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# THE CANADA EDUCATIONAL MONTHLY.

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## THE BUSINESS OF THE TEACHER.\*

J. J. FINDLAY, M.A., PRINCIPAL OF THE TRAINING COLLEGE.

OUR exposition must commence with a definition. In order to save your time I will offer you a form of words that seem to me to cover the meaning of the term "education"; they have appeared in print before, but I may be pardoned for reproducing them here.

"The adult portion of the community, distributed in the forms of the Family, the State (local and imperial), the Church, and various miscellaneous corporations, desires to promote the welfare of the rising generation. This it seeks to do by the employment of certain deliberate modes of influence, as an addition to the inevitable influences of circumstance and environment which operate upon all human life. These specific influences are called Education, and those who exercise them (whether professionally or incidentally) are called Teachers."

You observe that this statement declares that two factors are necessary to an act of education: the giver and the recipient. You cannot conceive of education apart from an educator. True, popular speech employs the term "self-education," but popular speech should here be corrected:

\* Inaugural lecture, at College of Preceptors, Sept. 27th, 1897, London.

self-culture is an admissible term; self-education is scarcely so.

Who, then, is the educator; who is the fount, the source of educational effort? Not, surely, the teacher—he is only an agent, employed by an adult society to achieve social ends. We must get behind him, and observe how he is appointed to his task by the organized groups of adult society which we call the Family, the State, and so forth. On the first blush these distinctions may be regarded by you as pedantic, but I trust that on further consideration you will admit their necessity—as the starting point for a comprehensive treatment of educational science. It enables us to give a proper place to all those grave administrative problems relating to the control of education which it appears to be the special task of our generation to meet and to solve. The definition involves the position, now admitted by all thinking people, that education is a social duty, a matter of public concern; not, as in earlier days, a private responsibility of parents alone.

Further, you will notice the use of the terms "deliberate" and "specific." He who educates is not concerned in a vague amateur enterprise; his undertaking must be of set pur-

pose, with the conscious adoption of means to an end; supplementing that immense variety of other influences which promote the welfare of the young.

Finally, before leaving the definition, let us notice that it affects the status of the teacher in his attitude towards those corporations under whose authority he acts. We teachers are the servants of society, not its masters; although tradition would ascribe a domineering spirit to our profession. As private individuals we may hold many private opinions, on politics, morals, manners, religion, but as teachers employed for public ends we are bound to distinguish between matters which concern private judgment and those which affect our relations with children; and this reserve, which society claims from us, we can, in return, expect from the authorities who control our work.

I have spent some little time upon this form of definition because I wish from it to trace the three principal departments of the study of education.

Firstly, we have to determine what constitutes "the welfare of the rising generation." What are we, as teachers, to set before us as the goal for our work? In a word, what is the *Aim of Education*, the business of the teacher?

Secondly, what steps does the adult society take to achieve this end? What are the functions and mutual relations of the family, the State, and the other corporations which undertake the task? How do these stand with regard to the teacher? These inquiries, which, as I have urged above, make a special claim on our attention at the present day, may be grouped under the title *Administration of Education*. Hitherto, it has not been the custom in our training colleges or in teachers' examinations to give much attention

to this branch of study, but I have found that it proves of interest to teachers. I therefore propose to assign a few lectures to it.

Thirdly, we have the large field of inquiry within which the province of educational theory is more usually confined; we contemplate the task of the teacher, when brought face to face with his pupil and his school. I have used the terms "Conduct" or "Practice" of Education to indicate this branch of study; the latter term, "Practice," is perhaps the most intelligible, but, owing to the contrasted use of the terms "Theory" and "Practice" in another sense, some confusion of thought may arise; hence I usually prefer the term "Conduct."

You will observe the order of these three divisions: first, Aim, then Administration, then Conduct. This order is not indifferent; you cannot safely arrange your ideas as to the administration of education in any community until you have resolved what are the ends that your plan is to achieve, nor can the teacher hope peacefully to enter upon his task until his status and his relations to those whom he serves have been determined.

This third department of study obviously claims the chief attention of students and teachers, and, on turning to the Lecture List, you will observe the manner in which we seek to cover the ground. First of all, we have to contemplate the child, the subject-matter around whom all our interest centres. In Courses IV. and VIII., the aid of physiology is sought in order to understand the child as a physical organism; in Courses V. and VI., the mental life of the child\* is brought under review. Assisted

\* It will be observed that the term "child" is technically employed to include all who are subject to the educational process.

by these subsidiary sciences, we are able to investigate the teacher's functions (Courses I., II., III., VII., VIII., XII., XIII., XIV.). In making this investigation we are confronted with one aspect of the teacher's work which enhances our difficulty both in the study of theory and in our daily business—we have to care not only for the isolated individual child, but for the community of children in a school. Theories and methods planned to suit the single pupil may prove useless when applied to the needs of a corporate society. You will find that writers on education have oft ignored these conditions—Locke, Rousseau, and even Herbart may here lead us into error. On the other hand our English tradition, of which Arnold is the chief exponent, allows great weight, perhaps to exaggeration, to the corporate influence of youthful society upon the individual.

A fully elaborated exposition of education would probably treat separately of these two aspects, dealing first of all with the unit, and then with the mass as organized in schools. For practical purposes I think it sufficient to devote one course (No. VII.) entirely to problems of organization, and in the other courses to deal with both the single child and the school as occasion arises. You will observe that in discussions on *Physiology and School Hygiene* (Course IV.) and on *Elocution* (Course XI.) this same dual treatment is rendered necessary. We cannot sacrifice the interests of the community to those of the individual, nor (in secondary schools at any rate) are we willing to consult the interests of numbers while neglecting the single child.

This study of the practice of education is confronted with another difficulty to which I must briefly refer. We cannot advance very far upon the road apart from actual dealing

with children. Lecture and discussion about teaching and training in the absence of our subject-matter, the child, is, no doubt, to some extent necessary; but it is obviously incomplete, and sometimes, I fear, this procedure leads to error. I trust, therefore, that my own professed desire to correlate such lecture work with practical school experience may protect me from going very far astray in theory, and, so far as effective demonstration can be employed by a lecturer who has not actual charge of a class, we do make the attempt in all our studies to base theory upon actual experience, which can be observed and verified by the students.

Let us now revert to the first section of inquiry, to the momentous question which, as I take it, stands on the threshold of education: What is our aim? In what terms can we describe the business of the teacher? In the definition we have expressly evaded this inquiry, contenting ourselves with vaguely indicating "the welfare" of the young as the purpose of education. We have done so in order to secure separate and adequate treatment for this issue.

There are two schools of thought which appear to come into sharp conflict. On the one hand we have writers like Alexander Bain, who would limit our responsibility to the intellect of the child. The schoolmaster, they say, has no concern with ethical ideals; the pupil is sent to him for a certain definite purpose—to secure the development of mental faculty by means of lessons. Anything outside of this range is incidental and should be ignored. On the other hand you have the great masters of our craft, from Socrates and Plato down to Arnold and Herbart, urging with the utmost emphasis the opposite doctrine. They urge us to seek the end of education by enlarging our sympathy, by reaching out

into those regions of conscience and character which touch the deepest springs of life. The conflict must be decided, finally, by each of us for himself. I have no choice but to place myself wholly in the ranks of those who accept the highest and fullest responsibility in discharge of the teacher's office. And I do so, not because I am out of sympathy with the desire exhibited by Bain, to treat education as a science; nay, rather, it is my very anxiety to obey the canons of scientific method which leads me to reject his leadership. For it is the first law of true science to have regard to the facts of the situation. Now what are the facts that confront us in our daily work as teachers? Surely the most superficial acquaintance with child-life shows how impossible it is for us to raise an artificial psychological limit between intellect and will, or between mental and moral influence. If you, as a teacher, propose to be responsible for memory and reason, leaving character and habit in the charge of the parents or the clergy, you are adopting a course which is not only contrary to the best traditions of our profession, but contrary to the facts of experience, and to the obligations which parents and public opinion impose upon us.

Fifteen years ago in Oxford we heard Arnold Toynbee offering a re-statement of political economy. He rejected the authority of Ricardo and declared his adhesion to the ideals of Carlyle and Ruskin. I do not think that his exposition lost value in the eyes of scientific men because he sought to base his social science upon an ethical ideal; nor need we fear the reproach (if it be a reproach) of being called unscientific, in rejecting the narrower theory of Bain and reverting to the ideals of Arnold and Herbart. We must, with them, insist that righteousness exalteth a school as well as a nation; that the

first simple purpose underlying every other aim in education is the creation of character. It may be that in some quarters there are influences about us which tend to degrade our ideal, to turn the educator into a mere instructor. What else, indeed, can we expect in a period and a country where wealth and luxury abound, and where it is loudly proclaimed by public men that self-interest is the only motive worthy of our regard? If here and there we teachers find such influences to prevail about us, if we find that a high moral purpose is not expected from us by those whom we serve, we can readily distinguish what is temporary and abnormal from the abiding, the eternal facts of experience. Ours is not the only calling in which the individual finds it difficult to maintain the highest standard of aim and practice.

And yet in no profession, except of course that of the clergy, is it more necessary to admit our obligations to this standard. The medical man, or the engineer, deals in the first instance with the physical world, and he may achieve much apart from an altruistic ideal, but, in the social sciences, any attempt to ignore the fundamental law which binds us to our neighbor is fatal to progress and to truth.

This simple statement of the ethical basis of education does not, however, by itself satisfy the situation. Our view of what is possible in the teacher's calling should be checked by our knowledge of child-nature. The child is not an adult, and child-character must be treated according to its kind. In other words, while we are compelled to turn to ethics to guide us in our ultimate aim, we cannot safely rest here; we must look to psychology (or, if you prefer the term, to child-study) and seek there, by actual observation of the child, for the limitations which his imperfect de-

velopment will impose upon our ethical aspirations.

We seek then, first of all, for the stimulus offered to us in the words and examples of the great teachers of the human race. In the Old and the New Testament, in Epictetus and Plato, in the writings of modern teachers like Emerson and Ruskin—in such illustrious teachers of mankind are revealed the lofty heights towards which our steps should bend; but, lest their inspiration should exalt our ambition beyond its proper sphere, we turn now to the child and study him: our kingdom, like the kingdom of heaven itself, can be entered only by those who are content to humble themselves as little children. At this lowly level we shall be safe from the two perils that beset the idealist: learning how limited are the powers of the child, we shall realize the true limits of our sphere of labor; learning something of the richness of the child's moral nature, we shall be saved from the reaction of unbelief and scepticism, which falls upon those who vaguely long after an ideal without the energy to pursue it.

Finally, restrained but encouraged by contact with the living soul of the child, we shall turn with confidence to the example of the great "practitioners" of our own calling, to those who have lived and worked among children, and we shall tread with confidence on the road where they have walked so safely.

Among these leaders of our profession, I have, for various reasons, singled out Arnold in England and Herbart in Germany as especially worthy of our study in connection with this problem of the educational aim. We cannot, however, entirely accept their guidance, for the world has not stood still during the last half century, our doctrines and practice are influenced, for good as for evil, by the development of ideas in every sphere

of life, and our science will not remain true to facts if it ignores these changes. Doubtless it is a formidable task to interpret wisely the forces which are now moving men's minds, and you will not expect any full interpretation from me; I will only venture to point out one or two of the more obvious influences which tend, not to overthrow, but to readjust the older conceptions of the business of the teacher.

The first of these we owe partly to one great man, Fröbel, partly to the social movement of our times connected with the advancement of women. The child to us is a more sacred person than he was to our fathers. He has his claims and his rights, *as a child*. Hereafter he may have a great future, as we say, before him; but the present also has its claims; let him live his own child-life in a child-like fashion.

You observe that this readjustment of our aim springs from the source to which we have already alluded—a more careful study of child psychology. I am bold enough to believe that this movement will grow in force as time goes on, until it finally revolutionizes the practice of our schools. Much is being talked—more, perhaps, in America than in England—of the New Education. I do not like the phrase, for it suggests an impertinent contempt for the old education, and in many respects I still think that "the old is better." If, however, that phrase and that movement mean anything at all, they mean just this: that your child has a right to self-development, untrammelled by the ambitions and interests of the adult, and that we teachers have to protect him, not only from his own errors and follies, but from the alien claims of his elders. You wish your child to be successful? Very good, but let his successes be such as accord with his simple

nature. You desire him to be wise? Yes, indeed, but this wisdom can only grow out of his own apperceiving concepts.

Look back upon the history of education in Europe, and judge whether the child has not just cause of complaint against his elders. Every advance in thought, from the Revival of Learning in the sixteenth to the discoveries of physics in the nineteenth century, has imposed new burdens upon the young, burdens many of them alien to his understanding and his sympathies. Am I too bold in asserting that the besetting sin both of parents and teachers is this unceasing effort to impose on children our interests and pursuits? As soon as some novelty attracts public attention, whether it be a voyage to the North Pole or the danger of paraffin lamps, we find some wisecrack anxious to plague our children with it in school lessons.

