of the bulb white in the same way, thus reducing the glare of the light thrown downward. Since the business of repairing burnt out lamps has grown to large proportions and the work is done cheaply, the investment in fancy bulbs for the household could not be looked upon as an extravagance. A foreign manufacturer makes a bulb covering of a spiral of glass wire, the purpose of which is to reflect and refract the rays of light emitted by the filament within in such a way as to make the whole bulb appear to glow instead of one's seeing only the brilliant line of the filament itself.—*N. Y. Sun.*

Written in the splendor of sunlight ;
graven in the mellowness of moonlight ;
emblazoned on the azure sky by the
marvels of heavenly systems, every
star a character, and every constellation
a sentence ; unfolded on every
wave of the unfathomable and ever
changeable ocean ; inscribed upon every
verdant field and golden harvest ;
traced upon every flower and leaf
whispered by every breeze that sways
the undulating prairie, or makes the
mighty forest vocal ; emphasized by
mountain peak and snow-capped sierra ;
thundered by roaring cataract ; mur-

mured by babbling brooklet; mirrored in lake and lakelet, is Heaven's warmest, never-ceasing invitation: "O Son of Man, study—all nature, God's own book, is before thee, take up and read; its every lesson will gladden thy heart and strengthen thy soul."

Study is covenant between man and immortality, the bond between the present and the hereafter, the link between time and eternity. It becomes the sceptred king better than jeweled crown, the armored soldier better than gilded panoply.

Hence Shakespeare says:

Alas, how should you govern any kingdom,
That know not . . . how to study for the
people's welfare.

Bradley, in his story of the Goths, tells us that, "it was the King Theodoric's special study so to apportion the taxes that the burden fell as equally as possible."

It is the statesman's inspiration, the warrior's security, the hope of the toiler, the incentive of the tried and the tempted.

If a man have great talents study will improve them; if he have but moderate abilities, study will make up their deficiency.

The sons of men study makes like unto the up-growing cedars of Libanus, and the daughters thereof like unto the polished corners of the temple. It is that God-sent, heaven blessed spirit which, to eager and ambitious youth, conveys the message from above:

Be not content. Contentment means inaction;

The growing soul aches on its upward quest.

Satiety is twin to satisfaction;

All great achievements spring from life's unrest.

* * * * *

Were man contented with his lot forever.

He had not sought strange seas with sails unfurled,

And the vast wonder of our shores had never
Dawned on the gaze of an admiring world.

Through study, the student recognizes the poverty of ignorance and the wealth of learning. The pursuit of knowledge invites and persuades, nay, with sweet and resistless power, forces him to look upwards, convincing him that, if he look down, his shoulders stoop, that, if his thoughts be downwards, his character bends, and that it is only when he holds his head up, his body becomes erect, and only when his thoughts go upwards, his life becomes upright.

The pursuit of knowledge implies that tender, yet firm, discipline which guards our homes and guides our youth, which shows itself not only in words, but in all the circumstances of action. It is like an under agent of Providence, directing us in all the ordinary concerns of life. More shining qualities are there, indeed, than discipline, but none more useful, for it is discipline which imparts value to all the rest, which sets them at work in their proper times and places, and turns them to the advantage of their fortunate possessor. Without it learning is pedantry and wit impertinence; virtue itself appears in the garb of weakness; the best parts qualify a man only to be more sprightly in errors and active in his own undoing.

No, there is no discipline without industry, no industry without study, no success without incessant study. He who, from day to day, recognizes, said an ancient philosopher, what he has not yet, and from month to month what he has attained to, may be said to love to learn.

Love of learning is the characteristic of true manhood, and true manhood, whether found in the humble shop of the artisan, in the stately hall of the legislator, or the gilded palace of the monarch, ever enlists respect, for its mouth never ceases to speak of wisdom, and its heart never fails to muse of understanding.

Give us men, cries out the State,

ve us men to guide our families, to lead our armies, to inspire our legislatures!

"Out of every youth that cometh unto me and gathereth wisdom at my feet," quoth the good angel of study, "I make a man," a man in truth, of whom may well and truly be predicated the immortal lines of the deathless bard of Avon:

The elements so mixed in him, that Nature might stand up
And say to all the world, This was a man!
Home Study.

The Ontario Educational Association meets on the usual days during Easter vacation. We should have a good meeting.

SCIENCE.

J. B. TURNER, B.A., Editor.

FORM IV. 1898—BIOLOGY.—(FIRST PAPER.)

