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THE CANADA
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FEBRUARY, 1894.

NOTES ON NUMBER AND NUMBER TEACHING.

BY PROF. JAMES A. MCLELLAN, M.A., LL.D., TORONTO.

THERE can be little doubt that the conflicting opinions which prevail upon primary number teaching and methods in advanced arithmetic are, in the main, due to misconceptions regarding the nature of number. To the same cause (*see* Nov. number CANADA EDUCATIONAL MONTHLY) may be attributed the absurdities in both matter and method which are put forth under the sanction of certain noted American educators, and which are not without a mischievous influence on Canadian teachers and teaching. Teachers and professors in prominent positions persistently maintain that the quotient in a division operation is equal to the dividend; that it is always a concrete number—that the divisor can never be abstract—that a “fraction” never represents division—that the denominator of a fraction “is not a number but simply a *namer*,” etc., etc.; and on the side of method we hear it asserted by many of the leaders of the new education, or upon their authority, that six months or a year should be given to the teaching of the number five—that

one year or even two years should be devoted to the number ten—that much drill should be had “upon the number one by means of interesting exercises,” etc., etc. Under these circumstances it seems desirable to make some enquiries as to what number and numerical properties really are as psychological facts. It seems quite plain that in order to help a child to think number, the instructor should know how number is thought. If number as learned by the child is the result of a thought-process, then clearly the teacher should be familiar with this process—with the way in which the idea of number is constructed in order to make his method helpful to the normal movement of the child’s mind. A full discussion of this topic will appear in due season; meanwhile the following notes, given by way of suggestion, may not be out of place.

NUMBER, A MENTAL CONSTRUCTION.

Number is not a *thing* any more than the perception of a colour or of a sound is a thing. Nor can it be

said to be a property of things any more than the sensations as psychical experiences are properties of the external things which occasion them. In the case of the simplest sensation there is action of the brain and sense organ. The child does something with the brain and sense organs. The results of the higher mental processes are still farther removed from things. A mind has a capacity for sensations ; and a thing has a capacity for occasioning sensations. But these sensations are neither knowledge nor things. They are raw materials which, under certain mental processes, become products ; which products, again, are neither things nor properties of things. Number is, we may well believe, no exception to this law. It is a process and a product of mental action ; it is due to the separating and combining energy of mind ; that is, to analysis-synthesis, which is the essential feature of all psychical operations.

In primary number work we, indeed, have the child use things, and perform actions with things, to enable him to see relations of things, in order to help him at last to see the mental relations which make number. But neither the things nor the physical acts with things are numbers. A child may form a group of, say, twelve things by three physical acts : he puts down a first group of four things, then a second group of four things, and finally a third group of four things. But no one will say that these physical acts are the idea twelve. The physical processes of separating and uniting are employed as auxiliary to the psychical processes. The physical whole-twelve things is a UNITY, which the child breaks up into parts, and which he re-makes by putting the parts together again. He is led to perform these operations in such a way as to see the relations of the parts to one another, and to the whole. And so, by the repetition of such acts,

the clear seeing of the relations of the things leads finally to the process of *mentally* relating through which number is constituted. That is, the operations with things, their separation and re-combination, conduces to the mental process of analysis-synthesis, the thinking of a whole as made up of parts, and of the parts as making up the whole. The sentence four dollars taken three *times* makes twelve dollars may, indeed, describe the physical act. But this act is simply a means to the mental process ; and it is this mental process and its products that the sentence properly expresses. In other words, the three *times* means that in forming the idea of twelve, as made up of *three* equal units, there are three related mental acts, dealing with a first four, a second four, a third four. making the three fours which compose the whole. This is exactly what the mind does in forming the idea of *three* with reference to any unit whatever. The kind, a magnitude of the unit of reference, does not affect the mental operation. This is the idea of *times* in number : it is, of course, abstract and is a psychological necessity to every idea of number as a measure of magnitude. For, as Prof. Dewey says : " If, for example, a child when he gets to four (in counting objects) does not carry in his mind his previous acts of counting one, two, three, the object would not be the *fourth*, as order, and hence not *four* as sum ; but simply another independent unity. '*Times*' denotes simply the act of mind in taking things, not as severally independent, but kept together (mental synthesis) as parts of one whole."

ABSTRACT TO CONCRETE.

But while teachers should be on their guard against making too much of the concrete, they must be on the alert against the barren manipulation of symbols. Thus, some of our phil-

osophers of method maintain that $\$12 \div \4 gives *not* the mental conception of *times (three)*, but a thing, *viz.*, "three, four dollars." Others tell us that $\$12 \div 3$ demands an "impossible operation," because 3 cannot be taken from $\$12$, but that $12 \div 3$ (*abstract* numbers) is a perfectly feasible and valid operation, "because we have $12 - 3 = 9$, $9 - 3 = 6$, etc." But if, as Kant long ago pointed out, the mere thought of the union of the numbers 5 and 4 does *not* give the conception of their sum, we clearly may conclude that the mere thought of the division of 12 by 3 does not give the conception of the quotient four. The relations involved in this operation must be supplied first of all by *intentions—i.e.*, by acts with things. And so we have to ask what are the intentions, the preliminary acts with things, that lead to the *conception* of these relations? Of course in division, as well as in all other mathematical operations, we work with the pure number symbols, and at last make the necessary concrete applications, *i.e.*, *interpret* the results. But these symbols must have definite meanings to begin with. Not only so. These symbols and the operations in which they are involved in any problem, *must be capable of interpretation at any and every step*. When, therefore, I am told that $\$12 \div 3$ is impossible; but $12 \div 3$ is easy and valid, because $12 - 3 = 9$, $9 - 3 = 6$, etc., I am not satisfied. I demand an interpretation of these steps. I must have a concrete illustration of this abstraction. What do these subtractions mean? And if no interpretation is forthcoming, I protest against the substitution of empty abstractions and sounding symbols, for clear and definite ideas. Some begin with things—the concrete—and stay there; others begin with the abstract—empty symbols—and stay there. The true way is from the

concrete (things) to the abstract, and from the abstract back again to the concrete. The individual, the concrete, without the general—the abstract—gives not true knowledge; the general without a rich filling of the concrete is but an empty name.

A DIVISION FALLACY.

This brings me to notice the assertion criticized in the November article, *viz.*: that the divisor can never be an abstract number. It was shown in that article, that the divisor may be an abstract number, and that every step of the operation in such division is capable of a common-sense explanation. One vice of primary number teaching is to exalt things at the expense of thought; another is that the "methods" have little or no *continuity* with the child's already acquired experiences; they do not bring into clear and definite consciousness what the child has long been unconsciously doing for himself. When a philosopher tells us, *e.g.*, that $\$12 \div 3$ is impossible, and that the problem can be solved only by using *abstract* numbers, he violates this principle of continuity. He makes the abstract precede the concrete, he implicitly teaches that the child cannot distribute twelve things into three equal groups, till he has been taught the process of abstract division! But the child has actually done the thing again and again. He does as the savage does, and as the race did before number symbols were invented. His practical solution of the problem, implicitly involving certain thought relations, prepares him for the arithmetical solution in which the thought relations become explicit; *prepares* him—that is, if the things that that nature and natural education have joined together are not put asunder by the arbitrary decree of the empiricist. A child, *e.g.*, is required to distribute a *whole* of things into

three equal groups; what does he do? He places *one* thing in each of *three* places, then another of the things in each of these three places, and so on till *all* the things are distributed. That is, he takes *one* of the things three *times*, then another of them three *times*, and so on. Finally, he counts the number of things in one of the equal groups, and his problem is solved. The example of division by an abstract divisor (*see* Nov. number CANADA EDUCATIONAL MONTHLY, p. 330) exactly represents the symbols the "taling" operations by which the child distributes his things into a number of equal groups; and, it may be added, the examples there given are typical, both in thought-process, and symbol-process, of all ordinary operations in division. It may be added, further, that the symbols and operations in elementary mathematics should not be inconsistent with what the student is to meet with in his subsequent course. Nature makes no leaps; neither should science. We have then $\$4 \times 3 = \12 , and therefore $\$12 \div \$4 = 3$, an easy and perfectly valid operation. But $\$12 \div 4$, the other inverse of the multiplication, is alleged to be a meaningless and impossible operation, having, of course, no relation with the former. But the student is soon to learn that $a \times b = c$, and that, therefore, $c \div a = b$; and also $c \div b = a$; both inverses intelligible, both valid, both necessary, both universal; or all mathematical reasoning is fallacious, and mathematical science a delusion.

UNITY AND UNIT.

The fact that number as conceived by the mind is the result of the fundamental activity, analysis-synthesis, which breaks up a whole into parts relates these parts, and re-combines them into the whole, is the basis of all right method of instruction in number; and to ignorance or neglect

of this law of mental construction, may be ascribed the numerous errors and inconsistencies in both principles and practice, to some of which reference has been made. As "a good beginning is the half of all"—especially in educational work—we may well ask, what shall be our starting point in primary number teaching? Beginning, of course, with objects, what number of objects shall we begin with? With *one* thing, an entity in itself, a fixed unit, as Grube and a host of followers do? Or, with a group of things a *whole composed of parts*, as sound psychology suggests? A simple question, yet a very important one, since upon it hangs the distinction between good method and bad, between a method which aids, and a method which thwarts the normal action of the mind. Analysis is the law under which the child's mind *must* work. What is the result of its working upon a single thing, a *one* presented as some fixed "unit"? If there is, in this case, any analytic activity at all, it must be in the discrimination of *qualities* which make the thing, the individual, what it is. The activity cannot be in the *relating* process, which is the very essence of the conception of number. There are no objects to relate; there is no integer or unity to be broken into parts and again reproduced from the parts. According to the normal action of the child's mind the single thing is a *unity*, but not a *unit*. That is, it has certain qualities which make it what it is; which give it *unity* of meaning; but it has *not* that *relation* to others of its kind which alone makes it a *unit*. The child has been making *unities*—in every act of attention—long before he begins the study of numbers; but he has *not* been conceiving *units*. To conceive of a banana as a *unity* is simply to discriminate and unify its qualities; to conceive it as a *unit* to think it in its relation to a number of

similar things making up a larger unity. Ignorance or neglect of this primary distinction will vitiate the whole course of instruction in arithmetic. To quote Professor Dewey : " This distinction between a unity and a unit may seem somewhat fine spun for practical purposes, yet I venture the remark that the conscious recognition of it, or the unconscious acting upon it, makes the difference between a right and a wrong method in beginning the study of number. According to the way the mind naturally works, every unit is always (from the synthetic standpoint) one *factor* of a qualitative whole, or (from the analytic standpoint) one *element* into which a whole is divided. Any true method of instruction will recognize this normal action of mind : the wrong method will set up an independent, fixed unit, and thus violate the law of mind." Yet we are told by a recent writer on number teaching that it is anything but folly " to spend much time on the number one—the child must *begin* the study of numbers and advance step by step, the *one* being assuredly the teaching, both primary and advanced.

first step. The development (!) of the number *one* forms ample opportunity for much drill, etc." Surely it is high time that something should be known about the psychology of number—the process by which the mind constructs its ideas of numbers—a the basis of a right method of number.

It may be worth while in a future article to develop these fundamental ideas somewhat more fully, and thence to show the absurdity of many of the current "maxims" in primary number teaching ; and to point out the factitious difficulties which inevitably follow in advanced work, as, for example, in the treatment of fractions. It can be shown, for example, that the rule which is practically followed by so many teachers, " Devote most of a year to the number five and most of two years to the number ten," violates the soundest principles of modern psychology ; and that the difficulties and "mysteries" connected with fractions, arise from an almost total misconception of the nature of number, and of the wrong methods to which such misconception gives rise.

THE CLAIMS OF CLASSICS.

BY PROF. G. A. H. FRASER.

(Continued from Oct., 1893.)

LONG before Matthew Arnold had made the phrase proverbial, Swift had said that " the two noblest things in the world are—sweetness and light," and long before Swift had formulated the truth the Greeks had lived it.

*Vos exemplaria Græca
Nocturna versate manu, versate diurna,*

said Horace, and the advice is as sound as when it was written. To no

other people in the world's history has so fine and delicate an artistic sense been given ; and the same ideal beauty which glows in their inimitable works of art animates their peerless literature.

The consummate finish of their workmanship is no more than equal to the eternal truth of their thoughts. The unstinting care with which the ancients elaborated their writings re-

sulted in a perfection which has endured as the ideal through every age; while the nobility of their ideas, their unsurpassed insight into character and their wonderful instinctive sense of beauty make them the indispensable implement of culture, and the invaluable corrective of the coarse or petty realism of modern days. Never was their influence more requisite than here and now. We need to be reminded that there are higher things in the world than the sordid and incessant pursuit of gain, and nobler things even than success.