It may be our pride to have trained children so as to become prosperous, worthy, faithful men and women hereafter: so be it, but may we not be content so to control their life that here and now they may exist as happy, worthy, faithful boys and girls: if so, our conscience will be clear, even if their lives are cut short by death before the age of manhood is attained.

Now, if you will grant the gravity of the plea which I have here urged, I will readily admit that there is an opposite truth, of equal importance, which was also foreign to the minds of our predecessors in the 'forties. This truth is expressed clearly enough in the Technical Instruction movement. I admit this opposing truth in the interest of the child himself, for he will not always be a child, and it is the business of the teacher to aid him gradually in "putting away childish things." Here is the true plea for Technical Instruction: not merely

as a new tool in the competition of trade and industry, to develop still further our material wealth, but rather as a recognition of the duty of every citizen to earn his bread in the sweat of his brow, reviving the ancient Jewish principle that every child should be taught the means of honest livelihood.

You will observe that in this matter we cannot abide by the counsels of Arnold or Herbart; fifty years ago education was only for the few; the term "school" then bore some relation to its origin in the leisurely intercourse of scholar and philosopher. Nowadays, when the struggle for existence appears to be more intense, our expression of the aim of education needs to be readjusted; we must see to it, however, that we still, under new conditions, maintain our hold upon the primary moral ideal.

If time permitted, it would be appropriate to observe how these two movements, the increase of sympathy with children and the need of equipment for life, have modified our view of the tools by which we seek to achieve our aim.\* The teachers of former days worked mainly under the influence of the Renaissance, and sought in the Humanities alone for the weapon wherewith to train the child towards goodness; to impart knowledge, in their eyes, was the chief business of the teacher; the active and volitional side of human nature received scant recognition. We are surely advancing in the pre-

\* There are, of course, other forms in which the aim of education may be stated, each containing an element of truth. Thus the doctrine of culture inheritance, which demands that the child shall be put into possession of his intellectual heritage, is at least as old as the Old Testament; the doctrine of harmonious development of faculty may be traced to the Greeks. But an adequate criticism of these would take us beyond the limits of this address.

sent day a step further: we are not content simply to follow Arnold and Herbart in giving a nobler aim to the studies of the child, but we desire also to bend his activities in recreation, in physical education, and in all the arts towards the same moral end. We need not, however, dwell upon this topic, for indeed it will occupy our attention at a later stage, when we come to consider the selection of material for the curriculum. I mention it here as a link of connection—showing how dependent we are, when proceeding to consider practical problems of teaching, upon our previous inquiry into this first department, the aim of education.

It appears, then, that the primitive ethical ideal needs to be interpreted anew under new social conditions. You will readily agree with me that in each age it is also imperilled by new dangers. To the most obvious and most oppressive of these I have already referred:—the forces of competition and wealth are a permanent foe to the simplicity of moral aims. I may mention briefly two other agencies which seem to me to be fraught with more subtle danger. The introduction of science teaching into our curricula has been, as we all agree, a necessary and welcome addition to our resources, but we shall surely also agree that it has sometimes been pushed to an extreme. After all, a knowledge of the natural world is not the highest or most important knowledge open to the child; nor does it lie closest to his affections and interests. First of all he is a human being, and in the pursuit of humanistic studies he has ever found the most direct food for moral nurture. (I of course include the study of the literature of the Bible as taking a supreme place in the Humanities.) It is widely admitted that the one-sided action of such organizations as the Science and Art Department has

not only hindered literary culture in our secondary schools, but has imperilled the ethical idea which underlies our conception of "a sound general education."

Another danger, surely, is to be recognized in our excessive absorption just now in problems of administration. Formerly the schoolmaster was a clergyman; now he seems likely to become a politician! From what I have said in the earlier part of this address, you will see that I make this reference to administration in no spirit of contempt. On the contrary, we owe a great debt to the leaders of our profession, who in recent years have taught us the necessity of organizing our secondary education. But we know that these very leaders are the first to anticipate the danger to which I refer. No interest of party or of organization should suffice to draw us away from the principal subject to which we are pledged to devote our lives:—the one subject of education now and always is the child, and the society of children which we call our school. Only so far as we remain faithful to this interest we are justified in giving what remains of our energy to the common cause of our profession. The business of the teacher is obviously to teach and to train the young; in their society he finds that his aims and hopes for education take a higher range than is permitted to him in the turmoil of educational politics.

Here, then, is the standpoint from which we have sought to answer our inquiry as to the Aim of Education. In its fundamental ethical basis it can never change, but, since each period of society, each nation and civilization, produces new codes of conduct, novel readjustment of the moral life, new perils to that life, so the business of the teacher needs to be presented under new aspects, conformable to what I sometimes call

“the ethics of the period.” And just as to-day we cannot rest content with the standpoint of an earlier age, so we have to expect that the progress of our age will readjust again the terms in which the ethical idea will be expressed.

Is it, you may ask, for us, as teachers, to forecast this progress? Are we to attempt the rôle of reformers of humanity, pioneers of new thoughts, of new ideals? As teachers, surely not; we must be content with a more humble task. Humble, first of all, because we are engaged with children, and they do not require, as yet, the breath of a new ethic—for them, at least, the old paths will suffice; and, secondly, because of our relationship, in administration, to the society in whose service we are engaged. They look to us to fulfil the ethical obligations of our age with all possible seriousness, rather than to discover a new law of life. The educational reformer has scope enough for progress within the bounds of his school: if he will only improve the practice of education he will find that the social and ethical doctrine of his age answers sufficiently the needs of the rising generation. Let him faithfully train up his pupils to that level, and he may rest secure; they, when their wings are grown, will fly of their own impulse to heights beyond his ken!

I fear, sir, that in this attempt to indicate the function of the teacher I have sometimes adopted the tone rather of the pulpit than of the lecturer's desk; if so, my apology must be found in the nature of the topic before us. In treating of a moral problem of this nature, which affects so intimately our own daily pursuits, we are in danger either of employing overwrought language which betrays the dreamer, or of assuming a false modesty which belies our hearts. We English teachers, I think, are peculiarly liable to this

honorable fault of self-depreciation; we hesitate to magnify our office, to talk of ideals, of ethical aims. But this modesty incurs, surely, a special danger of its own, for if we fail on proper occasions, to express our convictions, we may by our silence give encouragement to those who deny the moral obligation. We cannot be too modest in admitting limits to our personal qualifications for the teacher's office, but no barrier of reserve should hinder us from acknowledging the lofty aims of our calling. Let us contemplate this calling in its true proportion, taking our stand side by side with other professions which are “called” to the service of society.

Finally, one question suggested by the critical spirit of our age: Is our aim a reasonable one—that is to say, is it in any measure possible of achievement? Can we, by education, make children virtuous? Can we, by science, save souls? The sceptics of fifty years ago denounced the “humbug” of those who sought by legislation to improve the nation's morals. Can we, they sneered, make men virtuous by Act of Parliament? No! it was replied, but you can make the habit of virtue easy and natural: you can establish favorable conditions for virtue.

You cannot by preaching save souls, but you can touch emotion, arouse impulse, suggest reflection. Now these are possibilities within the teacher's range also; for he can bring all the armory of professional skill to bear upon this unique problem of the formation of character. Personal influence, environment, the selection of a curriculum, and methods of teaching can all be considered with reference to this supreme goal.—*The Educational Times.*

## THE HIGH SCHOOL TEACHER OF MATHEMATICS.

PAUL H. HANUS.

THERE is an important sense in which the preparation of every teacher is beyond the reach of human influences. His preparation has begun before his birth. He is either endowed by nature with personal qualities that should forever exclude him from the ranks of the teaching profession, or he possesses such qualities, as under appropriate training, enable him to overcome the inevitable difficulties that will beset his path, and ultimately to attain varying degrees of usefulness from mediocrity to the highest skill in his art. If he is a physical or mental weakling, if he is stolid and heavy, if he is indifferent to nature, human nature and art, if he lacks enthusiasm in the pursuit of his subject and never feels the glow of conscious mastery, if he has a crabbed or irritable disposition, if he is brilliant but unsympathetic, if he lacks an interest in his pupil at least equal to his interest in his subject, if he has no tact, and is lacking in the sense of humor that often furnishes the silver lining to an otherwise black cloud of youthful idleness or seeming perversity—in a word, if he is not physically and mentally vigorous, alert and active, if he is not interestedly and healthily responsive to the varied interests of life, if he cannot cherish a feeling of good will and maintain a hopeful and encouraging attitude in spite of many discouragements and some failures, whatever he may be able to achieve in other callings, he ought never to be a teacher. I need hardly say that, in what follows, adequate natural capacity and a responsive nature are assumed, and that my discussion pertains only to the preparation of the would-be teacher who possesses these characteristics.

The preparation needed by every high-school teacher is both general and special; that is to say, it should cover the essential elements of a liberal education, and special training in that subject or group of closely related subjects which the teacher expects to teach; together with enough professional training to show him his responsibilities to his pupils as well as to his specialty, and help him to become as good a teacher as possible as soon as possible. That a high-school teacher should in general, have profited by an education at least equivalent to that afforded by a good American college, ought to be universally recognized. Since this is not the case, one must assume either indifference to or ignorance of the importance of a liberal culture for high school teachers on the part of those who employ the teachers, or are responsible for their employment. Under such circumstances, it becomes one's duty to do what he can toward influencing public opinion on this very important matter. I am aware that in this presence this endeavor is unnecessary, if not somewhat presumptuous; but I am sure that the deliberations of this club are intended not merely for the enlightenment of its members, but also to promote the dissemination of wholesome educational ideals in the larger community outside, which the members of this club serve as educational advisers and teachers, and the intelligent co-operation of which they aim to secure in every legitimate way. It seems worth while, therefore, to point out briefly the serious consequences of indifference or ignorance on the part of employers of high-school teachers as regards the general culture essential to real efficiency.

It must be borne in mind that high school pupils are no longer little children, uninformed and unsophisticated. Besides possessing a considerable store of general information, they have usually learned to read human nature tolerably well where their own interests are concerned. Superficial knowledge, and limited mental power, narrow views of life, rusticity of manner—all of them marks of meagre culture—rarely escape detection in a high school; and particularly for the brighter and socially superior pupils offer a serious obstacle to the teacher's usefulness, if they do not destroy it altogether. It is a serious disadvantage to every high school pupil, whether he is aware of it or not, perhaps even more serious if he does not know it than if he does, to have his mental horizon determined by the narrow mental horizon of his teacher; his intellectual vistas and sympathies limited or dwarfed by the inadequate intellectual insight and want of perspective on the part of his teacher; to have his notions of social refinement and cultivation unformed, or deformed, or even perverted by the uncultivated man or woman who happens to be his teacher. The high school supplies to most pupils their last chance at these stores of inspiration and guidance, and they should be the very best. Such disadvantages to the pupil do not appear, and such obstacles to the teacher's success can hardly exist when the general culture and refinement of the high school teachers are sufficient always to command the just respect and challenge the regard, if not to inspire the imitation, of the best pupils. For such an equipment those who have tried it will agree, I am sure, that, in general, four years of training in a good college are little enough.

This view is strengthened by the reflection that there is no period in a young person's life in which impres-

sions received produce a more lasting effect, in which incipient interests, and habits of thought and conduct are more permanently influenced than during the period covered wholly or in part by secondary education—the period of adolescence. It is often said that the earliest impressions are the most lasting and the earliest training is the most important for intellectual and moral development, and for the future usefulness and happiness of the individual; but I cannot believe that in most instances this is a true statement of the case, so far, at least, as those pupils are concerned whose school career is continued into and through the high school. If good early training were always followed by equally good subsequent training, if the child's opportunities for growth in knowledge and power were continuous, if his moral training and his social environment improved with his growth from early childhood through later childhood and youth, if his earlier acquisitions were really made to serve continuously and progressively as the foundation for continuous subsequent growth, then the earlier and earliest training would be of the utmost importance; for it would be the foundation on which later development would be most economically and securely laid. But such conditions of development are rare. The cases are not common in which each stage of a child's progress is so nicely adjusted to the previous one. Such an arrangement of our courses of study and our teaching processes is as yet too commonly rather a vaguely conceived ideal. Moreover, the instability of the population, the perpetual migration of people in this country from one place to another, enormously increases the difficulty of approximating to such an ideal, even when it is consciously and conscientiously aimed at. But suppose that such an ideal were generally realized.