1. Make enlarged drawings of the parts of the submitted plant, naming the structures of importance and adding any explanations which you consider necessary.

2. Draw and describe the submitted section. From what organ is it taken? Is it monocotyledonous or dicotyledonous? Give reasons for your answer to these questions.

3. Compare the asexual generations of a fern and an equisetum.

4. What are the typical features of the Gymnosperms? In answering refer to the pine or spruce.

(SECOND PAPER)

1 (a) Make an enlarged drawing of the anterior quarter of the submitted animal (i) from the dorsal, (ii) from the ventral surface.

(b) Open along the median dorsal line and make an enlarged drawing of the anterior quarter of the intestine.

(c) Remove and draw the anterior quarter of the nervous system.

In each case name the important features and make any necessary explanations.

2. Give a general account of the axial endoskeleton in the Vertebrata, describing the elements of which it is composed, the regions into which it is divided, and the functions which it performs. Exclude the skull from your account.

3. Describe the structure of the heart and circulatory apparatus in the Fishes and compare with them the similar organs of the Mammals.

4. Indicate the general features of external structure in the tadpole, and explain what changes it undergoes in becoming a frog.

5. Describe the external form of the pond-snail, and give an account of its habits with special reference to its mode of respiration, locomotion, feeding and oviposition (egg-laying).

ONTARIO NORMAL COLLEGE.

METHODS IN SCIENCE FOR SPECIALISTS.

1. "The pupil must never seek information by constructing an equation. Observation is the only source of information, and the equation simply expresses the quantitative relations observed. All exercises in writing equations, and rules for constructing them, as if they were mathematical expressions, must be rigidly excluded."

(a) Discuss the soundness of the above statements with reference to (i) Third Form, (ii) Fourth Form classes.

(b) At what stage in the Third Form course would you introduce equations?

(c) Outline a lesson introducing the subject of equations.

(d) How would you deal with a Fourth Form class in which there is a strong tendency to give only equations in written answers to reactions?

2. (a) Give the order in which you

would take up the study of the animal types in zoology. State reasons for your arrangement.

(b) Outline your method of conducting a series of lessons on the grass hopper.

(c) Conduct a first lesson on any fish you may select.

(d) State clearly your ideas with regard to the relative importance to be attached to (i) Dissections, (ii) Oral Descriptions, (iii) Written Descriptions.

3. "Many parts of Physics can best be introduced by means of carefully reasoned and fully illustrated experiments by the teacher."

(a) In general when should the method indicated above be followed, and when should individual experimental work take precedence? Give examples.

(b) Outline your method of introducing the subject of Induced Currents.

(c) Write a sample-page of a pupil's

note-book filled out to your satisfaction on the topic in (b).

(d) By what means would you (i) emphasize and fix important laws and facts, (ii) satisfy yourself that the proper observations had been made?

4. "From the educational point of view the important results to be attained from the study of Botany are

(i) the awakening of sympathy with natural objects,

(ii) the sharpening of the powers of observation, and

(iii) the strengthening of the faculty of reasoning from the object to laws and principles."

(a) Outline your method of presenting the subject of germination of seeds, having in mind "the important results to be attained."

(b) What topics would you take up after germination? Give reasons.

(c) Your pupils have studied only the fern among the cryptogams; how would you present the subject of "alternation of generation"?

TRIGONOMETRY, 1898, FORM IV.

C. P. MUCKLE, B.A., Toronto.

1. Define an angle, a degree, and a radian. From your definition of a radian deduce and explain the formula; $\text{angle} = \frac{\text{arc}}{\text{radius}}$.

Show that there are nearly 206,265 seconds in a radian.

$$(b) 1 \text{ radian} = \frac{360^\circ}{2\pi} = \frac{180 \times 60 \times 60}{3.14159} = 206264.5 + "$$

2. (a) Give a careful definition of the trigonometrical ratios that will apply to angles of any magnitude; and trace the changes in the values of $\sin \theta$ and $\cos \theta$, as θ increases from 0 to 2π . Show also that $\sin^2 \theta + \cos^2 \theta = 1$ is a formula true for all angles.

3. If A and B are two angles whose sum is less than 90° , prove that $\cos(A+B) = \cos A \cos B - \sin A \sin B$. Write down the corresponding values for $\sin(A+B)$, $\sin(A-B)$ and $\cos(A-B)$.

4. From the four formulæ of question 3 deduce formulæ expressing the sum or difference of two sines or two cosines as a product, also formulæ expressing $\sin A$ and $\cos A$ in terms of $\cos 2A$.