It is greater far to present before men a taste formed upon the finest models of grace and simple elegance, and a character lofty and grand as the teachings and spirit which have inspired it.

Such things most of us can achieve only very partially; but it is the study of Classics which will most surely aid us to some degree of attainment. It is surely by familiarity with the most finished work ever elaborated by human genius that we are most likely to chasten and beautify our own style; it is surely by contact with the most elevated and symmetrical minds that the world has ever known that we will be best able to purify our emotions, ennoble our thoughts and add grace and dignity to our lives.

And if we believe this, we must turn where all the ages since have turned, to the Latin and Greek masterpieces, like their own god Phoebus Apollo, ever beautiful, ever young, to which might well be adapted the lines of Keats:

“When old age shall this generation waste
Ye shall remain in midst of other woe
Than ours, the friends of man to whom ye
say—
‘Beauty is truth, truth beauty, that is all
Ye know on earth, and all ye need to
know.’”

No statement, however imperfect, of the claims of Classics can afford to

omit the training they give in the social and intellectual *history* of the race.

“The Present is the vassal of the Past,” says Tennyson, and no sneer is more silly than that which disparages Classical men as dead to the activities of the present, and as groping among dead languages to learn dead facts about a dead world. The life and work of Greece and Rome permeate our modern life to an extent realized by few. The structure of our language is essentially Latin; of our vocabulary, a vast proportion is borrowed from Latin or Greek. Our principles of composition, rhetoric and poetry are theirs; the style of our greatest authors shows Classic influence in every line. Our sculpture entirely, our architecture in large measure are painfully remote imitations of Greek exemplars.

And more—our entire system of law is fathered by the Roman code, our forms of government are Classic, our philosophy of mind and of life is that propounded by the Greeks, and the vast mass of everyday ideas and axioms, the observance of which we term “common sense,” is in largest measure the sifted wheat from Classic garners, with which, in the form of daily bread, we are so familiar as to take no thought on what rich plains it grew, or on what threshing-floors it was laboriously winnowed.

An outline even as scanty as the above is enough to show how classical we are, and must be; and also to imply that if we wish to understand ourselves and the conditions of our life, it is to the Classics that we must resort for our information.

It is a commonplace to say that to estimate the present we must understand the past; it is equally a truism to observe, that while civilization progresses, the essential character of man remains unchanged. These facts, however, are worthy of more

than the careless acquiescence with which they are usually received.

Suppose, for example, we wish to estimate the character of some prominent public man. Any discriminating judgment upon his genius and work must be based, not merely upon what he is now, but upon what his surroundings and antecedents were. If we find him to have been gently nurtured and carefully educated, we understand his present courtesy and accomplishments. If we find him reared amid coarse and narrow surroundings, we shall be ready, in one case, to make allowance for some gruffness of address, or illiberality of view; or, in the other, to admire the nobility of character which has shaken off the trammels of early influence and risen superior to its old life. In either case, the only fair estimate of the man must be based as much upon what he was as what he is.

As with individuals, so with nations. Enough has been said as to our conditions to show how, consciously or unconsciously, we are confronted by Greece and Rome at every turn of modern life. If we are even to hope to understand our modern life, we must understand its antecedents, and its development under different influences; and to do this fairly, we must go to the fountain heads of Classic history. More than this, since man in his essential characteristics does not change, we meet in Greece and Rome the same types of character and examine the same forms of Government as those which demand our attention to-day. We may observe in Athens, the virtues and defects of an extreme democracy; in Sparta, an oligarchy, where the army was the great central point of national life. In Rome, we can watch the growth and decay of a magnificent republic, the calm progress of a beneficent despotism, or the cruelty and desperate internal convulsions, which at-

tended an unsound and tottering empire to its final catastrophe.

Thus we may learn the merits and defects of different types of character, the dangers which beset different forms of government, and the moderation and patient endurance which bring all things to the nation as well as to the man that waits.

And there is good reason why ancient, rather than recent, history best explains modern problems. To say nothing of the permeation of modern life by Classic influences and traditions, man was less artificial, civilization more simple, in ancient days.

There we meet all the most advanced questions which claim the attention of modern thinkers, education, slavery, woman's rights, socialism and all the rest, but we meet them in a less complicated form. The requirements of the problem are simpler; there are fewer non-essentials to be eliminated.

We see them, too, more clearly, unobscured by the mist of prejudice or the fog of complication; but the principles themselves are the same as those with which we have to deal to-day. It is the study of the Classics which leads us to a clear understanding of different social forces; such as we can never reach by the sole pursuit of modern history with its manifold complexities to befog the brain of the student, and its conflicting authorities to confound his judgment.

Time forbids the consideration, in this connection, of another noble study for which Classics are absolutely indispensable—the history of language. To trace the evolution or decay of different languages and the laws on which these changes depend is part of the history of civilization; and is thus most intimately connected with the highest of all sciences, Sociology, the science of human society,

its development and conditions. It is to Sociology, the science of man, as the grand and appropriate study of man, that every special line of work should tend; and it is the glory of Classics that they lead to that goal not by one path, but by many. The highway of history is one of the surest. All that hope finally to reach the end of the course must tread therein; but it is to those who traverse the road where it winds along the Ilissus and the Tiber that the gods have granted the widest and clearest view of the regions man has already passed, and the surest and farthest outlook over the land which still lies before him.

No essay on the advantages of Classics ever failed to leave the Classical man with the feeling that the half had not been told him. It might well seem, however, a Hamlet with the Prince left out, should it contain no reference to the crowning glory of classical culture, the training it affords in the philosophy of man and of human life.

"We are not born of stocks and stones," says Socrates; and with all deference to the noble study of science, it is not merely, or chiefly, of stocks and stones that we wish to learn.

And further, as the same philosopher in effect remarks, it is not of so much importance to our culture and our usefulness in life to know what kind of beast the hippalektryon, or the ichtyosaurus was, as to know what kind of beasts we ourselves are; for, he continues, to find out how to train these beasts aright is a subject of study which may not unprofitably claim a very considerable share of our attention.

Few arts nowadays are studied less, in proportion to their importance, than the art of living, an art which, in America especially, is little understood or practised.

A European professor remarked of American students that they lived as though there were only sixteen hours in their day, and as though they were in a continual state of excitement about it.

The typical American is in a hurry, in business, at table, in amusement. He has written his literature in a hurry, and is surprised that it is ephemeral. He insists on becoming rich in a hurry, and is indignant when his business enterprises end in ruin.

It is this undignified haste in life which ruins health, encourages superficiality in work and character, and prevents the rational enjoyment and the noble and unselfish conduct of life.

Now the ancients knew a more excellent way. "The endeavour of nature," says Aristotle, "is that men may not only be able to engage in business rightly, but also to spend their leisure nobly;" and this was the ideal of Greek and Roman.

They knew that as the Creator has given us faculties for enjoyment as well as for money getting, He probably intended us to use the one set with seemliness and decorum as well as the other; they have told in precept and shown in practice that the secret of comfort is, not to be over-careful of the things of this life; that happiness lies in the mean.

It would be as easy as it is superfluous to multiply similar maxims; or to dilate upon the gentlemanly leisure of the much abused Cyrenaic or Epicurean, or the dignified calm of the Stoic.

But it is their walk still more than their conversation that teaches how in life enjoyment and usefulness may be combined. Socrates and Sophocles, Horace and Cicero have shown us this so fully and so truly that subsequent writers have served up whole state dinners, composed solely of the crumbs which fell from these rich

men's tables. We may contemplate an Epictetus bearing suffering and privation with cheerful philosophy ; or an Olympian Pericles, calm and unruffled amid the rage of his erstwhile adoring fellow-citizens ; or a thousand other examples of noble or graceful living.

These, in their greatness, though not in their charm and distinction, may be paralleled elsewhere.

But it is in Greece alone that we find an entire national life permeated with simple refinement and tasteful culture. There we find wealth made an instrument of enjoyment and service, not of ostentation or ambition ; there we find honourable poverty gracefully borne and respectfully treated ; there we find good taste and *savoir vivre* in every rank of life.

It is the Classics, then, that can teach the half-forgotten art of living with dignity and refinement, and with gratification to ourselves and others. Nor is this an unworthy aim. Dryden's

" If the world be worth thy winning
Think, O think it worth enjoying"

is not necessarily the frivolous utterance of an idle voluptuary.

The fullest enjoyment of life necessarily presupposes that we obey the laws of nature, that we live with elegance and intelligence, and that we contribute to the happiness of others. Let us then follow in the footsteps of the Classic masters, where the centuries have preceded us.

There we may learn to avoid much that makes existence unlovely and unhappy ; and perchance, when we come to review our life at its close, we may have somewhat fewer regrets for misdirected activities and lost opportunities of pleasure and profit than generally fall to the lot of erring humanity

It is but a step from the conduct of life to ethics and philosophy in general, subjects which the ancient

Classic writers made peculiarly their own.

A man's first acquaintance with Greek philosophy is an epoch in his life. He may have met ethical ideas in the Greek dramatists ; but there they are interwoven with the story, and artistically subordinated to the human interest. But it is when he meets Plato or Aristotle, or even Cicero, that he finds how many more things there are in heaven and earth than were dreamt of in his philosophy.

There he has first to deal with pure abstract metaphysics : to investigate not merely belief, but the grounds for belief ; not merely principles of conduct, but the conflicts which arise between them, and the proportion of influence to be allowed to each in the formation of the ideal character.

He comes to know the faculties of the mind and their capabilities ; and in that very study exercises and strengthens in himself the perceptive, logical and moral powers which he is considering.

And he pursues these studies under the two most consummate masters the world has ever seen.

" Plato is philosophy, and philosophy Plato," says Emerson ; and again, " Out of Plato come all things which are still written and debated among men of thought."

And what Plato began, Aristotle completed—Aristotle whom, as Holmes wittily remarks, Europe took some centuries to learn, some generations to unlearn, and is now taking some fresh generations to learn over again.

It is under such masters and in such studies that we not only learn the processes by which man's reason works, but are led to apply that reason to the noblest objects of thought, to the contemplation of man, of the universe and of God that we learn to realize not merely our own powers, but also the purpose for which

they were given : and it is here that we find the highest and noblest ideal of life ever conceived by uninspired humanity.

"These studies alone," says Plato, "possess the power of elevating the noblest part of the soul, and advancing it towards the contemplation of that which is most excellent in the things which really exist."

What then is the conclusion of the whole matter?

Man's position in the world has been compared, not inaptly, to that of a person in a watch-tower which commands an extensive view in every direction.

There are many windows in the tower ; all, however, thickly encrusted with the grime of ignorance, which hard work only can remove. The man in the tower cannot clear all his windows ; he must choose some few which open upon the views he prefers.

He may, for example, let in the light through the French or the German window, and study some history, some poetry, and a monstrous number of novels.

Or, he may clear the window labelled "Science," from which he contemplates all manner of fowls of the air and four-footed beasts and creeping things—all, no doubt, very good.

Now what Classics claim to do for him is this. First, they train him to hard work, and thus enable him to clear his window thoroughly ; they sharpen his faculties so that he sees farther and more clearly, and judges aright of what he sees. Then they open before him not one, but many vistas ; all, however, converging upon one object, *man*. They show him processions of the illustrious dead, kings of men, shepherds of their people, and from the panorama of the past they elucidate the present and anticipate the future ; they present to

his vision the most perfect models of beauty and grace in literature, art and life, "thoughts that breathe and words that burn," characters as animate with life and beauty as the most incomparable creations of Grecian chisel, so that his own life insensibly grows more gracious and more ideal ; they reveal to him the workings of the human mind ; they show him the secret of a happy, a seemly, a profitable life ; they display the eternal principles of beauty and truth.

Is it wonderful, then, that for centuries the Classics have been known as the Humanities ; the studies which pre-eminently deal with man, and which alone completely educate the human being ?

The Classical man has no quarrel with the Modern Linguist or the Scientist. He gladly recognizes the usefulness and importance of their subjects. But when he is rudely assailed as the antiquated exponent of an exploded belief, and is imperatively required to admit that this or the other study is the be-all and the end-all of education, he may, perhaps, be pardoned if he lays aside his characteristic diffidence and maintains that the Humanities after all are the studies which give the broadest, most truly liberal education ; and that the highest science is that which teaches how to make life generous and noble.

"There is a certain education," says Aristotle in his Politics, "which our sons should receive, not as being practically useful, much less as indispensable, but as liberal and noble."