It would still remain true that childhood in its first dozen years or so, with its ready adaptability to changing conditions, its rapidly changing dominant interests, in a word, its instability, would be affected most strongly by its latest influences. In my opinion it is quite possible for the later school life to make good the defects of early training; or, it may undo very largely what has been well begun, on the one hand, as, on the other, it may build on an excellent earlier foundation a superior superstructure. If this be true, and I believe it is (in the absence of scientific knowledge one can only generalize from his own experience and observation), the great importance of good teaching, wise management, and the most wholesome and refining general atmosphere in the high school are apparent. In any event, it will be admitted, I think, that as the period of adolescence approaches, and especially during that period, the instability above referred to rapidly diminishes. The individual gradually emerges. The child becomes a youth. This is a critical period in the life of every human being. To assume the wise guidance of young people during this important period is the exalted function of the secondary school teacher. He is to be the inspiring, sympathetic, discriminating, and vigorous guide and leader of boys and girls just developing into manhood and womanhood. To be such a guide and leader in very truth he must have resources, both natural and acquired. The least that should be demanded of him is that he shall have taken pains to secure an equipment of knowledge that will give him broad, sane, and healthy views of life, with its duties and its privileges, and liberal intellectual sympathies; together with a conscious power in some one field that enables him to maintain, both for himself and his pupils, a high standard of achievement. Such

an equipment every college graduate who has made good use of his opportunities may possess. It is not often that one who has not profited by such an education can be expected to possess it.

There are special reasons why the teacher of mathematics should have a liberal equipment of general culture in addition to special knowledge and power in his particular subject. Pure mathematics is profound and interesting; but its subject-matter, save in its elements, is so remote from the common interests of men that its devotees are in constant danger of what may be called a professional or academic isolation; and this isolation is almost sure to increase with increasing devotion to the subject. It has fewer points of contact with the ordinary affairs of life than natural science, or language, or history; to say nothing of subjects like economics and political science. In this respect mathematics differs from all other subjects. Factoring, radicals, and quadratic equations, polygons, paralleropipeds, and spherical triangles, sines, tangents and trigonometric formulæ, the theory of equations, determinants, and complex numbers, point and line co-ordinates, involutes and evolutes, derivatives, differential equations, and elliptic functions, may completely shut out from view the living panorama of nature and society in which most men live and move, and have their being, and from which the young, in particular, derive most of their incentives and conscious purposes. In my opinion it is therefore not asking too much that the high school teacher of mathematics should possess and understand the importance of the general training that enables him to appreciate extra-vocational, *i.e.*, for him extra-mathematical interests. It ought never to be possible for the teacher of mathematics, however high he may rate the importance of his own

subject and its beneficial effect on the pupil, to become one who measures the capacity of all pupils solely by their ability to "do sums, and to work problems," and the goodness of any course of study chiefly by the work in mathematics it prescribes.

But after all has been said that can be said of the necessity of broad general culture for the teacher of mathematics, it is still emphatically true that his efficiency depends ultimately on his special training, on his resources in and power over his own subject; for it is through that subject that his special duty to the pupil is to be done. Either the pupil is to receive through him a peculiar insight into the marvellous system of the external world, some comprehension of the wonderful power and fertility of the human mind in one of its fields of activity, a quickening of his intellectual life through the knowledge and insight, the clearness and adequacy of exposition of mathematical truths characteristic of a scholarly enthusiastic, well-trained teacher; or he must forever remain indifferent to these interesting, and to some minds fascinating experiences, because both he and his teacher move about vaguely in a "world unrealized," where the intellectual fog never rises, and where the road traversed to-day must be re-traversed with the same dim uncertainty to-morrow.

If the teacher of mathematics has little mathematical ability, and if at the same time he has not had sufficient training, he is almost sure to carry on his work with a benumbing inadequacy of comprehension and exposition which soon becomes chronic, and through which the pupils come to look on mathematics as a highly artificial subject of little real interest or practical utility; a subject in which success does not depend on common sense and patient study, but on a certain inborn ingenuity of manipulat-

ing postulates, hypotheses, and previous propositions, and in which absurdities are as valid as realities.

A certain college student of my acquaintance must have had this kind of instruction. She said she had studied algebra before coming to college, but she had become interested in the subject only when she took up equations and proved "things." Whereupon I asked her if she had ever seen the paradox by which, through a series of equations, any number may apparently be proved equal to nothing. As she had never seen it, I showed it to her, securing her assent to the several steps as I went on. When we arrived at the conclusion,  $2 = 0$ , I handed her the paper and looked up with the half apologetic, half triumphant manner of one who expects after a very brief triumph and a rather lame defence to yield the point in question. But nothing of the sort happened. She merely said "That's all right" and handed the paper back to me. "But," I said, "how can it be? Two cannot be really equal to nothing." "O," she said, "that's algebra."

The situation is not much improved, although it is quite different, if the teacher has good ability, but insufficient training. In that case he is oppressed by the consciousness of the heavy demands made on him and of his inability for a long time to respond to them as he should. The work must be done somehow, the classes cannot wait. He is thus obliged to carry on a discouraging struggle against tremendous odds. Meanwhile, his pupils are the losers, and the reputation of the subject suffers. Similar statements could, of course, be made with respect to inadequate preparation in other subjects as well as mathematics, but the immediate consequences are not so conspicuous. The definiteness and rigor of mathematical reasoning afford a constant

and ruthless exposition of the teacher's shortcomings—an exposition which in other subjects is neither so glaring nor usually so disastrous. The teacher of mathematics must be a logical reasoner and ready in manipulation. If his training has left him without these powers, his other mental powers will avail him nothing. Either the pupil is right or he is wrong. Neither teacher nor pupil can escape the consequences of false reasoning or lack of skill in handling mathematical expressions. So, too, the glimpse the teacher gets of fields unexplored, which he vaguely realizes must have an influence on the interpretation of the work on which he is engaged, is a constant intimation of inadequacy, and so a source of self-accusation that heightens the acute "misery of conscious weakness" which he is sure to feel, and which is one of the most paralyzing of all the untoward influences that oppress the conscientious but meagrely equipped teacher. There is no heavier burden than the burden of accepted duties that one feels he cannot adequately perform.

There is, of course, always hope for the able teacher inadequately prepared, for he may, by dint of hard work, ultimately achieve at least a moderate efficiency, although at the expense of many pupils; but there is no hope for the ignorant teacher of poor ability unconscious of his own ignorance. In either case the want of adequate preparation before actual service begins casts its shadow over his entire professional career.

To teach mathematics well in the high school, it is, therefore, hardly necessary to argue that one must have a thorough knowledge of the subject, a knowledge that is far in advance of pre-collegiate study, *i.e.*, far in advance of a good acquaintance with the branches of mathematics usually found in the high school curriculum or such a presentation of them as is

contained in the usual text-books. It is hardly necessary to argue that with an equipment limited to pre-collegiate study, the teacher of elementary mathematics is unable to comprehend the relative importance of the different phases of his subject. He may, and usually does, neglect important aspects and magnifies trifles. He treats facts and processes as ultimate ends in themselves, instead of means to ends. He never gets the comprehensive point of view from which the subject is unified and gains full significance in his own and the pupils' minds. His pupils not infrequently learn many things which subsequently must be unlearned—an expensive and exasperating experience. That he may escape this unfortunate situation, that he may from the start enter on his work well equipped for the demands that are to be made on him, I purpose now to enquire what should a good course of study, to be pursued by the high school teacher of mathematics as special preparation for his work, comprise?

Bearing in mind that this course of study should enable the teacher to appreciate the relative importance of the different phases of his subject and of their interdependence throughout, and so enable him to select with certainty and wisdom those portions of mathematics essential to the elements of a liberal education, or for future specialization in mathematics, if the pupil's interest and probable career should lead him into that field; and also that the teacher should know and be able to point out the significance of mathematics for the adequate development of power over other sciences, it is clear that the teacher's preparation must cover both pure and applied mathematics, and a general training in elementary physical science. Only through such knowledge is it possible to expect confidently that the teacher shall have an adequate, a wise,

and firm grasp of essentials ; and be able to impart to the pupil the scientific interest born of insight, unified knowledge, and perspective ; and also a conviction of the fundamental utility of his subject in the pursuit of other sciences and in the practical affairs of life.

In view of these considerations, I suggest the following college course of study for the equipment of the high school teacher of mathematics :

Advanced algebra, about fifty lessons ; theory of equations, about fifty lessons (together with determinants and complex numbers) ; solid geometry, about fifty lessons ; trigonometry, plane and spherical, about fifty lessons ; surveying, about fifty lessons ; calculus, about one hundred lessons ; mechanics, about one hundred lessons ; history of mathematics, about fifty lessons ; physics, about one hundred lessons (general, with quantitative laboratory work) ; astronomy, about fifty lessons ; chemistry, including mineralogy, about one hundred lessons ; application of the calculus to light and heat, or to electricity, about one hundred lessons ; history and theory of education, about one hundred lessons ; methods, about fifty lessons.

Such a course of study should give the teacher of mathematics the original awakening and impetus, and furnish the permanent sources of inspiration and guidance without which growth

and high efficiency are impossible. It places the teacher at the centre of his subject, whence he can see and use its resources to the best advantage. The command it gives him over the resources, the problems, the historical development, and the practical and theoretical utility of elementary mathematics may be expected to enrich and vitalize his teaching. Under a teacher thus equipped, the pupils feel that they are dealing with a fertile and a beautiful subject, and that they have a steady, able, and sure guide to the mastery of it. The halting and labored procedure, so characteristic of one who is not master of the situation, will be wanting ; the pupils will perceive a definiteness and directness of aim and procedure, a facility of handling mathematical expressions which shows them how real it all is, how important, interesting, and useful it all is, and how accessible it all is to patient study ; and, to the mathematical spirits among them, how fascinating and how simple it all may become. Such a course of study will make it impossible for the teacher of elementary mathematics to regard high school algebra, geometry, and trigonometry as "higher mathematics," as I have heard some teachers call these subjects ; but he will nevertheless have a just and high regard for these subjects, and will address himself to teaching them accordingly.—*The School Review.*

#### BOSTON SCHOOL ADMINISTRATION.

**T**HE feeling that I should be called upon to formulate a course of study for a primary class, or a Latin school, or a manual-training school, became oppressive when I realized that I was not what is called "equipped" for such service ; nor did I hanker for the opportunity to designate what text-books should be

used in the schools ; a task which, in fact, amounts to nothing more than choosing between text-book publishing houses. It would seem as though even a political boss or a machine legislature could be made to understand that a lot of citizens, chosen haphazard from the shop, the counting room, the bar, the pulpit, the

household (for women serve, too), ought not to be required, and should not be permitted, to decide such questions for eighty thousand children—or for eighty children, for that matter. Of course it may be said that members of school committees are not obliged to perform these duties, or, at least, they may be wisely performed perfunctorily, by adopting the suggestions of the Board of Supervisors, which is supposed to be an advisory body. But, in my experience, this is just what a school committee will not do. It may, and often does, ask the supervisors to recommend a text-book, and to report upon some purely educational question, such, for example, as the so-called enrichment of the grammar course, departmental work, and the adoption of parallel courses. But it does not follow that the expert's recommendation must be accepted, or is even likely to be. I have frequently seen such advice disregarded and sometimes spurned. The Boston committee is composed of twenty-four members (elected at large and eight retiring each year), and as the Massachusetts statute requires a two-thirds vote of the full board for the adoption of any text-book, a clever text-book agent, if he cannot get his own wares adopted, may at least prevent any other book from going on the authorized list. Results that would be ludicrous, if they were not so serious, naturally follow. I recall a number of facts which, while they all belong to one case, illustrate more than one of the points I am trying to make. During my second year in office it was discovered that much dissatisfaction was being expressed by employers of juvenile "help" because of the ill-formed, cramped, and illegible handwriting of graduates of the grammar schools. It was found, also, that Chicago and several other large cities, besides many

smaller ones, both East and West, had adopted the vertical style of penmanship because it had been found that even the "hand" that was not good-looking had almost invariably the merit of being "plain." Hygienic questions were brought in, too, but these were somewhat abstruse, and subsequently the doctors in the Boston committee disagreed very learnedly upon them—as the lawyer members nearly always do on all debatable questions. The Boston board appointed a committee of five to inquire into the vertical system. This work was painstakingly and intelligently done, and the sub-committee's report, which became a public document, was unquestionably a meritorious, if a somewhat ambitious production. The introduction of the system, at least experimentally in a few schools, was recommended. The recommendation was adopted, after a hard fight, by a slender majority. Before the close of the session, when three of the yeas had retired, reconsideration was secured and the report of the sub-committee was rejected. The subject was then referred to the committee on examinations, which reported—only one member dissenting—in favor of the introduction of the system. This report was rejected, and the question was then referred to the Board of Supervisors, whither it should have gone in the first place. The experts made an exhaustive inquiry, summoning witnesses and corresponding with school authorities and other people far and near. At length they reported in favor of the vertical system. But even this report was rejected, almost contemptuously, and the superintendent was then directed by vote of the board to write to the grammar-school masters, asking them if they liked the vertical style and would be willing to try it in their classes. Several replied, expressing a willingness to experiment

with the system, but most of the masters, in the words of the superintendent, "begged to be excused." So that the school committee finally stood, that year, in the position of going over the heads of its expert advisers to get the judgment of their subordinates in rank, and, withal, it was itself impotent in the end. But those masters who were willing to try the vertical system did try it, not finding anything in the rules and regulations of the department to prevent them, and by the next year, and when the annual text-book raid was almost due, it was found that the reform writing had got quite a hold. Then the committee actually passed an order which authorized and encouraged the new system. But the next step, the adoption of a text-book, was more difficult. The copybook-makers waged a most desperate war, in which the members of the board soon became offensive partisans. Even the supervisors, who had recommended a book, were unmercifully assailed, and warned against exceeding their duties. They were to be seen and not heard, except when they were asked to speak. The result was the defeat of the copy books, sixteen votes not being secured, as required by statute. So that the school committee finally stood, that year, in the position of adopting a new style of writing, but refusing to furnish the necessary text-books for securing intelligent results on the part of the pupils; while the most hurtful direct consequence is that the individual child is taught the vertical hand in one grade and the sloping hand in the next, or *vice versa*, for the whole subject now rests, through the impotence of the school committee, with the individual teachers, who are influenced by personal experience or practice, by prejudice or caprice. It is, perhaps, needless to add that the school committee was swept from its moorings (the Board of Supervisors)

by the dazzling efforts, the almost hypnotic influences, of the publishing houses.