5. Prove:

$$(a) 2 \sin \frac{A}{2} = \pm \sqrt{1 + \sin A} \pm \sqrt{1 - \sin A}.$$

$$(b) \tan \frac{1}{2}(a+\beta) - \tan \frac{1}{2}(a-\beta) = \frac{\sin \frac{1}{2}(a+\beta)}{\cos \frac{1}{2}(a+\beta)} - \frac{\sin \frac{1}{2}(a-\beta)}{\cos \frac{1}{2}(a-\beta)}$$

$$= \frac{\sin \frac{1}{2}(a+\beta) \cos \frac{1}{2}(a-\beta) - \cos \frac{1}{2}(a+\beta) \sin \frac{1}{2}(a-\beta)}{\cos \frac{1}{2}(a+\beta) \cos \frac{1}{2}(a-\beta)}$$

$$= \frac{\left\{ \sin \frac{1}{2}(a+\beta) - \frac{1}{2}(a+\beta) \right\}}{\cos \frac{1}{2}(a+\beta) \cos \frac{1}{2}(a-\beta)} = \frac{2 \sin \beta}{\cos a + \cos b}$$

$$(r) \sin \frac{\pi}{15} = \sin \frac{14\pi}{15} = 2 \sin \frac{7\pi}{15} \cos \frac{7\pi}{15} = 2 \sin \frac{8\pi}{15} \cos \frac{7\pi}{15}$$

$$= 2^2 \sin \frac{4\pi}{15} \cos \frac{4\pi}{15} \cos \frac{7\pi}{15} = 2^3 \sin \frac{2\pi}{15} \cos \frac{2\pi}{15} \cos \frac{4\pi}{15} \cos \frac{7\pi}{15}$$

$$= 2^4 \sin \frac{\pi}{15} \cos \frac{\pi}{15} \cos \frac{2\pi}{15} \cos \frac{4\pi}{15} \cos \frac{7\pi}{15}$$

$$\therefore \frac{1}{2^4} = \cos \frac{\pi}{15} \cos \frac{2\pi}{15} \cos \frac{4\pi}{15} \cos \frac{7\pi}{15} \quad (1)$$

Again

$$\sin \frac{3\pi}{15} = \sin \frac{12\pi}{15} = 2 \sin \frac{6\pi}{15} \cos \frac{6\pi}{15} = 2^2 \sin \frac{3\pi}{15} \cos \frac{6\pi}{15} \cos \frac{3\pi}{15}$$

$$\therefore \frac{1}{2^2} = \cos \frac{3\pi}{15} \cos \frac{6\pi}{15} \quad (2)$$

$$\text{and } \frac{1}{2} = \cos \frac{5\pi}{15} \text{ or } \cos 60^\circ \quad (3)$$

\therefore multiplying (1), (2) and (3)

$$\frac{1}{2^7} = \cos \frac{\pi}{15} \cos \frac{2\pi}{15} \cos \frac{3\pi}{15} \cos \frac{4\pi}{15} \cos \frac{5\pi}{15} \cos \frac{6\pi}{15} \cos \frac{7\pi}{15}$$

6. Show that the following relations hold good for every triangle :

(a) $c = a \cos B + b \cos A$.

(b) $c^2 = a^2 + b^2 - 2ab \cos C$.

(c) $\tan \frac{B-C}{2} = \frac{b-c}{b+c} \cot \frac{A}{2}$.

7. In a triangle $\tan \frac{A}{2} = \frac{5}{6}$ and $\tan \frac{B}{2} = \frac{20}{37}$. Find $\tan \frac{C}{2}$ and prove that $a+c=2b$.

$$(a) \cot \frac{C}{2} = \tan \frac{A+B}{2} = \frac{\tan \frac{A}{2} + \tan \frac{B}{2}}{1 - \tan \frac{A}{2} \tan \frac{B}{2}} = \frac{\frac{5}{6} + \frac{20}{37}}{1 - \frac{5}{6} \cdot \frac{20}{37}} = \frac{5}{2}$$

$$\therefore \tan \frac{C}{2} = \frac{2}{5}$$

$$(b) \tan \frac{A}{2} \tan \frac{C}{2} = \frac{5}{6} \times \frac{2}{5} = \frac{1}{3}$$

$$\therefore \sqrt{\frac{(s-b)(s-c)}{s(s-a)}} \sqrt{\frac{(s-a)(s-b)}{s(s-c)}} = \frac{1}{3}$$

$$\text{or } \frac{s-b}{s} = \frac{1}{3} \quad 2s = 3b \quad a+b+c = 3b \quad \therefore a+c=2b$$

8. Define a logarithm and prove :

(a) $\log_a mn = \log_a m + \log_a n$.