Classics are not indispensable, they are practically useful, but above all they are liberal and noble. If we hope to check the flood of gross and sordid materialism, if we hope to produce a grand and immortal literature, if we hope to develop characters so finished and complete

"That Nature might stand up
And say to all the world 'This was a man!'"

we will study the Classics, and always the Classics, and will turn away with a smile and a sigh from those who absurdly oppose their insignificant *ipse dixit* to the accumulated authority of two thousand years.

“ Old wood to burn, old wine to drink,
Old friends to trust, old books to read ”

is a maxim as true as it is ancient. Those who have read in the old books of the Classics have found them more satisfying than the new books of the French and German; those who have tasted the vintage of Latium and

Chios find the cup of science less exquisite in its aroma, less potent in its stimulus.

And while the true Classic will cheerfully grant the worth of many a subject of thought, mathematical, scientific or literary, besides his own, yet, when invited to abandon the time-tested wisdom of the ancients for the pretentious learning of the moderns, he will make an old adage serve his turn as he replies, “ No man having drunk old wine straightway desireth new; for he saith, ‘ The old is better.’ ”—*Colorado College.*

THE IMPERIAL IDEA.

BY MR. LECKY.

(Continued from last issue.)

IT has been suggested to me that I should on the present occasion say something about the methods by which this great Empire was built up, but it is obvious that in a short address like the present it is only possible to touch on so large a subject in the most superficial manner. Much is due to our insular position and our command of the sea which gave Englishmen, in the competition of nations, a peculiar power both of conquering and holding distant dependencies. Being precluded, perhaps quite as much by their position as by their desire, from throwing themselves, like most Continental nations, into a long course of European aggression, they have largely employed their redundant energies in exploring, conquering, civilizing, and governing distant and half-savage lands. They have found, like all other nations, that an empire planted amid the shifting sand of half-civilized and anarchical races is compelled for its own secur-

ity, and as a mere matter of policy, to extend its borders. The chapter of accidents—which has played a larger part in most human affairs than many very philosophical inquirers are inclined to admit—has counted for something. But, in addition to these things, there are certain general characteristics of English policy which have contributed very largely to the success of the Empire. It has been the habit of most nations to regulate colonial government in all their details according to the best metropolitan ideas, and to surround them with a network of restrictions. England has in general pursued a different course. Partly on system, but partly also, I think, from neglect, she has always allowed an unusual latitude to local knowledge and to local wishes. She has endeavoured to secure wherever her power extends life and property, and contract and personal freedom, in these latter days, religious liberty; but for the rest she has meddled

very little ; she has allowed her settlements to develop much as they please, and has given a wide latitude to her governors. It is astonishing, in the history of the British Empire, how large a part of its greatness is due to the independent action of individual adventurers, or groups of emigrants, or commercial companies, almost wholly unassisted and uncontrolled by the Government at home. An empire formed by such methods is not likely to exhibit much symmetry and unity of plan, but it is certain to be pervaded in an unusual degree, in all its parts, by a spirit of enterprise and self-reliance ; it will probably be peculiarly fertile in men not only of energy but of resource, capable of dealing with strange conditions and unforeseen exigencies. England in the past periods of her history has on the whole been singularly successful in adapting her different administrations to widely different national circumstances and characters, and Governments of the most various types have arisen under her rule. Nothing in the history of the world is more wonderful than that under the flag of these two little islands there should have grown up the greatest and most beneficent despotism in the world, comprising nearly 230 millions of inhabitants under direct British rule, and more than 50 millions under British Protectorates ; while at the same time British colonies and settlements that are scattered throughout the globe number not less than 56 distinct subordinate Governments. This system would have been less successful if it had not been for two important facts. The original stuff of which our Colonial Empire was formed was singularly good. Some of the most important of our colonies were founded in the days of religious war, and the early settlers consisted largely of religious refugees, a class of men who are usually superior to

the average of men in intellectual and industrial qualities, and are nearly always greatly superior to them in strength of conviction and in those high moral qualities which play so great a part in the well being of nations. Besides this in those distant days the difficulties of emigration were so great that they were rarely voluntarily encountered except by men of much more than average courage, enterprise, and resource. These early adventurers were certainly often of no saintly type, but they were largely endowed with the robuster qualities that are most needed for grappling with new circumstances and carving out the empires of the future. The second fact is the high standard of patriotism and honour which we may, I think, truly say has nearly always prevailed among English public servants. It is not an easy thing to secure honest and faithful administration in remote countries, far from the supervision and practical control of the central Government. I think we may boast with truth that England has attained this end, not indeed perfectly, but at least to a greater degree than most other nations. The history of Indian and colonial Governors has never been written as a whole, but it is well worthy of study. In the appointment of these men party has always counted for something, and family has counted for something, but these have never been the only considerations, and on the whole I believe it will be found, if we consider the three elements of character, capacity, and experience, that our Indian and Colonial Governors represent a higher level of ruling qualities than has been attained by any line of hereditary sovereigns or by any line of elected Presidents.

In the period of the foundation of our Indian Empire much was done that was violent and rapacious, but the best modern research seems to show that the picture which a few

years ago was generally accepted had been greatly overcharged. The history of Warren Hastings and his companions has been recently studied with great knowledge and ability, and with the result that the more serious opinions on the subject have been considerably modified. Much exaggeration undoubtedly grew up in the last century, partly through ignorance of Oriental affairs, and partly also through the eloquence of Burke. There is no figure in English political history for which I at least entertain a greater reverence than Edmund Burke. I believe him to have been a man of transparent honesty, as well as of transcendent genius, but his politics were too apt to be steeped in passion, and he was often carried away by the irresistible force of his own imagination and feelings. Misrepresentations were greatly consolidated by the *Indian History* of James Mill which was for a long time the main, and, indeed, almost the only source from which Englishmen obtained their knowledge of Indian history. It was written, as might be expected, with the strongest bias of hostility to the English in India, yet I suspect that many superficial readers imagined that a history which was so unquestionably dull must be at least impartial and philosophical. Unfortunately Macaulay relied greatly on it and without having made any serious independent studies on the subject, he invested some of its misrepresentations with all the splendour of his eloquence. I believe all competent authorities are now agreed that his essay on Warren Hastings, though it is one of the most brilliant of his writings, is also one of the most seriously misleading. I am not prepared to say that the reaction of opinion produced by the new school of Indian historians has not been sometimes carried too far; but these writers have certainly dispelled much

exaggeration and some positive falsehood. They have shown that, although under circumstances of extreme difficulty and extraordinary temptation some very bad things were done by Englishmen in India, these things were neither as numerous nor as grave as has been alleged.

On the whole, too, it may be truly said that English colonial policy in its broad lines has to a remarkable degree avoided grave errors. The chief exception is to be found in the series of mistakes which produced the American Revolution and ended in the loss of our chief American colonies. Yet even in this instance it is, I believe, coming to be perceived that there is much more to be said for the English case than the historians of the last generation were apt to imagine. In imposing commercial restrictions on the colonies we merely acted upon ideas that were then almost universally received, and our commercial code was on the whole less illiberal than that of other nations. This has been clearly shown by more than one writer on our side of the Atlantic, but the subject has never been treated with more exhaustive knowledge and more perfect impartiality than by an American writer—Mr. George Beer—whose work on the commercial policy of England has recently been published by Columbia College, in New York. No one will now altogether defend Grenville's policy taxing America by the Imperial Parliament, but it ought not to be forgotten that it was expressly provided that every farthing of this taxation was to be expended in America and devoted to colonial defence. England had just terminated a great war, which, by expelling the French from Canada had been of inestimable advantage to her colonies, but which had left the mother country almost crushed by debt. All that Grenville desired was that the Ameri-

can colonies should provide a portion of the cost of their own defence, as our great colonies are doing at the present time, and he only resorted to Imperial taxation because he despaired of achieving this end by any other means. The step which he took was no doubt a false one; as is so often the case in England. It was made worse by party changes and by party nominations, and many later mistakes aggravated and embittered the original dispute; but I think an impartial reader of this melancholy chapter of English history will come to the conclusion that these mistakes were by no means all on one side. It is impossible, however, to review the colonial history of England without being struck with the many serious dangers that might easily have shattered the Empire which were averted by wise statesmanship and timely concession. There was the question of the criminal population which we once transported to Australia. In the early stage of the colony, when the population was very sparse and the need for labour very imperative, this was not regarded as in any degree a grievance; but the time came when it became a grievance of the gravest kind, and the Imperial power had then the wisdom to abandon it. There was the question of the different and hostile religious bodies existing in different portions of the Empire, at a time when the monopoly of political power by the members of a single established Church was cherished as a kind of religious duty to politicians at home. Yet at this very time the Imperial Government sanctioned in Canada and in some other parts of its dominions a system of dealing with Dissenting Churches far more liberal than that which it admitted in these islands, while in India it abstained, with an extreme, and sometimes even an exaggerated scrupulousness, from taking any steps which could by any

possibility offend native religious prejudices. There was the question of slavery, though we were freed from the most difficult part of this problem by the secession of America. In addition, however, to its moral aspects it affected most vitally the material prosperity of some of our richest colonies; it raised the very dangerous constitutional question of the right of the Imperial Parliament to interfere with the internal affairs of a self-governing colony, and it brought the Home Government into more serious collisions with the local Governments than any question since the American Revolution. Whatever may be thought of the wisdom of the measures by which we abolished slavery in our West Indian colonies, no one at least can deny the liberality of a Parliament which voted from Imperial resources 20 millions for the accomplishment of the work. There was the conflict of race and creed which, between 1830 and 1840, had brought Canada to absolute rebellion, and threatened a complete alienation of Canadian feeling from the mother country. This discontent was allayed and dispelled by some of the most successful legislation of the present century, and there are few greater contrasts in the present reign than are presented between Canadian feeling towards the mother country at the time when Her Majesty ascended the throne and Canadian feeling at the present hour. There was also the great and dangerous task to be accomplished of adapting the system of colonial government to the different stages of colonial development. There was a time when the colonies were so weak that they depended mainly on England for their protection, but, unlike some of the great colonizing Powers of ancient or modern times, England never drew a direct tribute from her colonies, and in spite of much unwise and some unjust legis-

lation, I believe there was never a time when they were not on the whole benefited by the connection. Soon, however, the colonies grew to the strength and maturity of nationhood, and the mother country speedily recognized the fact and allowed no unworthy or ungenerous fears to restrain her from granting them the fullest power, both of self-government and of federation. It is true that she still sends out a governor—usually drawn from the ranks of experienced and considerable English public men—to preside over colonial affairs. It is true that she retains a right of veto which is scarcely exercised except to prevent some intercolonial or international dispute, some act of violence, or some anomaly in the legislation of the Empire. It is true that colonial cases may be carried, on appeal, to an English tribunal representing the very highest judicial capacity of the mother country and free from all possibility and suspicion of partiality, but I do not believe that any of these light ties are unpopular with any considerable section of the colonists. On the other hand, though it would be idle to suppose that our great colonies depend largely upon the mother country, I believe that most colonists recognize that there is something in the weight and dignity attaching to fellow membership and fellow citizenship in a great Empire—something in the protection of the greatest navy in the world—something in the improved credit which connection with a very rich centre undoubtedly gives to colonial finance.