I never for a moment blamed the text-book men in this or any other instance. The board simply invites these ravenous invasions, which are annually made. Nor have I believed that the raiders find it congenial to traffic upon such predatory ground. The house that did not pursue such methods would certainly sell very few books in the Boston public schools. The selling agents care very little, I think, about the opinions, good or ill, of the Board of Supervisors, for they know that the school committee also cares very little about them. Just before the yearly attack there is a portentous calm. Few debates occur in the open board. There is a great deal of buttonholing in the corridors and the committee rooms at school headquarters. The text-book lobby is in full swing. Members whisper together and text-book men whisper to both. The text-book men follow the members to their offices and sometimes visit their homes, where much argument may be "pumped" into the individual who intends to be a spokesman on the floor in debate. I have found them very agreeable companions, for we have usually discussed school management freely, and text-books very reservedly. Before I had been long on the board I discovered that a good text-book man knew more about the public schools of Boston than the average member of the Boston committee, and I learned much from them about the conditions of the schools in New York, Brooklyn, Chicago, St. Louis, Cleveland, and a few other representative cities. I really did not need to hear their book arguments, for I knew I should hear them exactly reiterated in the school committee. As a rule such debates were confined to a few members, certain of whom almost always

spoke for one particular house, while other members followed the fortunes of another house. When the storm would break, at last, it always seemed as if there would never be any more sunshine in the Boston schools, and that the members of the board must be mortal enemies for life. As for the text-book men, one could imagine them trooping off with a crowd of seconds to some sylvan dell; but, quite to the contrary, I found them, early one morning in early summer last year, sitting and chatting together on the piazza of the Maplewood Hotel, watching, as they talked, the fleeting shadows of fleecy clouds as they chased up the great slopes of Mt. Washington and went into nothingness over the summit. I was glad to meet them again, for, after I had made it known that I would invariably vote to sustain the expert Board of Supervisors in text-book controversies, I missed them, and was very sorry. They had come to attend the annual meeting of the American Institute of Instruction, availing themselves of this opportunity to call the attention of teachers and educationists to their books and to secure written commendations where possible. I have found school-masters and even supervisors rather free in doing this sort of thing, and they, too, are not unlikely to "stand in" with one particular house through thick and thin. While I do not know that this is altogether wrong, I do know that I was embarrassed, and found my position with regard to expert advice made almost untenable, through the practice of supervisors themselves of launching text-books of their own upon the market through some favored houses, which promptly invited the school committee to put these books on the authorized list. I do not believe it possible to secure from a small, close body like this an absolutely fair, and certainly not an

unquestionable, professional opinion on the value and applicability of a book produced by one of its own members. And this brings me back to the school committee itself, whose members, like the text-book men, soon see the shadows flee when the controversy is closed. I have suspected log-rolling in some instances, but probably there was nothing in this, though I very distinctly recall a remark made in a sub-committee room one afternoon by a member toward whom reform associations are particularly tender. The memorable fight over Frye's *Geography* had taken place; the book had been defeated. The member (whose sex it would perhaps be unfair to state) was indignant, and exclaimed: "If we can't have Frye's *Geography*, they shan't have Metcalf's *Grammar*." This was not said during the stress of battle, but several days after it. The books mentioned came from rival houses that have had a long struggle for supremacy in Boston, and the "we" and the "they" in that sentence of eleven words bespoke the position of the Boston School Committee on the whole text-book question.

This kind of mischief done or averted, the board soon settled down to the discussion of some other form of patronage. The teachership is still a spoil of office. It is more difficult, at the present time, for a Catholic than for a Protestant young woman to get a place, but, nevertheless, some Catholics secure appointments, for "trading" may always be done, while each side has a wholesome fear of the other assailing it in the open board. A member said one day, in my hearing: "I must have my quota of teachers in — — —, anyhow." (The dashes represent the district in which he resides.) It turned out that he got at least a good part of what he demanded, and there was a remarkable sequel. One of the

ablest masters in the service, an elderly, discreet man, said to me one day: "I don't know what I shall do with that Miss —; she is thoroughly incompetent and a great injury to my school."

"It seems to me," I said, "you have only to make that statement to your division committee in charge."

"No, no," he replied, "it would never do. She was put in by Mr. —, and if she were removed the A. P. A. cry would be raised, and that would do the whole school so much injury I had rather put up with a poor teacher."

This religious difficulty has a double-back-action. Sometimes the Catholic is kept out of her rights; at others the Protestant is wronged to give the Catholic a place. And there is no peace any more. Actual merit is one of the last things thought of, if it is ever thought of at all. It is true the candidate must have passed an examination, but the supply is always much greater than the demand, and written examination is necessarily inadequate as a test of fitness, because it does not bring out the quality known as teaching ability. If a poor teacher gets into the service, removal seem almost impossible, because it is the political factor which controls. The elective board has the "say." The superintendent and his supervisors are mere figureheads. Even an opinion is rarely asked of them in such matters as this. Transfers are made without their knowledge. Sub-masters are chosen, and, in due time, promoted to masterships without it being even said to them: "What do you think of this?" The board at one time ordered a preferred list of sub-masters eligible for promotion to be made by the supervising body, but the very first time there was a vacancy it was found that the man with a "pull" was not on the list, and the list was therefore ignored.

Subsequently, it was found to have been ignored so much the board gravely voted it out of existence. "Pull" and expediency stand for merit now. If a master and his sub-master are incompatible, the sub-master is given the first vacant mastership for harmony's sake. Sometimes, and not infrequently, a master is transferred, regardless of the good of the service, from one side of the city to another, in order to make a vacancy in a school where an influential sub-master desires a promotion. The advice of the superintendent, if it is given, has no weight in such cases. It is not even thought of, I feel sure, when the board proceeds to the business of making the changes. The most inefficient sub-master in the service to-day may be elected master to-morrow, for while the salaried educationists may prefer what is best, the non-professional committee men will probably choose what is worst. There is often that very marked difference; personal advancement by mere choosing rather than by preferment. It has been suggested that the remedy may lie in delegating to the superintendent and supervisors the power to promote; or, at least, the board could adopt a rule by which, in effect, it would agree neither to select nor promote any instructor not recommended by the advisory officers. I do not expect to see any school committee accept with honest intent any such proposal. At all events, it would not be worth what it would cost to put it into type, so long as the supervisors and superintendent are not made secure by long tenure of office. I served but three years on the board, and yet voted for these officers twice during my short term of service. Few men thus situated are so natured that they can spontaneously assert the exact truth, without ambiguity or evasion, when they know it to be unwelcome, and likely,

if fearlessly and too forcibly expounded, to render each of them *persona non grata* with the office-giving authority. If President McKinley should go to the custodian of the post-office building in New York and tell him he wished Mike Jones appointed a janitor's helper, it is not probable the custodian would waste much time looking up the "availability" of Mr. Jones for such a position. Of course, Mr. McKinley would not do this, but members of school committees find no office, however humble, unworthy of their personal attention. And it is not a

stretch of imagination to foresee the school-board politician saying to the Board of Supervisors: "You are going to recommend Alf. Wiggle for the mastership of the Charles Sumner School, or I'll know the reason why!" The more refined worker on the board will hint to the supervisors that Mr. Wiggle seems to be a person who would fill the vacant place satisfactorily. In the end the office-seekers, who are invariably the most energetic, would get their candidates in, or the supervisors would get out.—*Educational Review.*

(To be continued.)

### SLOUCH.

I WOULD like to see in every school-room of our growing country, in every business office, at the railway stations, and on street corners large placards placed with "Do not slouch" printed thereon in distinct and imposing characters. For if ever there was a tendency that needed nipping in the bud (alas! I fear the bud is fast becoming a full-blown flower), it is this discouraging national failing.

Each year when I return from my spring wanderings among the benighted and effete nations of the Old World, on whom the true American looks down from the height of his superiority, I am struck anew by the contrast between the trim, well-groomed officials I have left behind me on one side of the ocean and the happy-go-lucky slouching individuals I find on the other. As I ride up town this unpleasant impression deepens. In the "little Mother Isle" I have just left, the "bus" drivers" have quite a coaching air, with hat and coat of "knowing" form. They sport flowers in their buttonholes and salute other "bus" drivers when they meet with a twist of whip and elbow refreshingly correct, showing by their air that they

take pride in their calling, and have been at some pains to turn themselves out as "smart" in appearance as their finances would allow. Here, on the contrary, the stage and cab drivers I meet seem to be under a blight, and to have lost all interest in life. They lounge on the box, their legs straggling aimlessly, one hand holding the reins, the other hanging dejectedly by the side. Yet there is little doubt that these heartbroken citizens are earning quite double what their London confreres gain. But the shadow of the national peculiarity is over them. When I get to my rooms, the elevator "boy" is reclining in the lift, and hardly raises his eyelids as he languidly manœuvres the rope. I have seen that boy now for months, but never when his cravat was not riding proudly above his collar. On occasions I have even offered him pins, which he took wearily, doubtless because it was less trouble than to refuse. But the next day the cravat again rode triumphant, mocking my efforts to keep it in its place. His hair, too, has been a cause of wonder to me. How does he manage to have it always so long and so unkempt? More than once, when expecting callers, I have bribed

him to have it cut, but it seemed to grow in the night back to its poetic profusion.

In what does this noble disregard for appearances which permeates our middle class men originate? Our climate, as some suggest, or discouragement at not being all millionaires? It more likely comes from an absence with us of the military training that abroad goes so far toward licking young men into shape.

I shall never forget the surprise on the face of a French statesman to whom I once expressed my sympathy for his country, laboring under the burden of so vast a standing army. He answered: "The financial burden is doubtless great; but you have others. Witness your pension expenditures; while with us the money drawn from the people is used in such a way as to be of inestimable value to them. We take the young hobbledehoy farmhand or mechanic, ignorant, mannerless, uncleanly as he may be, and turn him out at the end of three years with his regiment, self-respecting and well-mannered, with habits of cleanliness and obedience, having acquired a bearing and a love of order that will cling to him and serve him all his life. We do not go so far," he added, "as our English neighbors in drilling men into superb manikins of 'form' and carriage. Our authorities do not consider it necessary. But we reclaim them from the slovenliness of their native village, and make them tidy and mannerly citizens."

These remarks came to mind the other day as I watched a group of New England youths lounging on the steps of the village store, or sitting in rows on a neighboring fence, until I longed to try if even a judicious arrangement of tacks, "business-side up," on these favorite seats would infuse any energy into their movements. I came to the conclusion that my French acquaintance was about right,

for the only trim-looking men I saw were either veterans of our war or youths belonging to the local militia. And nowhere can you see finer specimens of humanity than West Point turns out yearly.

But if any one doubts what kind of man slouching youths develop into, let him look when he travels at the hopeless appearance of our farmhouses throughout the land. Surely our rural population is not so much poorer than in other countries. Yet compare the dreary homes of even our well-to-do farmers with the smiling, well-kept hamlets one sees in England or on the Continent.

If ours were an old and bankrupt nation, this air of discouragement and decay could not be greater. One looks in vain for some sign of American dash and enterprise in the appearance of our men and their homes. During a journey of over 4,000 miles, made last spring as the guest of a gentleman who knows our country thoroughly, we were all impressed most painfully with this abject air. Never in all those days did we see a fruit-tree trained on some sunny southern wall, a smiling flower garden, or carefully clipped hedge. Hardly even the necessary vegetables are grown. My host told me that throughout the West and South they prefer canned food. It is less trouble.