(b) $\log_a m^n = n \log_a m$.

$$(c) \log_a m = \log_a b \times \log_a m.$$

9. A man on a horizontal plane observes that the angle of elevation of the top of a tower, 800 yards away, is 15° . How much nearer must he come to the tower in order to make this angle just 30° ?

Let A be top of the tower, C the base, D the first position, C the second position, DC = 800 yds.

Then the angle ADB = angle BAD each being $15^\circ \therefore AB = DB = x$, say
CB = 800 - x

$$\text{Then } \frac{800-x}{x} = \cos 30^\circ = \frac{\sqrt{3}}{2} \therefore 1600 = x(\sqrt{3} + 2)$$

$$x = \frac{1600}{2 + \sqrt{3}} = 1600(2 - \sqrt{3}) = 428.72 \text{ yds.}$$

10. In a triangle having $a = 9$, $b = 12$, $A = 30^\circ$ find c .

$$\text{Given } \log 2 = 30103 \quad \log 171 = 2.23301$$

$$\log 3 = .47712 \quad \log 368 = 2.56635$$

$$L \sin 11^\circ.48'.39'' = 9.31108$$

$$L \sin 41^\circ.48'.39'' = 9.82371$$

$$L \sin 108^\circ.11'.21'' = 9.97774$$

Since a is less than b , but $> b \sin A$, and A an acute angle we have two triangles

$$\sin B = \frac{b}{a} \sin A = \frac{12}{9} \cdot \frac{1}{2} = \frac{2}{3}$$

$$L \sin B = 10 + \log 2 - \log 3 = 9.82391$$

$$\therefore \begin{cases} B = 41^\circ.48'.39'' \text{ or } 148^\circ.11'.21'' \\ A = 30^\circ \end{cases}$$

$$\therefore \begin{cases} C = 108^\circ.11'.21'' \text{ or } 11^\circ.48'.39'' \end{cases}$$

$$\text{Again } c = \sin C \frac{a}{\sin A} = \sin C \times \frac{9}{\frac{1}{2}}$$

$$\therefore \log c = \angle \sin C - 10 + 2 \log 3 + \log 2 = 1.23301.$$

$$\therefore \begin{cases} C = 17.1 \text{ if we take the first value of } C \\ C = 3.68 \text{ if we take the second value of } C. \end{cases}$$

MAGAZINE AND BOOK REVIEWS.

Credit should have been given to *Education* for the article "Some Thoughts on English in Secondary Schools," by Miss Ida M. Street, which appeared in the January number, 1899.

Among the great American magazines none has devoted so much attention to education as the *Atlantic*. In the February number is begun a series of papers entitled "Talks to Teachers on Psychology," by William James, which cannot fail to engage the attention of those for whom it is written. In the same number is a charming short story, "The Queen's Twin," by Sarah Orne Jewett. Mrs. Todd, with whom the author's readers are already

familiar, again appears and conducts another expedition through the country of the Pointed Firs. Charles G D Roberts contributes a story of his Acadian country, "Gaspar of the Black Le Marchands."

The opening article in the February *Appleton's Popular Science Monthly* is devoted to vegetation, "A Remedy for the Summer Heat of Cities." It is prepared especially for the conditions existing in New York, but it urges upon all cities "the cultivation of trees, shrubs, plants, vines, and grasses." There is also an account of a curious death trap in Yellowstone National Park, where carbonic acid gas is forme

in sufficient quantities to overcome the view of life rather sadly in most cases.

General Shafter's story of the war appears in the February *Century*. It is quite impossible for any one who is not an American to arrive at a judicious conclusion about the conduct of the late war. If they were all good and wise commanders, why are they now so incompatible with each other? But General Shafter certainly tells his story well. He speaks about Mr. Davis, although he does not name him. What Charles Dickens did for Childhood, his *Work in Education*, is an interesting article by Inspector James L. Hughes, of Toronto. "In the Topics of the Time" will be found an editorial comment on Mr. Hughes' paper. "The Curing of Kate Negley," by Lucy S. Furman, is an amusing short story on faith cure, a subject, however, which has its bitter side.