It is the custom of our friends and neighbours on the Continent to bestow much scornful remark on the egotism of English policy, which attends mainly to the interests of the British Empire and is not ready to make war for an idea and in support of the interests of others. I think, if it were necessary, that we might fairly

defend ourselves by showing that in the past we have meddled with the affairs of other nations quite as much as is reasonable. For my own part, I confess that I distrust greatly these explosions of military benevolence. They always begin by killing a great many men. They usually end in ways that are not those of a disinterested philanthropy. After all, an egotism that mainly confines itself to the well-being of about a fifth part of the globe cannot be said to be of a very narrow type, and it is essentially by her conduct to her own Empire that the part of England in promoting the happiness of mankind must be ultimately judged. It is, indeed, but too true that many of the political causes which have played a great part on platforms, in parties and in Parliaments, are of such a nature that their full attainment would not bring relief to one suffering human heart, or stanch one tear of pain, or add in any appreciable degree to the real happiness of a single home. But most assuredly Imperial questions are not of this order. Remember what India had been for countless ages before the establishment of British rule. Think of its endless wars of race and creed, its savage oppressions, its fierce anarchies, its barbarous customs, and then consider what it is to have established for so many years over the vast space from the Himalayas to Cape Comorin a reign of perfect peace; to have conferred upon more than 250 millions of the human race perfect religious freedom, perfect security of life, liberty and property; to have planted in the midst of these teeming multitudes a strong central Government enlightened by the best knowledge of Western Europe, and steadily occupied in preventing famine, alleviating disease, extirpating savage customs, multiplying the agencies of civilization and progress. This, gentlemen, is the true meaning of that

system of government on which Mr. Cobden looked with "an eye of despair." What work of human policy, I would even say what form of human philanthropy, has ever contributed more largely to reduce the great sum of human misery and to add to the possibilities of human happiness? And if we turn to the other side of our Empire, although it is quite true that our great free colonies are fully capable of shaping their destinies for themselves, may we not truly say that these nobleflowers have sprung from British and from Irish seeds? May we not say that the laws, the Constitutions, the habit of thought and character that have so largely made them what they are, are mainly of English origin? May we not even add that it is in no small part due to their place in the British Empire that these vast sections of the globe with their diverse, and sometimes jarring, interests have remained at perfect peace with us and with each other and have escaped the curse of an exaggerated militarism which is fast eating like a canker into the prosperity of the great nations of Europe. What may be the future place of these islands in the government of the world

no human being can foretell. Nations, as history but too plainly shows, have their periods of decay as well as their periods of growth. The balance of power in the world is constantly shifting. Maxims and influences very different from those which made England what she is are in the ascendant, the clouds upon the horizon are neither few nor slight. But whatever fate may be in store for these islands we may at least confidently predict that no revolution in human affairs can now destroy the future ascendancy of the English language and of the Imperial race. Whatever misfortunes, whatever humiliations the future may reserve to us they cannot deprive England of the glory of having created this mighty Empire.

"Not Heaven itself upon the Past has power ;

"That which has been, has been—
and we have had our hour."—

The Times.

All learning is self-teaching. It is on the working of the pupil's own mind that his progress in knowledge depends. The great business of the master is to teach the pupil of each himself.—*Anon*

THE HISTORY OF EARLY EDUCATION.

BY S. S. LAURIE, UNIVERSITY OF EDINBURGH.

IT may be truly said that God began first to dwell with men among the Jews. Whatever view may be taken of Biblical matters, this may be accepted as a historical fact. To Moses and the Israelites the world owes, not the conception of the spirituality and unity of God, but the more practical conception of the one God as a self-subsistent *moral* Personality. For this and their literature, devoted to the expression of this leading thought

and collected (if we except the Talmudic writings) in the Old Testament, the World owes a permanent debt to the Israelites. They are a possession which must always influence the thought and life of the human race. The religion of Jehovah was a protest against both the Idolatry of the other Semitic races and the Pantheism of the Orient.

The people, from whom came the Book of Job and the Psalms and Gen-

esis, and whose worldly wisdom found expression through Solomon in the Book of Proverbs, was certainly a very remarkable people. The intensity of their personal character, and of their family life and state life is what most powerfully impresses the reader of history. The *intensity* had its natural concomitant in exceeding narrowness so that even the "I am that I am" of Moses, while it was to them the name for the Universal Power had yet for the chief object of its eternal existence—the Jews. He was from the first a National God. Spite of this, the great fact remains that God for the first time now truly dwells among men and is personally concerned with the conduct of each man in his daily life. He demands certain observances from men—not solely or chiefly in the form of appeasing sacrifice, but as part of a *bargain*. This one idea of moral contract with the Divine Being was sufficient to educate a race.

Education of Priests.—Even, however when dealing with the Jews, I would remark that the fact of a distinct sacerdotal order which as such embraces an educational curriculum for priests, must always restrict the range and also the aims of the education of the people as a whole. The masses will simply pick up, as best they can, what is necessary for their daily occupations. The higher education of the country—indeed most of what we mean in modern times by the term "Education" is the education of the priestly order, and especially is this the case where the order is also a hereditary caste. It must always indeed be the instinct, if not the conscious purpose, of such a case to keep the masses of the people in ignorance or at least to regulate the amount and kind of knowledge to be conceded to them, and to reserve for themselves the power which inheres in exclusive knowledge. Nor can I

find in anything I have read, evidence that it was otherwise with the Israelites. The literature we have before us speaks to a high intellectual force and a lofty ethical ideal among the few and pre-supposed considerable education among those to whom it was addressed. The audience, however, must have been a very small minority of the nation. The range of instruction too, whether among the Levites and the Priests, or in' the "Schools of the Prophets" was restricted by the theocratic conception. The priests alone (*i. e.*, Levites of the house of Aaron) had to learn all the details of the Judaic ceremonial. They were the sole channel of sacrifice. This, ceremonial with learning to read, to write, with a view to the multiplication of MSS.; instruction in music, and perhaps verse; a little Chaldean astronomy, and a thorough knowledge of the law (for the priestly order was always a civil as well as ecclesiastical authority), would appear to sum up the curriculum of the most learned, till about 200 years B.C.

Schools of the Prophets.—The Israelites present many problems to the mind of an unbiased inquirer; but this is not the place to consider any of these. We might have ventured to say *a priori* that a small race which could begin its history by embodying in its creed all that was purest and best in the primitive faith of the Orient, and boldly annexing the God of the Heavens and the Earth as a private possession, while contracting with Him for certain advantages chiefly of a material kind, must evolve out of the whole a higher and freer spiritual life than any that an official priesthood could conceive. It is true that the nationalizing of God was a common characteristic of all the Semitic and some other races, but the Hebrews had growing up in the midst of them a conception of God

of so universal a type, that we should naturally expect them to rise above their fellow-Semites. And, in truth, owing to the deeper spiritual life which their great fundamental conception generated, the universality and dominancy of the God of the Hebrews as a "God above all gods" gradually found expression in the "Schools of the Prophets." These were instituted by private individuals. They had a loftier aim than any that the Law prescribed. Founded by Samuel, they existed primarily for the maintenance of the tradition of the idea of Jehovah in all its purity. Philosophic contemplation, and not merely the technicalities of ritual or of the law, occupied the students at these schools. In them we find the spirit as opposed to the form of Judaism; and men emanating from them exercised a powerful influence on the life and public policy of the Jews, recalling princes and people alike to the worship of the true God, and that "in spirit and in truth." They also seemed to maintain the theocratic as opposed to the civil theory of government, more than the priestly order itself, but in a broader and more liberal sense.

Education of Scribes.—Again, there was in Palestine (as in Egypt) a class of Scribes (1 Chron. 2, 55) employed in various offices, public and private. This profession would naturally be sought by the more ambitious and intelligent among the Levites and others not of the Levitical caste. They grew into importance after the captivity. The teachers of these, and of any others who received literary instruction were doubtless Levites.

Education of the People.—But outside these three classes, priests, prophets, and scribes, all occupied with Religion and Law, it cannot be said that instruction in our modern sense was to be found. Nor indeed with a people so narrow, and whose intellectual activity was so exclusively

"theological," was it probable that schools would ever be numerous, except for the defence of the faith against alien intrusion and the strengthening of patriotic traditions. The supreme object of education was neither arts, nor sciences, nor arms, but faith in God and knowledge of the law. The Levites were spread over the whole country, and were thus available as teachers and were in a position to perpetuate the knowledge of the law; and doubtless such instruction as the young obtained outside their families was obtained from them. But the education of the masses, however it may have been aided by the Levites in an irregular and sporadic way, was substantially domestic, traditional and oral.

Two characteristics of Jewish life and education which distinguish them from other ancient nations have to be here noted: *First*, morality and religion and civil law were substantially one. Wherever there is a religion it influences morality, but in the case of the Jews there was a conscious recognition of this fact. The moral law was in the most literal sense the law of God, and the civil law was a deduction from the moral law. The religious, ecclesiastical, and civil were inextricably interwoven in the daily life of the Jew. *Secondly*, faith in God and a knowledge of the law being the sum of wisdom and theoretically within reach of all, every Jew, however humble, stood in an essential equality with every other. All had equal *claims* to education, *theoretically*. I say. This conception of education as for all citizens was peculiar to the Jews. Neither Persians nor Greeks nor Romans shared it, and even in China it was not understood in the same sense or on the same grounds, although it was indirectly affirmed by throwing open the public examinations to all. In religion there was no

esoteric doctrine reserved for a favoured caste; on the contrary the profoundest religious thought and the highest religious expression was to be found outside the ceremonial priesthood in the schools of the prophets to which I have referred. To these schools laymen might attach themselves. They were not reserved for a caste.

The beginning and end of the Jewish conception of popular education is contained in the 6th chapter of Deuteronomy, 4th verse.

"Hear, O Israel: The Lord our God is one Lord: And thou shalt love the Lord thy God with all thine heart, and with all thy soul, and with all thy might. And these words, which I commanded thee this day, shall be in thine heart: And thou shalt teach them diligently unto thy children, and thou shalt talk of them when thou sittest in thine house, and when thou walkest by the way, and when thou liest down, and when thou risest up."

The father and mother were thus the divinely appointed teachers. As has been said, "The dwellings of Abraham, Issac and Jacob were at once house, school, state and church." The family life was, as I have said, intense, and the more so that the law thus directly addressed parents and placed on them the responsibility for the moral and spiritual well-being of their children. To the Jews more than to any other race we may apply the words of Shakespeare:

"Let never day nor night unhallowed pass
But still remember what the Lord hath done."

As might be expected, respect for parents and elders was rigidly enforced.

"Thou shalt honour thy father and thy mother," etc.,

"Before the gray head shalt thou stand up."

If we may infer from the Proverbs of Solomon that maxims such as are collected in that book were in general currency we may further conclude

that the domestic education was powerfully reinforced by traditions of practical wisdom. The Book of Ruth also could have emanated only from a people sensitive to the finer and more spiritual significance of family relations. A present God, whom to fear was "the beginning of wisdom," the honouring of parents and elders, a sacred family life, the memory of a great history and the practical wisdom of proverbs, constituted the elements of the education of the masses. No special *public* means, however, were taken to give this education to the people so that the fundamental conception of the equality of all before God, to which I have referred above, remained so far a barren conception, so far as state action to raise all to a certain level of intelligence and life was concerned.—*The School Review*.

THE BIBLE IN LITERATURE.—

There is one book, the Bible, which the study of all other literature will only render more precious, while at the same time it is so surpassing and universal in its range that all other literature serves for its foil or its illustration.

"The sun," says Theodore Parker, "never sets upon its gleaming page. It goes equally to the cottage of the plain man and the palace of the king. It is woven into the literature of the scholar, and colors the talk of the street."

"By the study of what other book," asks Professor Huxley, "could children be so much made to feel that each figure in that vast historical procession fills, like themselves, but a momentary space in the interval between two eternities, and earns the blessings or the curses of all time, according to its efforts to do good and hate evil, even as they also are earning their payment for their work?"—*Youth's Companion*.

THE STATUS OF GEOGRAPHY TEACHING.

BY J. W. REDWAY, MOUNT VERNON, N. Y.

A FEW years since, while lecturing on geographical topics at an educational association, I was interrupted by a teacher who propounded the question—"In drawing a map, which should the pupil be taught to insert first, the rivers or the mountains?" Recalling my own earlier experiences in forcing drainage courses many miles out of their proper positions so as to avoid hachure lines that had been too freely distributed, I promptly gave the first choice to rivers. Immediately on my preference being expressed, pandemonium seemed for a moment let loose. On inquiring the cause of my offence, it was explained that Professor Blank (a well-known educational reformer) had taught them that God made the mountains before He made the rivers, and therefore pupils should be taught to chart the mountains first and the water-courses afterward.

Now, the professor had doubtless instructed his corps of teachers thoroughly and impressively, but unfortunately he was not on sufficiently familiar terms with the works of the Almighty to comprehend the natural sequence of physiographic events. As a matter of fact, mountains are by no means always older than the streams associated with them, and in this particular case the stream that passed almost before the good professor's doorway had the prior right of way, and flowed in the same channel it now occupies long before the Appalachian folds were thrust above the present datum level of the stream. Here was a grand object lesson for a body of teachers to study, but in its place they had been fed with a few commonplace platitudes imposed upon them under the guise of improved "methods."

During the past seven years it has been my fortune to attend educational associations in many States, and I have heard the exponents of half a score of fads exploit their wares to an aggregate of twenty-five or thirty thousand teachers. With few exceptions the most noteworthy thing about the lecturers was their crass ignorance of the fundamental principles of modern geographic science. In other words, the instructor attempted to demonstrate what he considered the only proper method of teaching a subject about which he knew practically nothing, to an assembly of teachers who were not wiser than himself.