If you wish to form an idea of the extent to which slouch prevails in our country, make the experiment of trying to start a "village improvement society," and experience, as others have done, the apathy and ill-will of the inhabitants. Go about among them and try to rouse some of their local pride to your aid.

In the town near where I pass my summers, a large stone, fallen from a passing dray, lay for days in the middle of the principal street, until I paid some boys to remove it. No one cared, and the dull-eyed inhabitants

would doubtless be looking at it still but for my impatience.

You would imagine they were all on the point of moving away (and they generally are if they can sell their farms), so little interest do they show in your plans. Like all people who have fallen into bad habits, they have grown to love their slatternly ways and cling to them, resenting furiously any attempt to shake them up to vigor and reform.

The farmer, however, has not a monopoly. Slouch seems ubiquitous. Our large railway and steamboat systems have tried in vain to combat it, and supplied their employees with a livery (I beg the free and independent voter's pardon—a uniform!), but it has had little effect. The inherent tendency is too strong for the corporations. The conductor will shuffle along in his spotted garments, his cap on the back of his head, and his legs anywhere, while he chews gum in defiance of the whole board of directors.

Go down to Washington after a visit to the houses of Parliament or the Chamber of Deputies, and observe the air and bearing of our Senators and Representatives. They seem to try and avoid every appearance of "smartness." Indeed, I am told, so great is the prejudice against a well-turned-out man that a candidate would seriously compromise his chances of election who appeared before his constituents in other than the accustomed shabby frock-coat, unbuttoned and floating, a pot hat unbrushed, no gloves, as much doubtful white shirt-front as possible, and a whisp of black silk for a tie; and if he can exhibit also a chin whisker, his chances of election are materially increased.

Nothing offends the eye accustomed to our native "laissez aller" so much as a well-brushed hat and shining boots. When abroad, I can "spot" a compatriot as soon and as far as I can see one by his graceless bearing,

a cross between a lounge and a shuffle. In reading or dining-room, he is the only man whose spine does not seem equal to its work, so he flops and straggles until, for the honor of your land, you long to shake him and set him squarely on his legs.

Now, no amount of reasoning can convince me that outward slovenliness is not a sign of inward and moral supineness. A neglected exterior generally means a lax moral code. A man who considers it "too much trouble" to sit erect can hardly have given much time to his tub or his toilet. Having neglected his clothes, he will neglect his manners, and between morals and manners we know the tie is intimate.

In the Orient a new reign is often inaugurated by the construction of a mosque. Vast expense is incurred to make it as splendid as possible. But, once completed, it is never touched again. Others are built by succeeding sovereigns, but neither thought nor treasure is ever expended on an old one. When it can no longer be used, it is abandoned, and gradually falls into decay. The same system seems to prevail among our private owners and corporations. Streets are paved, lamp-posts erected, store-fronts carefully adorned, but from the hour the workman puts his finishing touch upon them they are abandoned to the hand of fate. The mud may cake up knee-deep, wind and weather work their own sweet will, but it is no one's business to interfere.

One of my amusements has been of an early morning to watch Paris making its toilet. The streets are taking a bath, the lamp-posts and newspaper stands are having their feet scrubbed, the shop-fronts are being shaved and having their hair curled, cafes and restaurants are putting on clean shirts and tying their cravats smartly before their many mirrors. By the time the world is up and about, the whole city, smiling

freshly from its matutinal tub, is ready to greet them gaily.

It is just this attention to detail that gives to continental cities their air of cheerfulness and thrift, and the utter lack of it that impresses foreigners so painfully on arriving at our shores.

It has been the fashion to laugh at the dude and his high collar, and the dandy of a Sunday morning in his master's cast off clothes, aping style and fashion. But better the dude,

better the colored dandy, better even the Bowery "tough" with his affected carriage, for they at least are reaching blindly out after something better than their surroundings, striving after an ideal, and are in just so much the superiors of the foolish souls who mock them—better even misguided efforts, than the ignoble stagnant quagmire of slouch into which we seem to be slowly descending.

AN IDLER *In Evening Post.*

## MODERN COLLEGE EDUCATION.

BY GRANT ALLEN.

BEYOND a doubt, the course of learning Greek and Latin does afford one a single piece of good mental training; it is unrivalled as a method of understanding the nature of grammar—that is to say, of the analysis of language. But this knowledge itself, though valuable up to a certain point, is absurdly overrated; ignorance of grammar is treated as a social crime, while ignorance of very important and fundamental facts about life or nature is treated as venial, and in some cases even as a mark of refinement.

An intelligent system of higher education designed to meet the needs of modern life would begin by casting away all preconceptions equally, and by reconstructing its curriculum on psychological principles. (And, I may add in parenthesis, the man to reconstruct it would be Professor Lester Ward.) I am talking now, of course, of a general scheme of preliminary higher education—the sort of education which should form a basis for all professions alike (like the ordinary B.A. degree at present), and which would have to be afterwards supplemented by the special technical training of the lawyer, the doctor, the merchant, the manufacturer, the en-

gineer and the parson. Such an education ought primarily to be an education of the faculties; and for educating the faculties, language and grammar have proved themselves to be the worst possible failures. It ought, however, at the same time to consider whether, while training the faculties, it could not also simultaneously store the mind with useful facts. For both these purposes a general education in knowledge is the most satisfactory; and I say knowledge on purpose, instead of saying science, unduly restricted. I would include among the most important forms of knowledge a knowledge of man's history, his development, his arts and his literature. I believe that, for a groundwork, a considerable range of subjects is best; this may be supplemented later by specialization in particular directions. Let us first have adequate acquaintance with the rudiments of all knowledge; in other words, let us avoid gross ignorance of any; afterwards, let us have special skill in one or more.

As a beginning, then, I would say, negatively, no Greek, no Latin, no French, no German. Those languages, or some of them, might or

might not come later in particular instances. For example, a man might get interested in Hellas (say by travel, or by examining Greek sculpture), and might reasonably take up Hellenic art and Hellenic archæology; in connection with which it would also be desirable that he should read Æschylus, Sophocles, Herodotus and Thucydides, not to mention likewise Pausanias and Pliny (I am aware that Pliny wrote in Latin). Or he might have business relations with Germany; in which case it would be desirable that he should learn German. Or he might take an interest in literature as a whole, and in the history of its development; in which case, of course, he could not afford to neglect French literature. Moreover, since languages are most easily acquired during plastic childhood, I do not deny that if exceptional opportunities exist for picking up modern languages (as during travel, etc.) advantage should be taken of them. I am not dogmatically opposed to the learning of languages; I have learned one or two (besides Greek and Latin) of my own accord. I only say their importance has been vastly overrated, and the relative importance of certain other subjects unaccountably underrated.

Or, the other hand, education ought certainly to include for everybody, men and women alike, some general acquaintance with the following subjects: Mathematics, so far as the particular intelligence will go; physics, so as to know the properties of matter; generalized chemistry; zoology; botany; astronomy; geography; geology; human history, and especially the history of the great central civilization, which includes Egypt, Assyria and Babylonia, Persia, Asia Minor, Hellas, Italy, Western Europe, America; human arts, and especially the arts of painting, sculpture and architecture in North Africa, West-

ern Asia and Europe. If this seems a large list for the foundations of an education, it must be remembered that six or seven years would be set free for the acquisition of useful knowledge by the abolition of grammatical rote-work; and that a general idea alone of each subject is all I ask for.

For instance, in physics, it would suffice that students should be taught the fundamental laws of matter, solid, liquid, and gaseous; the principles of gravitation; the main facts about light and heat; and some notions of electrical science. In biology, it would suffice that they should be taught the general classification of animals, a little comparative anatomy and physiology, and some idea of specific distinctions. At present, quite well-informed people will speak of a porpoise or a lobster as a fish; such grotesque blunders ought to be made impossible; they ought to be considered far more damnable evidence of ignorance and ill-breeding than "you was" or "me and him went there." A few weeks' practice will enable any intelligent young man or woman of eighteen to identify any plant in the American flora by the aid of a technical description; and the mental value of that training is immeasurably greater than the mental value of ten years' work at Greek syntax. And so forth with the other subjects. I contend that a man or woman ought to leave college with a fairly competent general idea of most arts and sciences, to be supplemented by exact knowledge of one chosen subject—say, beetles or chemistry, or the English literature of the seventeenth century, or Hittite inscriptions, or the fresh-water mollusks of the United States, or early Flemish painting, or the geology of the Ohio basin. The special subject ought always to be one chosen, out of pure predilection, by the student himself; the general subjects ought to be

imposed from above by the educational authorities of the particular university. In this way you avoid complete and foolish ignorance of any one subject about which it is desirable for everybody to know something ; but at the same time you give full and free play to individual diversities of taste and faculty.

A person brought up on such a curriculum ought to be fairly well equipped for the battle of modern life in everything except the technical training of the particular profession. And technical training must, of course, come afterwards—in the medical school, in the lawyer's office, in the engineering yard, in the merchant's counting-house. But I maintain that every man or woman will be better fitted for every position in life—he or she may fill—as a citizen, as a breadwinner, as a wife, as a parent—than when linguistically educated upon the existing basis. Wide knowledge of facts is essential to success in modern life ; it is ignorance of facts that most often causes failure of adaptation. And any nation that ventured to adopt such an education in facts, instead of words, would forge ahead of all other nations with an accelerated rapidity that would astonish even those who introduced it.

But there is a preconception still more fatal to progress than all these preconceptions with which I have hitherto dealt—a preconception which vitiates as yet almost all thinking on the subject, even in America. It is the deep-seated prejudice in favor of the college itself—of education as essentially a thing of teaching, not of learning—of education as bookish and scholastic—another baneful legacy of the monkish training. I believe almost everybody still overestimates the importance of college as such, and underestimates the value of travel and experience. Let me put the thing graphically. Thousands of American

parents, asked to thrust their hands into their pockets and pay a round sum to send their sons or daughters to Harvard or Vassar, will do so without hesitation. Thousands of English parents will do the same thing, at still greater expense, for Oxford or Girton. But ask those same parents to thrust their hands into their pockets and pull out an equal amount to send their sons and daughters traveling, deliberately, as a mode of education, in Europe, and they will draw back at once ; “ I don't want to waste so large a sum on a mere pleasure excursion.”

Why is this? Clearly because the mediæval idea that most learning or all learning is to be derived from books still survives among us. In the middle ages travel was difficult. People lived much in the same place, and the knowledge of the times was really all book knowledge. To-day people travel freely ; but the conception of travel as a great educator hardly exists at all in Europe, and is relatively little known even in America. I say “ even in America,” for I gladly admit that many more Americans than Europeans do really understand the high educational value of travel. But for the Englishman, travel in England itself is comparatively useless ; so for the American, is travel in America. It is travel in other countries that is of prime importance—above all, in the motherlands of culture—France, Germany, Italy, Greece, Egypt. And the greatest of these is Italy.

In my opinion a father who has sons and daughters of the proper age to go to college will do better by his children, and not less economically for himself, if he sends them for two years to travel in Europe than if he sends them for three years to an American or English university.

The knowledge gained at the university is unreal and bookish—

mere half knowledge; the knowledge obtained by travel is real and first hand; it teaches and impresses. And the things it has taught us live with us forever.

Let any cultivated man or woman of middle age ask himself or herself seriously: "How much of what I know that I really prize did I learn at school and college, or learn from books, and how much did I learn from things seen and visited in London, Paris, Venice, Florence, Munich, Nuremberg, Dresder, Brussels?" Will not the answer be, to the first half, next to nothing; to the second half, almost everything? Speaking for myself, I can honestly say I went away from Oxford without a single element of education worth speaking of, and without the slightest training in method or development of faculties. Everything that I have ever learned worth knowing I have taught myself since by observation and travel; and I reckon in particular my first visit to Italy as the greatest and most important date in my mental history. Oxford taught one how to write imitation Latin verses; Italy taught one who the Romans were, and why their language and literature are worthy of study. Until you have been in Rome it is silly and childish to read Roman books; only when you know Rome does Rome begin to live and speak for you

One's own experience is often the

best guide one can have; therefore I shall make no apology for adding that on the first day I ever spent in Rome, I took a long drive round the town—a drive of mere orientation, suitable for a man who was weary with travelling all night; and in the course of it I saw the Forum, the Capitol, the Palatine, the island in the Tiber, the Vatican, St. Peter's, the Pantheon, the column of Trajan, and most of the other great monuments and churches. Now, I had been teaching Roman history half my life, and lecturing on the masterpieces of Roman literature; but when I returned from that drive I felt I knew and understood Rome as I had never understood it before; and I was ashamed of the fact that I had not earlier seen it. I realized that my education had been neglected. I re-read several of my classics, comprehending for the first time in my life what they were about, and reading them with pleasure, where before I had read from a sense of duty. The man who has once visited Italy finds all the world thenceforth something fuller and deeper for him.