Littell's Living Age is at present reproducing "The Etchingham Letters" from the *Cornhill Magazine*. It would be hard to praise these letters too highly. Culture is an abused word, but no other can be applied with as great appropriateness. "A Royal Romance," by James Mowbray, is an account of the early love of George the Third.

In the February *Book Buyer* is given an interesting picture of Ernest Seton Thompson, and, further on in the magazine, a short sketch of his career, rather a condensed account—"born in England in the early sixties and in 1882 went to the plains of the Assinaboine." Possibly Mr. Thompson's commentator did not know anything more about him between these dates, but to know Silverspot and Castle wild animals. *The Popular Science Monthly* has been credited by a contemporary lately with influencing such new fiction as Miss Robin's "An Open Question." There can be no doubt

that science is affecting the modern Frank, one must have been a small Toronto boy. "The Young Author and the Old Author" is an amusing attempt at instructing the vast number of people who know little about writing and yet will write, often, to do the world justice, without the slightest encouragement.

The *Table Talk* has now introduced a young soldier to its cover dinner party, which is a sign of the times. But inside the covers there are still a great many good things, practical, theoretical, and otherwise. "In Bermuda with Theodora" is an amusing travel sketch.

A *Critical Study of In Memoriam*, by the Rev. John M. King, D.D. Geo. N. Morang, Toronto. This volume consists of a series of lectures or chapters originally prepared by the Principal of Manitoba College, to be delivered to an audience interested in literature, and the character of the book has been largely determined by this circumstance. The exposition of the poet's meaning is followed through each individual poem, and the criticism itself is often verbal. This makes Dr. King's study specially suited to the class-room, and, indeed, it can hardly be enjoyed without the constant employment of the text of the poem. Any teacher or lecturer engaged in the elucidation of *In Memoriam* will find the book a great assistance in his work. While the author naturally is attracted by and dwells on the more purely theological side of the poem, he brings to its comprehension a keen and critical understanding and a warm and human sentiment. The more than common success of Dr. King's book has been well deserved.

Alywin, by Theodore Watts-Dunton. George N. Morang, Toronto. As a story Alywin is well worth reading on its own account. From the point of view of its literary style the pleasure

connected with its perusal is constant and unflagging. But perhaps the keenest and most unusual charm of the book is due to the fact that Mr. Watts Dunton has been the familiar companion for many years of men in whom the nineteenth century in England has found its highest art. Alywin is singularly informed with the moods, sentiments and characters of such men as Fossetti, Swinburne and Morris. Their feelings, habits and conversations are woven into the life of the book. It is what they saw in Wales and in the Roman provinces and what one may find in Alywin. The whole book is devoted to beauty in language, landscape, character and person.

Windyhaugh, by Graham Travers. The Copp, Clark Company. A great many years ago, as modern fiction is counted, Dr. Todd's first novel, *Mona Maclean*, was published, and very heartily liked. Since then one might find in *Blackwood's* an occasional paper, or short story, plainly from the same hand, but now comes the satis-

faction of a long novel of the same type, healthy, sane and interesting, full of perplexing problems, but not less full of hope and temperateness, since one can't say temperance for fear of being misunderstood. The only fault to be found, so far as the story goes, is in its medical side, which might be abated, we think, with advantage. But let there be no mistake, there is nothing impure or even disagreeable in *Windyhaugh*. It is a book worth waiting for, a good novel that will outweigh ten of the ordinary manufacture.

Ginn & Co., Boston :

Piccolia, by J. H. Boniface, edited by Abbey L. Alger.

Physical Geography, by W. M. Davis and W. H. Snyder.

The American Book Company, New York :

Selections from the Correspondence of Cicero, edited by J. C. Kirtland

Ten Orations of Cicero, edited by W. Harper and F. A. Gallup.

The Story of the Thirteen Colonies, by H. A. Guerber.

Out of 566 recorded freshmen at Oxford this term, 250, or a little less than half, come from the great English public schools. Of these Eton contributes far more than any other school, with forty six freshmen. After this come St. Paul's with twenty, Charterhouse with nineteen, Winchester with nineteen, and Marlborough and Harrow with sixteen apiece. A curious feature of the lists this year is the large number of undergraduates coming from Scotch universities

and Roman Catholic colleges. Stonyhurst alone sends nine, and several others help to swell the total. Miscellaneous freshmen come from all parts of the world, a great number from American universities, one from New Zealand, and several from India and Australia. The list includes one viscount, four honourables, one lord, and one Belgian count. It should be noted that there are several omissions from this list, as several colleges have not yet printed their returns.