Unfortunately this sort of teaching is the rule rather than the exception. At the yearly institute as well as at the normal school, the instructor in geography is almost wholly without training in the subject he undertakes. In fact I do not know of a normal school in the United States in which the instructor in geographic science is a trained geographer. In employing an instructor of mathematics or of language a board of trustees is usually careful to select a teacher critically educated in the subject to be taught; the teacher of geography, on the contrary, is required to present no evidence of special training. Why this is the case, is a question that must be left to the various boards to be answered. The result, however, is fast becoming painfully apparent.

For want of qualified teachers of geography, the character of the work done has improved but little, if it has at all, in the past twenty years. In the schools of the larger Eastern cities it has deteriorated. In New York, where most of the work is done orally, the elementary instruction consists mainly in the cramming of sufficient

statistics to pass the examination. Fortunately there is one member of the corps of instructors in New York who has been trained to geographic work, and he is a thoroughly competent man. But one instructor cannot well do the work of twenty; it is not surprising, therefore, that occasionally an assistant teacher may be found explaining to a class how "Indians on the Plains catch buffaloes with ropes." Considering the fact, however, that the assistant teachers are required to carry their pupils through a course of instruction in geography without the use of books; with wall maps that ten years ago were caricatures; without topographic models, or possibility of out-of-door lessons; and in view of the fact that the percentage of pupils passed for promotion is too often the standard that determines the teacher's tenure of position, the only wonder is that her work is done so well.

The source of trouble, however, is not so much with the rank and file of teachers as it is with those who train them. With the number of normal schools and the various local assemblies of teachers now supported by the different States and municipalities, there should be better work done in geography. In the main it is fundamentally bad, because the training of teachers is not well done.

To better illustrate the superficialism of the methods followed by a large class of training teachers and instructors, I take as an example the manner in which the inequalities of the earth's surface are discussed before the class. The lessons are not infrequently taught from the moulding board, each feature being represented or reproduced in moist sand. The successive steps are about as follows:

A hill is an elevation of land.

A mountain is an elevation of land higher than a hill.

A mountain range is a succession of mountains joined at the base and ranged in line.

A mountain system includes all the range near one another.

Not only are these or similar definitions made the basis of instruction by the training teacher, but a similar scheme appears in many of the most popular text books. The inventors of the various fads and improved methods dwell—not on the physiographic formation of these features, but wholly on the sequence in which they are presented. Hill, mountain, range, system—this, it is argued, is the only inductive way; any other order, such as range, system, hill, mountain, would be rank pedagogical heresy. That is, the mountain is presented to the pupil as a very large hill, and the range as a windrow on peaks. Had I not seen this same exercise 'time and time again exploited, I should not mention it here. As a matter of fact, however, the essential features could not be more ingeniously misinterpreted.

To begin with, a hill is not a small mountain. From a geographic point of view the hill and the mountain have nothing whatever in common except inequality of surface—just about as much, in fact, as a wen on a man's head and the nose on his face. The hill, it is true, may consist of a mass of detritus thrown up, but quite as often it is formed by circumdenuation. To illustrate this by means of the moulding board would be a highly instructive lesson to the child, but in my experience with instructors and normal school teachers, I have never yet seen it so much as hinted.

Again the mountain is not the unit of orography. Isolated mountains are rare; and wherever they exist, in nearly every instance they are volcanic upheavals. The range, not the peak, is the unit of structure. The essential feature about the range is the fact that it is a wrinkle or fold of the earth's strata. This can be shown in various ways. A few pieces of colour-

ed cloth of the same size, formed evenly in a pile, and then crumpled by side pressure, will illustrate the principles of mountain formation in a manner that can be comprehended by even the youngest pupils. Then by means of the moulding board, or perhaps better by pictures, the effects of erosion can also be shown. A most admirable series of pictures illustrating mountain formation may be found in Powell's *Cañon of the Colorado*, but I have never heard a geography instructor refer to it; I certainly have never seen one in use by a normal or a training school teacher.

There is no feature of the landscape whose laws of birth, growth and death are easier to illustrate than those of the lake, and almost every school-yard, as well as the road leading to it, furnishes the required apparatus. During a rainy day, let us suppose that the class be taken out of doors

to some place where a rill is flowing along a wheelrut in the road. At some point or other, as judgment dictates, the rill is dammed, and a pool, or miniature lake, is formed. The pool fills until the water reaches the lowest part of the rim. Then, as it runs over the rim, little by little the overflow cuts away the channel of outlet, until the pool is nearly or quite drained. Moreover, it will be quickly observed that while the outflowing stream, by cutting away the rim, was draining the miniature lake, the inflowing stream was working quite as effectually by forming bars and mud-flats at its head. Not only does an out-of-door lesson of this kind readily illustrate why a river is the mortal enemy of the lake, but it also shows why lakes are the most transitory features of the landscape.—*The Educational Review.*

(To be continued)

TO IMPROVE SECONDARY SCHOOLS.

W. T. HARRIS, the United States Commissioner of Education, has made public the report of the committee of ten on secondary school studies, appointed at the meeting of the National Educational Association held in July, 1892, at Saratoga, N. Y. The committee, after an extended preliminary discussion, decided to organize conferences on the following subjects: First, Latin; second, Greek; third, English; fourth, other modern languages; fifth, mathematics; sixth, physics, astronomy and chemistry and natural history (biology, including botany, geology and physiology); eighth, history, civil government and political economy; ninth, geography (physical geography, geology and meteorology). They then proceeded to select the members of each of these conferences,

having regard in the selection to the scholarship and experience of the gentlemen named, to the fair division of the members between the colleges on the one hand and schools on the other, and to the proper geographical distribution of the total membership. A list of all questions was adopted as a guide for the discussions at the conferences, which were held on December 28, 1892, each in a different city. Elaborate reports and recommendations are made by each of the ten conferences, a few of the more important features in which are given as follows: An important recommendation of the Latin conference is that the study of Latin be introduced into American schools earlier than it now is. They recommend that translation at sight form a constant and increasing

part of the examinations for admission to college and of the work of preparation. They next urge that practice in writing Latin should be carried on with equal steps. The conference desire the schools to adopt a greater variety of Latin authors for beginners, and then give good reasons against the exclusive use of Cæsar's Gallic War. The conference on Greek agree with the conference on Latin, recommending the cultivation of reading at sight in schools, and in recommending that practice in translation into the foreign language should be continued throughout the school course. They urge that three years be the minimum time for the study of Greek in schools, provided that Latin be studied four years. They would not have a pupil begin the study of Greek without a knowledge of the elements of Latin. They recommend the substitution of portions of the Hellenica for two books of the Anabasis in the requirements for the admission to college, and the use of some narrative portions of Thucydides in schools. They urge that Homer should continue to be studied in all schools which provide instruction in Greek through three years, and they suggest that the Odyssey is to be preferred to the Iliad.

The conference on English is of the opinion that English should be pursued in the High School during the entire course of four years; but in making this recommendation the conference have in mind both study of literature and training in the expression of thought. To the study of rhetoric they assign one hour a week in the third year of the High School course. To the subject of historical and systematic grammar they assign one hour a week in the fourth year of the High School course. The conference claim for English as much time as the Latin conference claim for Latin in secondary schools; and it is clear that they intend that the study

shall be in all respects as serious and informing as the study of Latin. One of the most interesting opinions expressed by the conference is "that the best results in the teaching of English in High Schools cannot be secured without the aid given by the study of some other language; and that Latin and German, by reason of their fuller intellectual system, are especially suited to this end." They say that the study of words should be so pursued as to illustrate the political, social, intellectual and religious development of the English race; and they urge that the admission of the student should be made to depend largely on his ability to write English, as shown in his examination books on other subjects. It is a fundamental idea in this report that the study of every other subject should contribute to the pupil's training in English; and that the pupil's capacity to write English should be made available, and be developed in every other department. The most novel and striking recommendation made by the conference on modern languages is that an elective course in German or French be provided in the Grammar School, the instruction to be open to children at about ten years of age. The conference made this recommendation "in the firm belief that the educational effects of modern language study would be of immense benefit to all who are able to pursue it under proper guidance." They admit that the study of Latin presents the same advantages; but living languages seem to them better adapted to Grammar School work.

They plead that "all pupils of the same intelligence and the same degree of maturity be instructed alike, no matter whether they are subsequently to enter a college or scientific school, or intend to pursue their studies no farther." Finally, they declare that "the worst obstacle to modern lan-

guage study is the lack of properly equipped instructors; and that it is the duty of universities, States and cities to provide opportunities for the special preparation of modern language teachers." The conference on mathematics were unanimously of the opinion "that a radical change in the teaching of arithmetic was necessary." They recommend "that the course in arithmetic be at once abridged and enriched; abridged by omitting entirely those subjects which perplex and exhaust the pupil without affording any really valuable mental discipline, and enriched by a greater number of exercises in simple calculation, and in the solution of concrete problems." They map out a course in arithmetic which, in their judgment, should begin about the age of six years, and be completed about the thirteenth year of age. Among several other recommendations is one that a course of instruction in concrete geometry with numerous exercises be introduced into the Grammar Schools; and that this instruction should, during the earlier years, be given in connection with drawing. They recommend that the study of systematic algebra should be begun at the age of fourteen. The conference on the subject of physics, chemistry and astronomy were urgent that the study on simple natural phenomena be introduced into elementary schools; and at least one period a day from the first year of the primary school should be given to each study. The conference on natural history unanimously agreed that the study of botany and zoology ought to be introduced into the primary schools at the very beginning of the school course, and be pursued steadily, with not less than two periods a week throughout the whole course below the High School. In the next place, it was agreed that in these early lessons in natural science no text-book should be used, but that the study should be

constantly associated with the study of literature, language and drawing.

The conference on history, civil government, etc., believe that the time devoted in schools to history and the allied subjects should be materially increased. It was declared that the teaching of history should be intimately connected with the teaching of English; that the pupils should be encouraged to avail themselves of their knowledge of ancient and modern languages, and that their study of history should be associated with the study of topography and political geography, and should be supplemented by the study of historical and commercial geography and the drawing of historical maps. The conference report on geography deals with more novelties than any other report, exhibits more dissatisfaction with the prevailing methods, and makes, on the whole, the most revolutionary suggestions. It is obvious, even on a cursory reading of the report, that geography means for all the members of this conference something entirely different from the term "geography" as generally used in school programmes. Their definition of the word makes it embrace, not only a description of the surface of the earth, but also the elements of botany, geology, astronomy and meteorology, as well as many considerations pertaining to commerce, government and ethnology. "The physical environment of man" expresses as well as any single phrase can the conference's conception of the principal subject which they wish to have taught.—*Public Opinion.*

Errors such as are but acorns in our younger brows grow oak in our older heads, and become inflexible.—*Sir Thomas Browne.*

Of all human things nothing is more honorable or more excellent than to deserve well of one's country.—*Cicero.*

DRAWING IN GENERAL EDUCATION.

BY D. R. AUGSBURG, AUTHOR OF "DRAWING SIMPLIFIED," SALT LAKE CITY, UTAH

LANGUAGE and number have heretofore been the beginning and end of education in the common schools.

Language is here taken as the general name for reading, spelling and grammar, and number for mathematics. These two studies have been pursued with a persistence which has led to the popular belief that they were all in all, and that nothing more was needed to lay the foundation of a well rounded and complete educational training.

But modern education has kept pace with modern thought and ideas, until to-day training along these two lines alone is found to be insufficient; that with these two for a foundation the superstructure is one-sided and incomplete; that if the end sought is a harmonious and well rounded education, the foundation must be made broader and stronger.

Modern education recognizes three grand divisions of educational training; body training, mind training and soul training. The harmonious development of these three is the sum total of education. Of these mind training receives the most attention in the common schools. Four studies are at the basis of mind training. They are *number, language, drawing and music.*

Drawing here is taken in the widest sense as representing the elements of both form and colour. It is the mental process by which ideas are represented both pictorially and in solid form.

Of these four studies drawing alone seems to be viewed by the masses with suspicion. Because it was not taught in their day, and they do not feel the need of it, they pronounce

against it. By the same argument, the successful business man who has had no schooling in his early days, pronounces all scholastic study humbug. It may be said of any department of knowledge, that one does not understand its importance until he enters into its domain himself, or sees another put it to practical use in the affairs of life. So those who have not learned drawing, do not, in their own experience, know what they have lost,

But if number, language, drawing and music are the fundamental studies, then all others are but branches, and these four studies are the elements of which they are composed. This is even so, for without a knowledge of these studies, it would be difficult to acquire a knowledge of other branches. For example, the elements that enter into the study of geography are number, language and drawing. In other words, in order to understand geography one must have a knowledge of mathematics, language and form, because these are the elements on which it is based.