"But you had already learned some Latin!" In fear and trembling, yes; as a hateful task, to be examined in. If I had never learned Latin till I went to Italy, and had then spelled it out word by word on the monuments, I should have learned it more thoroughly, and certainly loved it better.—*Cosmopolitan*.

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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 doubtful light.

"That from Discussion's lips may fall  
With Life, that, working strongly  
binds—  
Set in all lights by many minds,  
So close the interests of all."

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Vanity it would be in me and to you bootless, to repeat what has been re-

peated and written *ad nauseam* about the increase of pupils since 1847, in

the then Grammar Schools, now our High Schools and Collegiate Institutes, also the great change which has come to our Colleges and Universities, as regards both equipment and attendance, and logically therefore the great increase in the wealth and population in Ontario, Canada; the last item being the basis on which the two former facts stand.

Not, indeed, that these things are unimportant, especially if we took time to analyse the characteristics of the population of Canada. If this were done, I believe the result would be eminently satisfactory to the Central British Empire.

The words given me, the Higher Education, High Schools, Colleges, etc., etc. gave me pause.

The Higher Education surely cannot be modes of conducting examinations, or the results of examinations, though these are much spoken about and written about, or even the number of graduates of High Schools and Colleges.

If the staffs in these seats of learning are cherishing the fond delusion that the country expects only, as the result of their labor, that the alumni of these institutions may be able to give a good account of themselves in examination halls or on public platforms, to the neglect or in defiance of the absolutely necessary education covered better by the word manners than any other single word, then they are woefully mistaken. No one whose opinion is worth having on any matter pertaining to life can depreciate these splendid gifts, but they are not Education.

The Crown is celestial; we must reject everything as a temptation

Extract-notes of remarks made by the Editor of THE CANADA EDUCATIONAL MONTHLY, at a banquet held during Jubilee of Toronto Normal School, Nov. 2, 1897.

to evil, which has a tendency to confine our efforts and energies to gathering straws, small sticks and dust, like unto the man in the immortal Allegory.

Within the last two weeks I met a man born in Toronto more than 54 years ago. His father had considerable property, a large share of which fell to this son. After the death of the father the son invested pretty freely, by which he lost \$30,000. He risked unwisely and lost; all right, he himself said. He gave me unasked his views of our education. "The centre of our system of education is in the wrong place. When I see a lot of young men in our colleges, etc., come down Yonge Street, smoking, swaggering, hands in their pockets, and often talking loudly, I feel and say that they are in the wrong place, and think to myself who pays for these young men? What will these young men do at college, and worse still, what can they do for a living? Many of our young doctors live on 5 cent lunches. Many of these leave us and go to U. S. A. When I look over our town and see many families from the country, the parents having sold their farm and brought their children to the city, sons and daughters, to educate them, they say, then I ask again, what are these children to do? Every one cannot be a lawyer, or clerk in a store, or type-writer. It is ruin to these children; perhaps worse for the daughters than for the sons. But it is ruin; I tell you, sir, the centre of our education is in the wrong place."

"What would you suggest in order to improve matters?" I asked my communicative friend.

"We must have more farmers, more mechanics, more artisans, more producers of wealth. We have too many non-producers."

These, in brief, are the statements made by a man who was born in Toronto, and lived in the city continuously for over 54 years; several times went to the U. S. A. as far south as Washington. I do not vouch for their correctness, but there is no doubt that he believes them to be correct, and blames our educational system for the desire of our people for professional life, and he gave me particulars which I must suppress."

Ontario is not alone in this respect. We find practically the same conditions existing in the U. S. A.

To give an opinion on what I constantly hear and see on every side, I would say that our great lack is lack of reverence, manifested in the lack of respect to age, lack of consideration for the work our forefathers were engaged in, and in which they lived healthily and happily.

The Mayor of Montreal the other evening at the Convention of the Protestant Teachers of Quebec, said that farming—the mainstay of Canada's prosperity—was now carried on as a drudgery. His Worship's hope for a better state of things was in the teachers of his province. Akin to his Worship's statement is that made by a writer in one of the leading magazines of the U. S. A. viz:—that quite recently he travelled westward in his country for 3,500 miles without seeing a kitchen garden on a farm. The farmers seem to feel that unless they can have the sofas, chairs, carpets, etc., etc., which are found in houses in our cities and towns, whether paid for or not, they are ill-treated. They seem to have lost the sense of appreciation of things suitable for the farm; the strength and beauty of chairs, clocks, tables, chests of drawers, etc., which have upon them the comeliness of having served more than one generation. The character-

istic which is working so much damage to our country is lack of respect for the work in which the individual may be for the time engaged. We are all workers, and in the right spirit we should rejoice in our work.

The Higher Education can only be found in the direction indicated in the following three statements:

1. Do justly, love mercy and walk humbly with thy God.

(Written 2600 years ago.)

2. Not slothful in business, fervent in spirit, serving the Lord.

(Written 1837 years ago.)

3. Self-reverence, self-knowledge, self-control.

(Written during the present generation.)

—  
 " In the softly fading twilight  
 Of a weary, weary day,  
 With a quiet step I entered  
 Where the children were at play;  
 I was brooding o'er some trouble  
 Which had met me unawares,  
 When a little voice came singing,  
 ' Me is creeping up the stairs.' "

" Ah it touched the tenderest heart  
 strings,  
 With a breath and force divine,  
 And such melodies awakened  
 As no wording can define.  
 And I turned to see our darling,  
 All forgetful of my cares,  
 When I saw the little creature  
 Slowly creeping up the stairs. "

" Step by step she bravely clambered,  
 On her little hands and knees,  
 Keeping up a constant chatter,  
 Like a Magpie in the trees.  
 Till at last she reached the topmost,  
 When o'er all her world's affairs,  
 She delighted stood a victor  
 After creeping up the stairs. "

" Fainting heart, behold an image  
 Of man's brief and struggling life,

Whose best prizes must be captured  
 With a noble, earnest strife ;  
 Onward, upward, reaching ever,  
 Bending to the weight of cares,  
 Hoping, fearing, still expecting,  
 We go creeping up the stairs."

### LESS SOCIETY AND MORE SLEEP.

THE tendency of boys and girls to enter society at an age when they are in nearly every respect unfitted for it is one that needs to be carefully guarded. While no sensible person desires to remove from the young a single source of real enjoyment and pleasure, the time has come in this country when all the friends of our grammar and high school pupils should unite in demanding for them, because it is absolutely necessary to their future happiness and usefulness, that they give less time to society and more time to sleep. This may seem like a very plain and abrupt statement, but it is, nevertheless, a true one. We have frequently heard the public lecturer accuse the public schools of overworking the boys and girls, and in many instances the accusation has been met with applause from fathers and mothers who ought to have known better. It is possible that, in very rare instances, pupils in our grammar and high schools are overworked, and as a result nervous prostration follows, but every time one instance of this kind can be found, at least a score may be found of similar conditions brought about by the attendance of boys and girls at parties and dances three or four nights each week when they ought to be at home in bed. Every parent or teacher who has ever given the matter any intelligent, honest consideration will admit that the application and hard work which are absolutely necessary

on the part of each and every pupil who succeeds in his studies, cannot be developed in the midst of the distracting influences surrounding the person who gives up his time to the demands of modern society. It is gratifying to note that teachers and superintendents are beginning to call special attention to this very important question. In the last report of the Newark Public Schools, Supt. J. C. Hartzler refers to it as follows :

"The besetting weakness of public schools of the city and country over is the indifference of parents as to regularity of attendance. The premature entrance of our young people into society circles is doing more to dissipate interest in school work than perhaps all else. Loss of sleep and late refreshments always unfit a pupil for both the preparation and recitation of lessons. It is hoped that this brief suggestion may be graciously received by the patrons of our city schools."

At the opening of the schools this fall Supt. Hartzler again called attention to the matter through the Newark papers :

"May not the above suggestion be further emphasized at this time, the opening of the school year, by this additional suggestion, that no evenings of the school days, Friday evening, if it must be so, excepted, be wasted in premature attentions to society by our young, school-going people? Sleep, the greatest of all restoratives of nervous energy, so indispensable to the conditions of correct student life, cannot be interfered with without reflex injury.

"Foreigners tell us that we Americans live too fast, eat too viciously, struggle too hard in the scramble for wealth, and are thereby too wasteful of our nerve energy; all of which every observing and considerate person must accept as true. If there is any part of our present construction

of society that needs reconstruction, it must be admitted to be in the premature entrance of our young school-going people into society circles. But this question needs no further discussion here. We believe that a fair, frank statement to the upper grammar and high school grades, suggesting the importance of regular habits of living as well as of study on the part of our students, will prove a sufficient guaranty that an improved condition of things will prevail in Newark in the future."

We congratulate Dr. Hartzler on the firm and sensible stand he has taken, and are glad to learn that he is meeting with the most hearty co-

operation of the great majority of the patrons in his city. Let the good work go on. In these latter days when character—manhood and womanhood—is being emphasized, as never before, as the end and aim of education, it is well to remember that good habits are very essential elements in good character. Society of the right kind has its proper place in the world, and in that place is all important, but the foolishness and emptiness which characterize modern society in many instances are purchased at too dear a price, when health, and opportunity to get an education are sacrificed to obtain them.—*Ohio Educational Monthly.*

#### CURRENT EVENTS AND COMMENTS.

**M**ANY cultured United States folk have been in Canada this summer and autumn, in connection with the meetings of the British Association and the British Medical Association at Toronto and Montreal, and they are carrying back to their homes a new idea of Canada and the Canadian people. Professor D. S. Martin, for instance, says: "The writer was much confirmed in the belief, formed on previous visits to Canada, that our people do not understand or appreciate our neighbors at the north, the greatness of their domain, their just pride in it and intense love for it; their educational, scientific and material progress, and their truly national spirit. Too often we hear Canada spoken of as a mere appendage to England, and its people as without a country of their own. Nothing is farther from the truth. The Dominion has an area somewhat greater than ours, even including Alaska; vast regions of it are just being opened to cultivation, and in a few years will be changed from a wilderness into a 'fruitful field'; its

mineral resources are enormous; its institutions free and progressive; its society cultivated and elegant."

"If Canada," Professor Martin goes on to say, "has not absolute and separate independence, she has a feeling of being part, and a great part, of a world-wide empire of the English-speaking race, 'on which the sun never sets.' Her people are proud and loyal; and they have good reason to be so. They have no menace and no jealousy for us; they wish to be friends and kind neighbors, but any idea of absorption or annexation is intensely alien to their feelings, and can never be realized or even approached until immense changes have taken place and long decades have passed.

"In fact, Canada and the United States are like two brothers whose careers have been differently chosen and shaped. One has quarrelled with his father, gone away and set up for himself, and developed great energy and great success. He is proud of his independence and achievements, and cares naught for

the old homestead and family traditions. The other has remained near his father, has built his home on the ancestral estate, and clings to the memories and associations of the family. He, too, is wealthy and proud, but his pride and his treasure are interwoven with the name and the fame of the paternal house. The two people are different; they are two nations, each with its own work to do and its own providential mission to fulfil in diffusing a free, intelligent, Christian civilization through the continent of North America.—*The Canadian Gazette, London, Eng.*

In these days we hear a great deal—perhaps not too much—about “awakening an interest” on the part of pupils in their studies. The value of this “interest” depends very largely upon its character and what it will do for a pupil after it is awakened. If the chief factor leading up to it is *entertainment*, and it leaves the pupil in a state of mind which will be satisfied only by more *entertainment* of the same kind, then the less we have of it the better. In some schools which make a very good showing when on “dress parade,” it will be observed that the teacher does all the *work*, and all that the boys and girls have to do is to be “interested” in the performance. On the other hand if the “interest” on the part of the pupil is of such a character as to lead him to *work* and what is still better *to love to work*, then we cannot have too much of it. It must never be forgotten that ability to do continuous hard work cheerfully and happily is the one factor in character, on account of the lack of which, so many people fail in life’s work.—*Ohio Educational Monthly.*

Have we any signs presenting

themselves of the literal fulfilment of the prophecies respecting Israel’s restoration to the Promised Land? We have. For one thing, it must be noted that its process will be a gradual one. The restoration from Babylon which had been predicted was of this nature. Let us, then, notice what history records, and observe some of the signs of the times.

It is an historical fact that a great change for the better has come upon the Jews during the past century. To a great extent they have become emancipated from “the yoke of the Gentiles.” In England they were enfranchised in 1753. In France the yoke fell off a little later. In Austria, a liberating edict was proclaimed in 1783. In Prussia oppressive laws were repealed in 1787. In Russia the edict which excluded Jews from the country was revoked in 1805. Other countries in time followed these examples. The grasping Turk gave them toleration and liberty to possess land in Palestine in 1867; while in Italy the day of their humiliation terminated with the overthrow of the Pope’s temporal power in 1870. In all this we see the fulfilment of the prediction that in “the latter days” the people should burst their bonds (Jer. xxx: 8). In England the restrictions which existed have been fully removed from the Jews. They now have seats in the national Legislature. A Jew has reigned as Lord Mayor of London, and another has enjoyed that high honor during this present year. Their influence in politics is rapidly extending throughout Europe, where they possess an extensive hold on the press of leading cities.