In the same manner number, language and drawing are the foundational aids in acquiring such branches as physiology, physics, geology, etc. The trades are almost entirely based on these three studies.

In proportion to the knowledge of and ability to use these four elements, the branches become easy and the time for their mastery is shortened.

Drawing is largely the basis of the trades. The stone cutter cuts a capital out of marble with chisels, the draughtsman draws it on paper with pencil; the manual process differs, but the mental process is the same. The blacksmith draws a horseshoe

with a hammer, the draughtsman draws it with a pencil; the manual process differs, but the cerebral action is the same. In like manner the painter draws with a brush, a carver with chisels, a tailor with shears, a mason with trowel, and the carpenter with various tools. The lathe is a machine for drawing different forms in iron and wood, the band saw for sawing out designs, the loom for drawing fabrics of all sorts. With all these machines if a pattern is not used, the operator is the artist, and designs his own work. If a pattern is used the one that designed it is the artist, and the operator is but a part of the machine. He is an artisan.

If a blacksmith can draw beautiful designs on paper, he can hammer them out of iron. If the draughtsman can draw a horseshoe on paper, he can hammer it out of iron as soon as he has overcome the technical difficulties. If a person can draw a design on paper he can construct that design in any trade or department as soon as he has overcome the mechanical difficulties of that department.

Outside of the mechanical arts, drawing is the basis of a large number of branches. It is the basis of the *decorative arts*; frescoing, tapestry, embroidery and lettering; *the plastic arts*; carving, moulding, modeling and sculpture; *the reproductive arts*; etching, engraving, lithographing, printing, photography; *the productive arts*; which include original work in any department.

Drawing shortens the school course. By cultivating the perceptive powers, the time is shortened in acquiring those branches that wholly or in part depend on observation. Trained perceptive add wonderfully to the powers of the imagination. A cultivated imagination enables the pupil to see a river in a rill, a mountain in a hillock of sand, or a lake in a pool of water; will enable him to journey

with you in imagination across the trackless ocean, through the jungles and forests, up the rivers, over the plains and across the mountains; will enable him to see forms beyond the range of vision, and compass magnitudes too vast for measurements. Imagination is the creating faculty.

Drawing is one of the surest means of acquiring knowledge. To draw an object requires an intelligence and close observation; to reproduce that object, a cultivated memory. To reproduce a modified form of that object, a trained imagination, and lastly, to represent an idea from that object requires knowledge, memory and imagination. For example, it requires close observation to draw a cat; an acute memory to recall the image, and reproduce it on the blackboard; a trained imagination to be able to represent the cat climbing a tree, and lastly a combination of these three to associate cats together, making a harmonious composition.

Drawing cultivates the hand and lays the foundation of technical education. It is a study that seldom or never becomes involuntary like writing, but is always under the direct supervision of the mind. To draw even the most simple object requires the concentration of the mind in directing the hand for its reproduction. This constant working of the mind and hand in harmony with each other leads to great precision and accuracy in the use of the hand. The precision and accuracy may be utilized in any department of work. *Drawing is the basis of accurate observation.* To reproduce an object requires the closest scrutiny of that object, not only of the details but of the whole form taken as a unit; not only the shape of the tree, but the character of its branching and foliage as well. Not only the form and color but the number and arrangement of its petals, stamens and pistil. A

trained observation will see that a cat is similar to a tiger, a dog to a wolf, and a rat to a beaver; will see the similarity of an island to a lake, a strait to an isthmus, and a cape to a bay. Observation gives ideas.

Drawing is a study peculiarly adapted to children. Children love drawing. The perspective powers are the most active in childhood. Mental activity begins in the senses. A little child lives in his senses. He delights to see, hear and feel. His eyes are sharp, his ears acute and his fingers are busy. He learns best by seeing and doing. Drawing is seeing and doing.

To the teacher drawing is a great help, not only in awakening interest but in lessening her labour and making school more attractive. There is no limit to the resources which

this subject places at her command. She can bring into the school room a lake, a mountain or a river; all kinds of animals, birds and reptiles; all kinds of trees, shrubs and plants, fruits and flowers. She can show how the Eskimo lives in the frozen regions of the north, and the savage among the tropical forests of the south. She can bring into the school room the pyramids of Egypt or a Chinese pagoda. She can use drawing in object lessons and for busy work. It can be used in the reading, number and language classes; in the geography, history and physiology classes; and as the handmaid of the sciences. She can illustrate what she sees, thinks and imagines. She thus opens a new field, a new world, and makes life wider and broader and deeper.—*Education.*

“AN EDUCATION FOR CRIME.”

THIS is a strong term to apply — as was done by Rev. Dr. Stephens at the N. Y. Church Congress — to the educational system of the United States: a system of education which leaves a large proportion of the children practically without any effective religious instruction at all. It is found that children who attend schools where religion is ignored as a factor in education learn to scorn religion in every form—scout and avoid both Sunday schools and church! In a country where—as an element of life—*obedience to parents* is almost unknown beyond a certain very tender age, the duty of church going is simply laughed at by young people: and if they go at all, it is for some form of amusement or recreation connected with the place of worship. This creates a demand for

“entertaining” services in lieu of public worship—lectures for sermons, anthems for hymns. So this godless education drags the Church down to its own level! The Canadian system is not so different from that “across the border,” that we can afford to proceed jauntily in the face of kindred menaces to our national welfare. As has been frequently pointed out in these columns of late years, the supposed recognition of religious teaching in our schools is so far *worse than useless* that it makes so many people imagine that the work is done, when it is not. There are doubtless some Utopian spots where the children are so amenable to religious influence that they voluntarily stay after school hours instead of rushing out—as an arrow from the bow!—to play and

scamper homewards. Their name, we need hardly say, is not "legion." There are just about enough instances of this kind probably to "prove the rule" to perfection. Our close connection with Great Britain, the loving retention in Canada of the domestic and social traditions of "home," form a wholesome drag upon the wheels of irreligion here; but the *grade is all down*. Everybody feels that "religion has been shelved," to put in a very telling popular phrase: it is seen not to be in the regular routine, but can be "procured from the side-boards" if you please! "What's the use of it anyway?" is about the way the average boy or girl in America is disposed to question the utility of "religious exercises" generally, and *doctrinal teaching* in particular. It is no use to call upon the preachers or ministers at large to "avail themselves of" and "utilize" the opportunities of religious instruction afforded by the trustees of various schools. To spend their time in *trying* to produce some impression under the given circumstances is such an atrocious *waste* of time that no thoroughly conscientious and energetic clergyman will submit to the farce. The sooner our cousins south of the lakes recognize the fact that we have no such precious jewel of a system here, the better for themselves. Let there be no half measure! All English-speaking communities should fall into line with the prevailing Church sentiment in the Old Country, and stand shoulder to shoulder in a *plain demand* for the right of having Church schools, wherever the rates can be allocated sufficiently to pay the expenses required by the public system. Our clergy fought bravely years ago for "separate schools," and would have had them but for the treachery, or cowardice, or false liberality of so many Churchmen. The objection to "separate education" is purely senti-

mental—unworthy of full-grown men and women, gifted with a fair share of common sense. There need be no worse results from parallel sets of denominational schools than *wholesome rivalry*—if the line be carefully drawn where the question of adequate expense comes in. Every school should be equipped and taught up to a certain secular standard. The national conscience is being educated. Alongside of the downward stream of crime and criminality created by the lack of religious instruction in the public schools in any country, may be seen (thank God!) a *counter current* setting back towards the "old paths." For a while, our Canadian people were staggered, almost paralyzed, by the blow so successfully struck at Church schools thirty or forty years ago, but the generation has not passed in vain; it has carried into clear evidence the conviction that to do with "common" education when religious education can be had, is a grave crime against the soul and spirit that men possess. People feel more and more that it is worth a good deal to get their children educated where the influences, at least, and sanctions of religion, have an over-ruling authority to leaven and modify all else that is taught. Hence the triumph of "Church schools." Up and down our land there are schools started under Church auspices—carefully "feeling their way" at first—and after a while *flourishing*. This is true of boys' schools as well as girls', and it is true of *all types of Churchmanship*. It is true of every class of citizenship as low down as the fees can reach. People have to pay their taxes for the support of the "godless system," but they pay school fees besides rather than submit their children to the malign influences of a "common" school. The only question is, how low can the fees be brought and yet furnish enough to pay the way for the

schools' success. It is a shame that this tyranny of the majority should oppress a section of people, but it is bravely borne with. Meanwhile, we should be organizing for better subsidy or better system of support. The work of Sisters ("Kilburn," "St. John the Divine," etc.) is the ideal for the poorer classes, but even they must take *some* fees. We need both "swords and trowels" for this work!

One day we shall be able to demand our rights. Even dissenters are learning—though slowly—to look at these matters as we do, and they will ultimately be with us, for they *mean* well. —*The Canadian Churchman.*

Most anybody can do a thing he feels like doing, but it takes a true man to do a thing when he doesn't feel like doing it. —*Sam Jones.*

NOTES FOR TEACHERS.

THE NEW CLOCK AT ST. PAUL'S CATHEDRAL.—St. Paul's at last has a clock worthy of the great cathedral. In 1891 the old works, after 182 years' service, were declared worn out, and Lord Grimthorpe, who designed the famous clock of St. Stephen's, was consulted on the plans of the new time-keeper. The hours and quarters will ring out as of old, but with increased volume, from St. Paul's. The clock is the largest in the kingdom, bigger even than that at Westminster. Its pendulum is 15 feet long, weighs 7 cwt., and has a two-second beat. Great accuracy is naturally expected, and if care in construction goes for anything Big Ben must look to his laurels. For the benefit of the citizens it may be mentioned that the time is indicated by the first stroke of the hour, and of the chimes at the other fifteen-minute intervals.

The clock was started recently with a simple but picturesque ceremony. The interior of the south tower is circular, and from the base to the summit, where the clock is placed, there is an open winding stair. The Dean and Canon Newbolt and the resident clergy took their places at the bottom of the tower; and the choir were stationed on the stair, each singer being three or four steps higher than the one

below him. The effect was wonderfully fine. Looking upwards, there appeared surpliced choristers in ever decreasing circles—some in comparative shadow, others in the full blaze of the sunlight which streamed through the windows. Psalms xix. and xc. having been sung, Miss Gregory (daughter of the Dean) set the clock in motion by pulling a rope which released the pendulum, and the Benediction was pronounced just as the hour of noon was proclaimed from the bell overhead. It is intended that the three dials—east, south and west—shall be illuminated at night, but it has not yet been decided whether gas or electricity shall be used. —*The School Guardian.*

IS THE SCHOOL UNDERMINING HEALTH?—The modern school is now the most widely extended institution the world has ever seen, and it was never so fast extending as at present. North Africa, New Zealand, Egypt, Finland, and many till lately barbarous lands, under the present colonial policies, have developed elaborate school systems. The juvenile world now goes to school and has its brain titillated and tattooed, and we have entirely forgotten that

men have been not only good citizens but great, who were in idyllic ignorance of even the belauded invention of Cadmus. Now, if this tremendous school engine, in which everybody believes now with a catholic consensus of belief perhaps never before attained, is in the least degree tending to deteriorate mankind physically, it is bad. Knowledge bought at the expense of health, which is wholeness or holiness itself in its higher aspect, is not worth what it costs. Health conditions all the highest joys of life, means full maturity, national pros-

perity. May we not reverently ask, What shall it profit a child if he gain the whole world of knowledge and lose his health, or what shall he give in exchange for his health? That this is coming to be felt is seen in the rapidly growing systems of school excursions, school baths, school gardens, school lunches, provisions for gymnastics of the various schools, medical inspection, school polyclinic, all of which have lately been repeatedly prescribed and officially normalized.—*Professor G. Stanley Hall, in the December Forum.*

PUBLIC OPINION

PROFESSOR TYNDALL.—“All that I have proposed to myself, in writing these few pages, is to illustrate and emphasise the fact that, in Tyndall, we have all lost a man of rare and strong individuality; one who, by sheer force of character and intellect, without advantages of education or extraneous aid—perhaps in spite of some peculiarities of that character—made his way to a position in some ways unique; to a place in the front rank not only of scientific workers but of writers and speakers. And, on my own account, I have desired to utter a few parting words of affection for the man of pure and high aims, whom I am the better of having known; for the friend, whose sympathy and support were sure, in all the trials and troubles of forty years' wandering through this wilderness of a world.”—*Prof. Huxley, in the Nineteenth Century*

THE AGE AND THE FASHION.—There is little doubt that this is not the age of enthusiasm. We are smart, clever, and as a rule well-informed, but are not enthusiastic. We pride ourselves on our realism and flatter

ourselves that we are students of truth. The ideal is forgotten in the search after the matter of fact. It is the fashion to look coldly at mysticism, symbolism, allegory and metaphor. Ours is a hard and money-making age. This present world absorbs us. Our aim is to make money, and when we have made it to make more.

We are also very much led by the reigning fashion. It is the fashion now to be real, to look without shuddering at ugliness in any form or guise.

Hence the ugly novels, plays, and pictures which are to be seen all around us. Art in especial has suffered sorely from the dead level of commonplace which we have reached. The glory of Michael Angelo and the religious fervour of Raphael must be looked for in vain in the pictures which the nineteenth century produces.

Amongst our modern painters, however, there are a few grand exceptions and of these George Frederick Watts takes the highest place. His is the fine enthusiasm of the broadest and deepest religious art.—*L. T. Meade, in the Sunday Magazine.*

LONGEVITY IN CANADA — Our attention has been called to a remarkable fact in connection with the parochial work of the Rev. Robert Ker, rector of St. George's parish, St. Catharines. During the month between December 2nd, 1893, and January 2nd, 1894, Mr. Ker read the service for the burial of the dead over five persons whose combined ages amounted to 423 years, not one of whom was under eighty years of age. The St. Catharines *Star*, commenting upon the above facts, says that nine octogenarians were interred in the city cemetery during December, whose combined ages amounted to 762 years, making an average of 84¾ years. Two of the members reached the great age of ninety and ninety-one respectively. These returns speak volumes for the healthfulness of the Niagara district, which has been called the most favoured portion of North America.

We enjoy in Ontario a climate well adapted for the production of the highest type of the human family. Indeed, this may be said of our country as a whole. The Province of Quebec boasts of one of the most healthful of climates. Even where sanitary laws seem to be set at defiance, it is common to read of the deaths of those who have lived nearly a century. Nova Scotia possesses a climate which tends to preserve life to old age. The military records at Halifax show a smaller percentage of deaths than in any of the stations of the British Army in the world. A statistician noted in three years in Nova Scotia 29 cases of people over 100 years of age, the united ages being 3,004, or an average of over 103. A Truro physician reported the names of 97 people over 80 years within the limits of his own practice, 16 of whom were from 90 to over 100 years of age. Another writer gives a list of deaths, covering two townships, of 316 persons of 80 years

and over, and of these 64 were of ages ranging from 90 to 99 inclusive, and six were 100 and over. New Brunswick can give as wonderful returns. A reader of the obituary notices in four newspapers noted in two years, 1887-8, the names of 232 people over 80 years, of which number 55 were between the ages of 90 and 99 inclusive, and 22 were over 100. The Prince Edward Island papers in the same years chronicled the death notices of 223 persons dying at over 80 years, of whom 49 were between 90 and 99, and four were centenarians.

The reasons given for the influences at work which conduce to old age are interesting. One writer gives as factors coarse diet, outdoor exercise, bracing sea winds. Another thinks longevity is due to the even and uneventful lives of the people, the absence of mental or moral excitement, the non-use of stimulants, and the quiet of a Christian life. Another authority thinks the good results are due to the fact that the people came from hardy pioneer stock, and were not wealthy nor poor. "They were religious, and had implicit faith in the benevolence and goodness of God."

There are deep spiritual lessons in such statistics as these. Why are the old suffered to live beyond the term of usefulness, when they become a burden both to themselves and others? Surely, to awaken loving sympathy, and to give opportunity for filial care to the young. They are also given a long period of preparation for the world to come. They serve also, when mature Christians, to elevate the character, inspire the hope and strengthen the faith of others. — *Evangelical Churchman*.

First, I thought, almost despairing,

This must crush my spirit now;
Yet I bore it, and am bearing—

Only do not ask me how.

—*Heine, translated by George Mac Donald.*

GEOGRAPHY.

THE MANCHESTER SHIP CANAL.—Manchester, England, has, by its great new canal, become a seaport, and is one of the four or five most populous in the world, with a future promise and potentiality beyond all reckoning. The route chosen for the canal was thirty-five and a half miles long, from a point near Eastham, on the Cheshire or southern side of the Mersey, to Manchester. It followed the shore of the Mersey as far as Run-corn, and then pursued an independent route, crossing the Mersey and the Irwell several times before reaching Manchester. The country there is fairly level, but it was found that Manchester stood about seventy feet higher than Liverpool; wherefore it would be needful to have several locks in the canal. For this purpose the whole canal was divided into five levels, or reaches. The first is tidal, and is twenty-one miles long, extending from Eastham to a little above Warrington. Then a huge set of locks raises it sixteen and a half feet, and at that level it runs seven and a half miles further, to Iriam. The second set of locks raises it sixteen feet, to the third reach, which is only two miles long. The third locks, at Barton, raise it fifteen feet, to the fourth reach. Finally, three and a quarter miles further on, the fourth locks raise it thirteen feet, to the fifth and last reach, which is only a mile and three-quarters long and which leads to 114 acres of docks, artificially constructed between Manchester and Salford. Locks at the Eastham end will keep the first or tidal reach at the level of the highest spring tides. The minimum depth of water in the canal will be twenty-six feet, and it can be increased at any time to twenty-eight. The minimum width at the bottom is 120 and at the top 170 feet. It is of

interest to note that the Suez canal is only 26 feet deep and 72 feet wide at the bottom, the Amsterdam canal 23 feet deep and 72 feet wide. The Panama canal was intended to be from 27 to 29 feet deep and from 72 to 79 feet wide. The Manchester canal thus ranks in these dimensions as decidedly the greatest artificial waterway in the world.—*Goldthwaite's Geographical Magazine.*

SIR SAMUEL BAKER.—To some men it is given to make history, to others to make geography. In Sir Samuel Baker we have just lost the last survivor of the band of great explorers who, with no other bond of union than a common enthusiasm, first made their way into the unknown land that spreads over the centre of Africa. The vagueness and mystery of that great gap in our geographical knowledge appealed, perhaps, more strongly to the imagination of the schoolboy than the definite knowledge of lake and tributary, of mountain range and native States, which Livingstone and Burton, Speke and Grant and Baker have put within his reach. But even the schoolboy might forgive additions to his daily tasks if he were sometimes turned loose upon the record of the adventures, hardships, and privations through which Sir Samuel Baker and his wife fought their way to the fountain-head of that great river, whose course, so finely likened by Leigh Hunt to a "grand mighty thought threading a dream," has, from the days of Herodotus to our own, piqued man's curiosity by its mysterious uncertainty. Baker was no foolhardy adventurer, no mere hunter after "big game." He was inspired, as the *Times* leader says, with "that love of work for its own sake, the mere pleasure of

creation, of bringing order out of chaos and substituting abundance for dearth," which have been, we are proud to think, among the strongest incentives to English enterprise. Let us hope that this spirit is still among us even amid the apathy and indolence of a waning century. Something, at least, may be done to keep it alive, if those whose business it is to give a bent to eager young intelligences will not forget sometimes to animate the dry bones of geographical science with the vital interest of biography and travel. "Let us now praise famous men" would be occasionally an excellent text for the geography lesson.—*The School Guardian*.

OIL-TANK STEAMERS.—According to the London *Engineer*, there are at present 47 oil-tank steamers afloat, ranging in size from 666 to 4,134 tons gross, while no less than 17 more are at present being built at European yards. The Dover (England) Harbor Board has closed arrangements with an oil company for the erection on the docks of large oil reservoirs, which are to be constructed by next summer, when oil-tank steamers will make Dover a depot for the South of England, and run regularly between there and Russian and American ports.

A WATCHWORD.

WHEN you find a certain lack
In the stiffness of your back
At a threatened fierce attack,
Just the hour
That you need your every power,
Look a bit
For a thought to baffle it.
Just recall that every knave,
Every coward, can be brave
Till the time
That his courage should be prime—
Then 'tis fled.

Keep your head !
What a folly 'tis to lose it
Just the time you want to use it !

When the ghost of some old shirk
Comes to plague you, and to lurk
In your study or your work,
Here's a hit
Like enough will settle it.
Knowledge is a worthy prize ;
Knowledge comes to him who tries—
Whose endeavour
Ceases never.
Everybody would be wise
As his neighbor,
Were it not that they who labor
For the trophy creep, creep, creep,
While the others lag or sleep ;
And the sun comes up some day
To behold one on his way
Past the goal
Which the soul
Of another has desired,
But whose motto was, " I'm tired."

When the task of keeping guard
Of your heart—
Keeping weary watch and ward
Of the part
You are called upon to play
Every day—
Is becoming dry and hard,—
Conscience languid, virtue irksome,
Good behaviour growing *worksome*,—
Think this thought :
Doubtless everybody could,
Doubtless everybody would,
Be superlatively good,
Were it not
That it's harder keeping straight
Than it is to deviate ;
And to keep the way of right,
You must have the pluck to *fight*.
—*St. Nicholas for January*.

GOOD PEOPLE.—Some of the best souls in this world have acquired their moral superiority less by an effort of their will than by a natural imitation of the good people who surround them.—*Compayre*.

DISCUSSION.

To the Editor of THE EDUCATIONAL MONTHLY:

SIR,—“Master” will be interested in the following clipping from the *Critic*:

“If there is one peculiarity of expression that I dislike more than another, it is (as I have said before) the omission of the preposition from the phrases ‘sleep at night,’ ‘work by day,’ etc. I recently offered to lay a wager with a cultivated young woman who defended their use, that she could not find higher authority than a certain charming American writer of to-day for the monstrosities ‘sleep nights,’ ‘open evenings,’ etc. She did not venture to take me up. If she had done so, I should not have referred to the subject just now; for I have seen, within a few weeks, an extract from a letter of Sir Walter Scott’s, in which the great romancer and good poet remarks that he ‘often *slept nights*’ at Melrose! It is comforting to know that Sir Walter is famous on far other grounds than the purity of his English. It was significant that, during the holidays, the most literary of New York publishers and booksellers called attention to the fact that his shop was ‘Open in the Evening.’”

The reaction against excessive purism as set forth in unscholarly works, like Ayre’s “Verbalist,” has been felt for five years or more. Genung’s list was probably prepared before this reaction set in. There is no doubt that rhetoricians as well as catch-penny book-makers have condemned phrases which are sanctioned by authors of unassailed purity. It is just a trifle ludicrous to find so kindly and sensible a writer as “Lounger” in the *Critic* disgusted by an expression which a poet used without distaste. Recently in

some critical review I noticed a discussion of the question, Is it good English to write an adverb between the parts of a *to*-infinitive? For example, may one say, “to patiently await”? After a few letters it appeared by abundant evidence that nearly all the best prose writers use construction freely.

What I write to suggest is, that questions of usage should be settled by *extensive inductions*. What better work could be done in the great universities than original investigation of the best English prose of the last two centuries for the purpose of settling whether or not the hundred of words and phrases attacked by the purists are or are not stamped with the seal of good taste and good sense by great, broadminded and discriminating authors. Much of this work has been done pretty satisfactorily by the writers of the “Century Dictionary;” but much remains to be done. It would be interesting to know what that scholarly work says concerning the dozen expressions mentioned by “Master.” There is, *me judice*, no authority on such questions more generally satisfactory, or congenial rather, than the *Century*.

In conclusion, may I say that even an excess of purism is good for Canadian pupils. Purism is an excess anyway in men and women, but not in pupils: let them be as critical as you please, they will lose enough of the critical faculty in ten years to leave them merely pure, not puristic. This I venture to hold in spite of the reaction, and in spite of the fact that most of my wisest friends assure me that the opinion is fallacious.

The Editor of THE EDUCATIONAL MONTHLY: SIR,—As you have opened a department for Notes and Queries by teachers, will you allow me to ask whether English masters generally are accustomed, when explaining the construction of such sentences as, "He acted like a fool," to supply a verb (acts), and to parse *like* as a conjunctive adverb. My reason for asking, is that I have always regarded such an explanation and parsing as wrong, and have taught my pupils accordingly, but that I observe that Mr. Williams, of Collingwood, the author of one of our text books on English, regards it as correct. In a little book of Notes and Questions on Rhetoric, Grammar and Composition, lately issued by him, he more than once speaks of *like* as a conjunctive adverb, and in dealing with the sentence, "I had acted like a giddy pated boy," he says that *acts* is to be supplied after *boy*.