They have also entered into the educational arena with zest. They hold in various quarters high positions as instructors of the people; and as scholars, linguists, critics, and professors they rank among the highest.

Their influence in literature, education, and politics is not alone considerable, but is on the increase—so much so that a leading journal has said: "If this upward movement continues, the Israelites, a century hence, will be masters of Europe" (*Century*, April, 1882). This is not unlikely, because the "sure word of prophecy" has declared, "I will make you a name and a praise among all people of the earth" (Zeph. iii, 20). Combined with all this it is to be noticed that prophecy sets forth how the Jews should be possessed of immense wealth when on the eve of restoration. There is a vast accumulation of money now in Jewish hands, according to the official statistics of various European countries. They command some of the Bourses in Europe. The position of the Rothschilds is well known. Be it how it may, there is a noted tendency for capital to accumulate with the Jews; and herein we find a further prophetic fulfilment. Isaiah foretold that they should "eat the riches of the Gentiles," that is, increase in wealth at the expense of the latter.—*The Quiver*.

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The University of Toronto has made a distinct advance by establishing a post-graduate course leading to the degree of Ph.D. No provision has as yet been made for post-graduate lectures, but the regulations laid down in the new Calendar are such that a graduate of the University on pursuing a special subject for two years after graduation, presenting a satisfactory thesis as evidence of research in that line, and passing an examination on two allied minor subjects, may receive his "Ph.D." on the fulfilment of a further requirement, the payment of the necessary fee. All candidates must be graduates in Arts of the University of To-

ronto, and registered in the University as graduate students. In order, however, that graduates of other Universities may enter on the course, if so desirous, provision has been made that they may register on being admitted *ad eundem gradum* in the University of Toronto. The subjects are arranged in groups, and the candidate is allowed to choose his special or major subject from any of the following departments: Biology, chemistry, physics, geology, philosophy, Oriental languages, political science, modern languages, Latin and Greek, history and mathematics. This major subject must be pursued for two years under the direction of the professor of such subject in the University, but on report of satisfactory study at another university, exemption from attendance for the first of the two years may be granted. In the minor subjects chosen an examination equivalent to that required for first-class honors in the examination for the B.A. degree must be taken, though this examination will be dispensed with if the candidate has already obtained first-class honors in these subjects at the University. The chief feature, and that for which the course was primarily established, is the requirement of a thesis on some topic embodying the result of an original investigation, conducted by the candidate himself. It is hoped that by this means original research may receive a stimulus in the University. The new course may be entered upon with the commencement of the academic year.

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Most of our educational institutions have reopened for the fall term, and the attendance seems to be larger than ever. A word or two to parents may not be out of place: Try and get to know the men and women who are teaching and training your boys

and girls, and let them know that they possess your confidence and sympathy. Do not listen to every complaint your boy or your girl makes. At least, if you do, see that you investigate thoroughly. Do not set at naught the discipline of the school, or ask for too many relaxations in favor of your children. Their teachers will probably know your children's characters as well, if not better, than you do yourself, and unless in very exceptional cases, this authority should be upheld at home. What children need particularly to learn in this age is obedience, which is simply putting one's self in a right relation to the world.

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#### THE MONTREAL CONVENTION.

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FROM the full reports that have appeared in the public press of Montreal, the late convention of the Teachers' Provincial Association of Quebec has been the most successful ever held in the history of that Association. The president of the assembly was Dr. J. M. Harper, who was ably assisted by the Hon. Dr. Ross, of Toronto, Hon. Judge Lynch, Principal Peterson, Rev. Principal McVicar, Rev. Principal Adams, and the more prominent of the educationists and teachers of the Province, in bringing about the success of the various sessions. It is our intention to refer to the proceedings next month, and to examine the discussions which promoted the greatest interest. The influence which has been exerted upon the teachers to make so much of the selection of officers is said to be a pernicious influence, and one that has for years been antagonistic to everything in the way of solid improvement; and now that one of the

teachers has entered an open protest against that influence the whole history of the trouble will no doubt be exposed in time, and the teachers be led to breathe a purer air of independence of action in their co-operation. Dr. Harper uttered no uncertain sound in his inaugural address, and from time to time we will point out how these views are being endorsed and supported by the men who have evidently been living in the belief that it is the duty of every one, even of THE CANADA EDUCATIONAL MONTHLY, to defend or cover up every indiscretion they commit. In this connection, the report of the speeches of the Rev. E. J. Rexford and Mr. Truell, is especially instructive. If that report is correct, it would seem that Mr. Rexford's logic is of a remarkable kind. Mr. Hewton had asked if it was true that the teachers of the Province would have had another representative on the Central Council of Education, had it not been for the action of the members of that council who are supposed to be representatives of the teachers. Mr. Rexford, by way of reply, said that Mr. Truell had not defended him from certain aspersions made against him, and hence he had used his endeavors, with those associated with him on the Text-Book Committee, to bring about Mr. Truell's defeat as a candidate for the coveted place. When, however, Mr. Truell made his defence quite a different aspect appeared, so that now teachers and others can judge for themselves, and put the blame on the right person.

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Another remarkable discussion during one of the sessions was a criticism *pro* and *contra* the new text-book on Canadian history. The merits of that discussion will no doubt be made more manifest when the

teachers have had an opportunity of judging of the book, and it was a pity that Mr. Patterson should have seen fit to push the matter to a vote, the most ridiculous that perhaps was ever taken in the public assembly, in face of the fact that the teachers present had not even read the book, and that Mr. Patterson had to assume an apologetic tone when referring to the defects pointed out. At least this is the impression left after reading the newspaper reports of the discussion that took place on this subject.

The air, however, seems to have become quite excited, when Mr. Hewton made his charge about the unseemly conduct of certain men high in authority, who had led some of the headmasters of Montreal into the way of wrong doing, especially when he was challenged by Dr. Robins and others in very intemperate language, which no school boy would dare use towards another with impunity. We have heard that this matter is not likely to end with Mr. Hewton's protest, which we give verbatim as it appeared in the *Gazette* :

"I, Robert John Hewton, member of the Provincial Association of Protestant Teachers, a body politic and corporate of the Province of Quebec, and being duly qualified to vote for the election of officer of the said association, do hereby file the following protest in writing against any declaration of the election of officers made, or to be made by the president, or other officers whose duty it is to make such declaration, at the present convention of the Provincial Association of Protestant Teachers, and against all proceedings which have hitherto been taken by the said association in respect of such election; and in support of this protest I allege:—

"1. That, in violation of the constitution of this association, a number of ballots have been issued to mem-

bers of this association prior to the date of the annual convention.

"2. That some of the said ballots were marked prior to the time provided for by the constitution, and were subsequently deposited, thereby rendering null and void all proceedings in connection with the present election.

"3. That influence has been exerted by certain members of this association upon other members of the said association, under their authority, to determine the nature of their vote.

"4. That certain head teachers of public schools have held meetings of their subordinate teachers, members of this association, previous to the date of the present convention, and presented to the said subordinate teachers a prepared and printed ticket, and indicated the manner in which the said subordinate teachers should exercise their voting privileges, in connection with the present election of officers of the Provincial Association of Protestant Teachers."

Notwithstanding some of these features of the convention just hinted at, it seems to have been brought through its work with the well known tact of the chairman to a successful closing scene, which is thus reported :

"The incoming officers were then presented by Dr. Harper, who, on retiring from the chair, said that he was pleased to see such a large number present at the closing meeting of the convention. He was proud personally to be able to say that this perhaps had been one of the most successful, if not the most successful conventions that had been held in the history of the association. It had certainly been the largest, and when they contemplated the pleasant experience they had had the evening before at McGill, he thought, notwithstanding the various little bits of

fireworks that had been exhibited, that good fellowship prevailed and that good fellowship would continue. He spoke in a complimentary way of the character of the papers that had been read before the convention. They were of a practical and instructive nature, drawn from the personal experience of those who prepared them, and it seemed that every sentence in those papers came directly from the minds and hearts and souls of those who read them. He had to thank them all for the kindness exhibited towards him, as chairman. Unfortunately the chairman was obliged to assert himself sometimes. He could not always escape the necessity of exerting the authority of his position to cover up a difficulty. With perhaps one exception, he had been supported throughout in his movements, and he thanked them heartily for that support, and would bespeak the same kind consideration for the gentleman who was to take his place."

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### ASTRONOMICAL NOTES.

NOVEMBER.

THOMAS LINDSAY.

**O**BSERVERS of the heavens interested in planetary work, have not, during the past summer, been at all fortunate, there having been, so to speak, a dearth of planets in the evening skies. And for some little time yet it is in the early morning that the amateur may show his enthusiasm; lacking that, he will probably not observe at all. From August to October Jupiter was either lost in the sun's rays, or but feebly visible, and the satellites quite too faint for observation. But he presents his beautiful disc now before sunrise, reaching the meridian about 8 o'clock, and is well worthy of observation. His position on the celestial equator is among the

stars of Virgo, and on the morning of Nov. 15th the planet will be in the same field of view in the telescope with Eta Virginis, a 4th mag. star. It may aid the observer to note that the four satellites will be on the west side of the planet and the star west and a little north of the more or less straight line running through the system, the whole forming a very pretty telescopic field.

For Mars we need not look at all; the little fiery planet is directly in the sun's rays and quite harmless to evoke a renewal of the discussion on the origin of his surface markings, for this year at least. In connection with this, we are reminded of the peculiar argument given by Mr. Percival Lowell in support of his views. He says the lines on Mars "look" artificial. It may not be strictly scientific, but we can all understand how he might become impressed in this way if his telescope does really give the exquisite definition credited to it.

Saturn is, like Mars, close to the sun and invisible. It is some little compensation, however, to know that when he does pass round to the position of morning star the ring will be more broadly opened out than it has been for years past. Recently published reductions of measures made by Prof. Barnard, at Lick Observatory, seem to decidedly negative the theory at one time advanced, that the rings were slowly drawing in upon the planet; the delicate micrometer thus supports mathematics in the demonstration of the stability of the Saturnian system.

Venus still shines beautifully in the morning sky, but is waning in lustre as she passes away from us in that part of her orbit concave to the earth. The crescent form of the planet is now almost lost, and the disc appears in the telescope nearly circular.

Mercury is as disappointing as the

others during November, except that he makes a third planet in close conjunction with the sun in one month.

When the planets are not favorably situated, the amateur turns to the ever beautiful moon and the countless objects of interest in the sidereal heavens. During November we have several occultations of stars by the moon, and one especially noteworthy. This is an occultation of the Pleiades group on the morning of November 10th, between 4 and 5 o'clock. In this case the brightest of the cluster, Alcyone, is right in the moon's path. The moon is then past the full, so that the bright edge occults the stars; but there will be no difficulty in seeing the latter with the ordinary

two-inch telescope. These observations are always interesting, while to render them valuable it is only necessary to be accurate in noting the times of immersion and emersion. If this be done, any of the great observatories will gladly receive reports of the work. As winter comes on we welcome the ever beautiful Orion in the evening skies. The great nebula, photographed by all the skilled workers in this line, presents yet a very rich field for the artist with the pencil. An exquisite drawing of the nebula was recently shown at a meeting of the Astronomical Society, made with a hard black lead. It is by attempting such work that the amateur becomes thoroughly familiar with objects of this class.

## SCHOOL WORK.

### SCIENCE.

Editor—J. B. TURNER, B.A.

The following are the papers in Physics, assigned at the Midsummer Examinations of 1897:—

#### THE HIGH SCHOOL AND UNIVERSITY EXAMINATIONS.

##### FORM III.—PHYSICS.

Examiners: { J. FOWLER, M.A.  
A. MCGILL, B.A.  
J. C. MCLENNAN, B.A.

1. (a) Explain the terms: *magnetic field*, *line of force*, *inclination*, *declination*.

(b) Describe, with diagrams, the magnetic field produced by an electric current when the conductor is (i) a straight wire, (ii) a circular wire, (iii) a solenoid.

2. Explain the effect on the current from a battery of (a) the size of the plates, (b) the distance between the plates, (c) the number of cells in series, (d) the number of cells in multiple.

3. State the laws according to which electric currents are produced by variations in the magnetic field, and show how each law may be verified by experiment.

4. Find the *wave lengths* in air corresponding to the notes of a major chord, the vibration-number of the fundamental note being 512, and the velocity of sound being 1,100 feet per second.

5. Explain the method of studying sound-waves in air by means of manometric flames. Show clearly how the flame-picture is produced.

6. Explain the terms *node and loop* as used in Acoustics. How would you demonstrate the existence of

nodes and loops in (a) a vibrating string, (b) a vibrating column of air?

7. Explain, with diagrams, how you would determine whether a mirror which you cannot touch, but in which you can see objects reflected, be plane, concave, or convex.

8. Make drawings to show the action of a convex lens when used (a) as a simple microscope, (b) for projection purposes.

9. What is a spectrum? What apparatus do you require, and how would you arrange it, to produce a pure spectrum from a gas flame? Make a diagram showing the path of the rays.

FORM IV.

1. (a) Show how to find, graphically or otherwise, the resultant of a number of forces acting at a point.

(b) Two forces, acting at right angles on a particle, are balanced by a third force making an angle of  $120^\circ$  with one of them. The greater of the two forces being 4 pds., what must be the values of the others?

2. A stone, *A*, is thrown vertically upwards from a high bridge with a velocity of 96 feet per second; find how high it will rise. After 4 seconds from the projection of *A* another stone, *B*, is let fall from the same point. How many seconds will elapse before *A* overtakes *B*?

3. Water is poured into a U tube, the limbs of which are 12 inches long, until they are half full. Oil (Sp. Gr. = 0.9) is then poured into one of the limbs to a depth of 4 inches. As much alcohol (Sp. Gr. = 0.8) as possible is then poured on top of the oil. What length of the tube will the alcohol occupy?

4. A piece of iron (Sp. Gr. = 7.2) is

covered with wax (Sp. Gr. = 0.96) and the whole just floats in water, the weight of the combined mass being 36 grams. Find the weight of the iron and the wax respectively.

5. Describe two methods of finding the resistance of a copper wire, explaining the principle of the measuring instrument used in each case.

6. (a) Describe any simple voltaic cell, explaining the formation of that which is called the *current*.

(b) Describe a series of experiments which show that the E. M. F. of a cell does not depend upon the dimensions of the cell but upon the materials used in its construction.

7. (a) Explain the acoustical phenomenon of *interference*.

(b) How would you exhibit this phenomenon by means of an ordinary tuning fork?

(c) Describe fully another method of exhibiting *interference*.

8. (a) Describe how the air vibrates in an open and in a closed organ pipe.

(b) An open organ pipe, 2 feet in length, when excited, emits the note  $C_1$  of the diatonic scale. Find the length of a closed organ pipe which will emit the note  $G_1$  of the same scale.

9. If the index of refraction for a ray of light passing from air to glass is  $\frac{3}{2}$  and from air to water  $\frac{4}{3}$ , show graphically that the index of refraction for a ray passing from *glass* to *water* is  $\frac{3}{4}$ .

10. A convex lens of focal length  $f$  is placed at a distance  $4f$  in front of a concave mirror of radius  $f$ , and an object is placed half-way between the two. Make a diagram to show the positions of the images formed by refraction through the lens (a) direct-

ly and (b) after one reflection at the mirror. Also compare the magnitudes of these images.

### NORMAL COLLEGE NOTES.

On Friday, Oct. 1st, the new Normal College, at Hamilton, was formally opened by the Hon. G. W. Ross. The opening lecture was given on the following Monday, at which nearly 200 students were in attendance.

The number of students at present is 205, comprising 115 ladies and 90 men. Of these about 80 are graduates or undergraduates, the remainder being 1st class candidates.

The large attendance this year is partly accounted for by the number of Hamilton students present, and by the fact that many of the students wish to come in under the old regulations, which do not require them to take Latin.

A Literary and Scientific Society has been formed with the following officers: Hon. Presidents, J. A. McLellan, LL.D., R. A. Thompson, B.A.; Patron, J. J. Mason, Chairman of the Collegiate Institute Board; President, C. E. Race, B.A.; 1st Vice-Pres., Miss E. R. McMichael, B.A.; Treasurer, G. F. Colling, B.A.;

Corresponding Secretary, Miss J. P. Brown, B.A.

The first regular meeting was held on the 22nd inst., when addresses were given by Mr. R. Thompson and Dr. McLellan, the latter selecting as his topic "Thoughts on Literature." A vote of thanks was passed to the Hon. G. W. Ross, for providing a piano for the use of the society. Piano solos were interspersed during the proceedings.

In the first weeks of the term, no less than five receptions were tendered the students by the different churches of the city.

Athletics are booming at present. The ladies have formed an Athletic Association. Basket-ball is practised twice a week in the gymnasium behind screened windows.

The male students of the Collegiate and the College have combined to form an Athletic Association. Hon. Pres., Hon. G. W. Ross; Pres., J. T. Crawford, B.A.

A football team has been entered in the contest for the Spectator Challenge Cup. The Y.M.C.A. grounds are used for practice. Basket-ball is indulged in daily on the grounds in front of the Collegiate.

Dr. McCabe has been appointed lecturer in sanitary science hygiene.

### CORRESPONDENCE.

#### MINISTERIAL EDUCATION.

BY WM. MORTIMER CLARK, M.A.  
Q.C.

Chairman of the Board of Management of Knox College.

**T**HE beginning of a new session of Knox College under its strengthened theological faculty, has led many of the friends of the institu-

tion to consider whether some improvement might not be made in the literary culture of the students, before they enter on the special work of the seminary. It is felt that, while the raising of the standard in theology is a step in the right direction, and is gratifying to all interested in the welfare of the College, yet the benefit to be derived from the more complete equipment of the theological faculty,

and the efforts of the professors to impart a more thorough training in the various departments of ministerial education, will be greatly minimized and hampered by the continued importation into the theological classes of men without sufficient previous literary training and culture. While the Canadian Church was in its infancy, and the means provided for obtaining an adequate literary education were wanting or surrounded by ecclesiastical or financial restrictions, which almost precluded students from obtaining the higher education of the period, and while more men were urgently required for home mission work than could be found, the Church was obliged to accept the services of such students as presented themselves, and to provide for them such educational advantages, through the preparatory course, as circumstances then permitted. This condition of affairs is entirely changed. Higher education is now within the reach of all, and can be obtained in our university at a cost almost nominal; and while in the past, ministers could not be found in sufficient numbers to supply the needs of the Church, now men are more numerous than charges.

Under these circumstances it becomes a grave question whether the Church is called on any longer to furnish at a large expense a gratuitous literary education to aspirants for the ministry, and to divert money given for theological education to foster and perpetuate a system which affords a primary education confessedly inadequate. The maintenance of the preparatory course in fact holds out a premium to superficiality, and opens a side door for entrance into a profession which requires in these times imperatively the highest culture. The policy of the Church in this respect is in painful contrast to that of the governing bodies of the legal and

medical professions, and indeed of all educational institutions, and so much is this noticed that prominent laymen have declined to subscribe to the funds of the College while the preparatory course is continued. It is not surprising that under the present system of clerical education so many complaints are heard of the inadequacy of ministerial support. Congregations are not slow to realize that, if the education of a minister is indifferent, and has cost him little or nothing, he cannot expect a liberal remuneration for his services. In the Church of England of late years an increasing number of candidates for the ministry have obtained ordination without having previously had a university education. These men are known in England as "Literates," and the large increase of such has naturally reduced the already meagre rate of ministerial remuneration. The Presbyterian Church in England being fully alive to the defects of the past system, has been using every effort to raise the standard of the culture of students, and with a view to improvement has removed its divinity hall to Cambridge.

It has been said, in answer to suggestions previously made as to the abolition of the preparatory course, that if students were required to take a university degree it would extend the time required to be spent by them in study. This, doubtless, is the case, but it would only enlarge the period for one year longer than at present. If the student looks to the ministry for a *living* this is unquestionably a weighty argument with him; but if a young man has the high ideal before him of his sacred calling, the anxiety to equip himself for his life work will outweigh all such unworthy considerations. It has also been argued that if a university degree were demanded before students entered the theological classes at

Knox College, many would seek their education in other institutions. The loss would not only not be serious, but would be eminently advantageous to the College and the Church. The Church would be benefited by receiving a larger number of educated ministers, for it would be found that students would hesitate to deliberately seek their education at institutions where the education would be notoriously inferior to that of the students of Knox College. Congregations would specially note the fact in selecting pastors. The College would itself acquire a reputation and a standing which would attract the very best students to its halls. The college which will have the courage to insist upon the possession of a degree in Arts from every student who seeks admission to its theological course will be the one which will specially command the respect and liberality of congregations.

It has been further said that, were the College to insist on a university degree being first obtained before students are received, it would be a limitation on the operation of the Holy Spirit. This argument, which is somewhat questionable, appears to pre-suppose, to some extent at least, that the Spirit is more active in His energy among the "Literates" than among the university men. So far as

human observation can permit of any judgment being formed on this subject, it has not been borne out by experience. It must be remembered also that the Church needs educated ministers, and that the Spirit does not provide or promise the needful literary training. It is certainly true that the Spirit of God works when and where He pleases, but His gracious operations, it must be remembered, are extended to multitudes who are utterly unfit for the public ministry of the Word. He certainly does not encourage superficiality in training for the ministry, or the desire on the part of students to get into the Church with the least possible quantum of education. Those who complain that the rule contemplated would preclude persons who are desirous of abandoning their business, and late in life studying for the Church, from entering the ministry, might peruse with profit the words of the Apostle Paul in I. Corinthians vii. 20, where he says: "Let every man abide in the same calling wherein he was called."—*Westminster*.

[In the above communication, Mr. Clark deals with a question affecting all branches of the Church, and it is high time for all of them to take concerted action in the matter. Perhaps the Presbyterian Church can show the way.—ED. C. E. M.]

## CONTEMPORARY LITERATURE.

The anniversary number of *The Atlantic Monthly* is truly a notable one. The opening article by James Lane Allan is on the two great principles in fiction, that is, as he characterizes them, the masculine and the feminine. No one can deny that there is much truth in what he says, but on the other hand facts can be quoted to support almost any literary theory. Kipling's "Recessional

Hymn" is an instance in Mr. Allan's judgment of the union of both principles. "Caleb West," a new serial by Hopkinson Smith, opens with great promise. There is a healthiness and a vigor about his portrayal of character that will attract liking from any straightforward mind. No one who has been in Edinburgh should miss "Penelope's Progress," there conducted by Kate Douglas Wiggin.

It would be hard to say which is the more interesting, John C. Van Dyke's article on "Sir Joshua Reynolds" or Joseph Pennell's on "The Art of Charles Keene" in the October *Century*. But before one has been enabled to discriminate, another choice of interest is given us; here the judgment is exercised between Theodore Roosevelt's "Account of the New York Police Force" and "Marie-Antoinette as Dauphin," by Anna L. Bicknell. Add to these that in the same number "Hugh Wynne," and "The Days of Jeanne D'Arc" are both fitly concluded, and one may have an idea of the worth of the last issue of *The Century*.

"Miss Lillian Bell's Adventures in the Old Country" promise to be most entertaining reading. They are begun in the October number of *The Ladies' Home Journal* and are to be continued for some time. The writer is so sprightly and so keen in her attacks on the world in general that our filial anxiety is already aroused for our distinguished progenitors who may possibly be misunderstood by so swift a lady, but the process of dissection is sure to be vastly amusing.

If the *Review of Reviews* has done nothing more, it certainly has contributed to the better understanding of the great general principles that underlie caricature. Here month by month one may see what the outside world thinks of some other part that we are interested in, and a monstrous thinking it generally is. The force of caricature has always been a curious one.

*The Book-Buyer* for October contains an interesting and appreciative sketch of Henry McCarter, the illustrator, along with fine reproductions of some of his most successful work. He succeeds to an extraordinary de-

gree in conveying the romantic and mystical atmosphere, more especially of the poems which he illustrates.

From the American Book Company, New York: "Third Year in French," by L. C. Syms; "Physics for Grammar Schools," by Charles L. Harrington; "The Student's Manual of Physics," by L. C. Cooley; "A Study of English Words," by Jessie Macmillan Anderson; "The American Word Book," by Calvin Patterson; "The Story of Japan," by R. Van Bergen; "Natural Elementary Geography," by Jacques W. Redway; "The Advanced Music Reader," by F. H. Ripley and T. Tapper.

We have also received from Ginn & Company "Exercises in Greek Composition," by Edwin H. Higley; eight books of "Homer's Odyssey," for the use of schools, by Bernadotte Perrin and Thomas Day Seymour; and "An Introductory Course in Quantitative Chemical Analysis," by Percy Norton Evans.

"The Mineral Wealth of Canada: a Guide for Students of Economic Geology." By Arthur B. Willmott, M.A. B., Sc. William Briggs, Toronto.

A more opportune time for the appearance of this book could not have been chosen so far as the interest of the general public is concerned. The author, who is the Natural Science Professor in McMaster University, has for some years been giving to his class in geology a short course on this subject, and the present production comprises these lectures, together with explanatory passages for the use of readers who are not acquainted with the elements of geology. The work has been founded largely on the reports of the Geological Survey of Canada, an enterprise which is not sufficiently recognized by the Canadian public.