It seems to me that the correctness or incorrectness of this parsing, turns simply on this. Can Mr. Williams, or any other teacher that upholds this mode of dealing with such sentences, show that it is in accordance with good English usage, to express a verb in this way after *like*. That such expressions as "He acted like a boy does," "If you had done like we did," "I would not have stood up there like he did," are very common in colloquial English, and that even educated persons may *sometimes* be heard using them, I readily admit, but that they have established themselves as part of our written and literary English, I do not believe, and nothing but the production of half a dozen examples from the carefully written works of as many of our standard British or American authors will convince me that I am wrong. If, then, as I believe, it is not in accordance with good literary usage to express a verb in this way after *like*, it certainly can not be

correct grammatically to explain the noun after *like* as subject to a verb understood, and, if not, then *like* is not a conjunctive adverb. Besides, to conclude, I see no reason why it should not be regarded as a simple adverb of manner in such cases.

Yours,

INQUIRER.

To the Editor of THE EDUCATIONAL MONTHLY :

SIR,—I quite agree with "Master" in his criticism of the majority of the expressions given in his letter of last month.

1. "To catch a train"—or a car—is at least becoming sanctioned by usage, though it is not classic English.

2. "To champion a cause" is simply a metaphor.

3. "To confess, used in the sense of admit" is an Americanism, I think.

4. "This is of no consequence" is sanctioned by several writers. Macbeth, Act I., Sc. 3: "Betray us in deepest consequence."

5. "Constantly"—In Hood's *Bridge of Sighs* we have:

"Whilst the wave constantly
Drips from her clothing."

6. This is perhaps slightly doubtful.

7. I cannot see the objection to this.

8. Prof. Genung is evidently thinking of "He don't."

9. I am inclined to think that one cannot properly speak of a river *emptying* into the sea.

10. This objection is surely ungrounded. Do we blunder also in the words execution, executioner, etc.?

11. Is there any objection to the monthly magazine being supposed to be a record of the *days* of the month?

12. I think this objection is valid. "This is the same picture *that* I saw yesterday" is better.

Yours respectfully,

TEACHER.

EDITORIAL NOTES.

The following numbers are wanted: October, 1885; July, 1889. For these numbers we will pay cash, or credit their value on current volume. We will feel much obliged to anyone who will kindly send in these numbers.

It is not at all necessary that we should state that this magazine does not approve of the present method of making and authorizing text-books for our schools, of the non-existence of the Council of Public Instruction, (or a committee having its power and duties), of the chief in the Education Department being a political partisan. All this has been again and again repeated till our friends began to suspect and accuse us of political aims. We take it that the present discussion and discontent indicate that the public are beginning to see some of the evil effects of the present defective system. We do not think that there was any need of making Ontario an object lesson to educational administrators, but that is what it has been for more than twelve years. The question is, Will the politicians hold their present grip? Time will soon tell.

There was a very interesting gathering in the Library of Toronto University last Saturday afternoon, to witness the unveiling of a portrait of the late Chancellor William Hume Blake (the gift of Chancellor Edward Blake), and a portrait and bust of the late Prof. George Paxton Young. Portraits of Bishop Strachan and Rev. Prof. Croft were transferred from University College at the same time. Chancellor Blake presided. Addresses, making fitting reference to the eminent men whose portraits were unveiled, were delivered by President Loudon, Mr. Maclean, Mr. J. A. Patterson, Mr. W. J. Robertson, Chancellor Burwash, Professor Thomson, Rev. D. J. Macdonnell and Chancellor Blake.

The requirements regarding history for the Fourth Form of the Public Schools as adopted August 3rd, 1893 were as follows:

"The outlines of Canadian History generally, with particular attention to the events subsequent to 1841. The municipal institutions of Ontario and the Federal Form of the Dominion government. The outlines of British History shall also be taught without a text-book; but there will be no questions in British History at the High School Entrance examination."

This has been amended by the substitution of the following Regulation:

The outlines of Canadian history generally, with particular attention to the events subsequent to 1841. The municipal institutions of Ontario and the Federal form of the Dominion Government. The outlines of British history shall also be taught; *there will be suitable questions in British and Canadian history at the High School Entrance examination.*

It will be noticed that the amendment makes no change in the course required to be taken up in the Fourth form, and where the Regulations have been followed by teachers no addition is made to the work of the pupils. It was feared, however, that without questions in British history at the Entrance examination the subject might be slighted. The questions at the examination will correspond with the course made obligatory last August

JOHN MILLAR, *Deputy Minister.*
EDUCATION DEPARTMENT,
Toronto, January 12th, 1894.

We have been asked to publish the above circular, which we do with pleasure. The marvel is that an occasion should have arisen which would make it necessary for the Education Department of Ontario to issue such an announcement to the teachers of this Province.

CONTEMPORARY LITERATURE.

MAGAZINES.

A striking feature of the January *Century* is the number of papers on the lives of celebrated people, Franz Hals, the Dutch painter; Robert Schumann, musician; George Sand, Andrew Crany, and Sir James Simpson. There is also an interesting and sportsmanlike paper on "The Vanishing Moose," by Madison Grant. The second installment of "Pudd'nhead Wilson," Mark Twain's story, confirms the impression that this will prove one of the author's most successful efforts.

The extraordinary and interesting experiment made by the editor of the *Cosmopolitan* seems to be turning out an unqualified success, if one can judge by the figures of the December edition, 400,000 copies. The literary, scientific and other departments at the end of the magazine are remarkably good. It is a characteristic of this magazine that the contributors are from no particular class of writers, but cover a wide range of interests.

Alfred Austin's "The Garden that I Love" is concluded in the issue of January 27th of *Littell's Living Age*. There is also an amusing sketch of "A

Humorous Rogue" by Mr. Andrew Crosse, taken from *Temple Bar*. Among the number of short stories in the January *Overland* "The Rich Fool and the Clever Pauper" is specially human and interesting in its treatment.

The *Quiver* has been successful in securing specially interesting serials for the present year. There are several interesting short stories, and a noteworthy paper on the Book of Ruth by the Right Rev. Boyd Carpenter, Bishop of Ripon.

The February number of the *Missionary Review of the World* is chiefly devoted to the work in China. This magazine is of the greatest help and interest to those engaged in Mission work.

"Tiger! Tiger!" is Rudyard Kipling's story this month for the lucky Young Folks of *St. Nicholas*—another chapter in the history of the interesting Mowgli. There is a sketch of Benjamin Franklin, the virtue of whose character has long since been held up to be admired by youth. "Babette" is a charming little tale.

BOOKS RECEIVED.

We have received from Messrs. W. & A. K. Johnston, a number of beautifully executed Natural History Charts (coloured), which would be very suitable for hanging in school-rooms. Accompanying these is a fine coloured plate of the English, Irish and Scotch Ensigns and the Union Jack.

Messrs. Macmillan & Co. (London, Eng., through the Copp, Clark Co. Ltd., Toronto). "The Beauties

of Nature and the Wonders of the World we Live In." By the Rt. Hon. Sir John Lubbock, M.P., F.R.S. "Drawing and Design for Beginners." By Edward R. Taylor. "Elements of Synthetic Solid Geometry." By N. F. Dupuis, M.A., F.R.S.C., of the University of Queen's College, Kingston, Canada.

Sir John Lubbock, in his usual delightful, scientific, scholarly style,

discourses of "Nature and her Wonders," often using favourite quotations. This is the fifth edition. (1s.)

Mr. Edward Taylor is headmaster of the Birmingham Municipal School of Art, and an R.C.A. The book is beautifully executed and very suitable for even young pupils' use. Care has been taken to connect the drawing lessons with writing lessons etc.

The appearance of Professor Dupuis' work on "Synthetic Solid Geometry" has been looked forward to by Canadian mathematicians for some time. It is divided into four parts: the first dealing with the descriptive properties of lines and planes in space, of the polyhedra, and of the cone, the cylinder and the sphere; the second dealing with areal relations; the third with stereometry and planimetry, and the fourth with conical or perspective projection. Exercises are given at the end of each chapter, and there is an excellent collection of miscellaneous exercises at the end of the work. This work is admirably adapted for use by mathematical students. We observe the use of a few new terms and fresh and varied solutions. The execution is very satisfactory.

Nos. 21 and 22 of the Teachers' Manuals Series, published by Messrs. E. L. Kellogg & Co., New York, and Chicago, are "Rousseau and his Emile," and "Horace Mann." Both are written by Mr. Ossian H. Lang, author of several other books on educators.

We are also indebted to Messrs. Kellogg & Co. for copies of Prof. Rein's "Outlines of Pedagogics," and of President G. Stanley Hall's "The Contents of Children's Minds on Entering School." Prof. Rein's work is translated by C. C. and Ida J. Van Liew, and both these books should be read by teachers. The latter is of considerable interest. It is based

upon experiments made in German and in American Schools, and one can hardly read it without learning something.

Messrs. Moffatt and Paige of London, England, have published a Students' Edition of *Coriolanus*, edited, with introduction and notes, by Thos. Page. (2s.6d.) This does not differ materially from similar text-books published by the same house, the editor's work being exceedingly well done, and the book very carefully prepared. Some few of the miscellaneous notes might surely be omitted, e.g., p. 176., "Denied, refused." And p. 134, "Devour, swallow up, make an end of."

Macmillan's School Library. The Story of the Odyssey. By A. J. Church, M.A. New York: Macmillan & Co. We could wish that all children's books were printed in such beautiful type as this. The volumes of the School Library are very suitable for Supplementary Reading in Schools, and the present number is a skilful condensation of Homer's wonderful story, such as any intelligent pupil would find interesting.

Seek your life's nourishment in your life's work. Insist that your buying or selling or studying or teaching shall itself make you brave, patient, pure and holy!—*Phillips Brooks*.

Listen to the great modern Gospel of Work, but do not let it be to you the shallow, superficial story that it is to many modern ears. Work is everything or work is nothing, according to the lord we work for.—*Phillips Brooks*.

This is the largest and richest education of a human nature—not an instruction, not a commandment, but a Friend. It is not God's truth, it is not God's law—it is God that is the salvation of the world.—*Phillips Brooks*.

SCHOOL WORK.

EXAMINATION PAPERS.

EXERCISES IN ENGLISH.

BY PRINCIPAL STRANG,
Collegiate Institute, Goderich.

For Entrance Classes.

1. Complete the following sentences correctly :

- (a) I will be——. (b) I shall be——.
(c) Who do you think——? (d) Whom do you think——? (e) If he was here——. (f) If he were here——. (g) If he has it——. (h) If he had it——. (i) If he had had it——. (j) I have sent them word so that——. (k) I sent them word so that——. (l) He divided the apples between——. (m) He divided the apples among——. (n) He had a taste of——. (o) He had a taste for——.

2. In how many places may the word *only* be placed in the sentence, "One boy would lend me a ruler," and what effect will it have on the meaning in each case?

3. Pronounce as distinctly and rapidly as you can, five times in succession, each of the following sentences :

- (a) She sells sea shells.
(b) Growing gleams glowing green.

4. Pronounce distinctly and correctly the following words : mischievous, grievous, covetous, insidious, presumptuous, unctuous.

5. Write out the following sentences in full, supplying the ellipses as you would have to do for analysis :

- (a) It looks as well as ever.
(b) His conduct was worse than usual.
 isn't as if he were a stranger.
(c) His hair is whiter than when I last saw

(e) I know of nothing better for him than to travel.

(f) This is not so coarse as what he showed us.

6. Write all the inflected forms of : child, monkey, who, see, bid, do.

7. Analyze the following simple sentences :

(a) Beneath the palm trees on the plain
 Once more a king he stood.

(b) O, how the tender mothers
 Their desolate darlings kissed!

(c) So runs the ancient legend
 By bard and painter told.

(d) Once into a quiet village,
 Without haste and without heed,
 In the golden prime of morning,
 Strayed the poet's winged steed.

(e) And something of myself in thee,
 A shadow from the past, I see,
 Lingering, even yet, thy way about.

(f) A traveller by the faithful hound,
 Half buried in the snow was found,
 Still grasping in his hand of ice
 That banner with the strange device,
 "Excelsior."

8. Divide into clauses, write out each in full, classify it, and give its relation :

(a) But sleep stole on, as sleep will do,
 When hearts are light and life is new.

(b) From morn till night he followed their
 flight,
 O'er plains where the tamarind grew,
 Till he saw the roof of the Caffre huts,
 And the ocean rose to view.

(c) And a feeling of sadness comes over me
 That is not akin to pain,
 And resembles sorrow only
 As the mist resembles the rain.

(d) We revere, and while we hear,
 Uplifted high in heart and hope are we,
 Until we doubt not that for one so true
 There must be other nobler work to do
 Than when he fought at Waterloo,
 And victor he must ever be.

QUESTIONS ON CÆSAR. BOOK IV.
CHAPTERS 13-18.

BY H. J. STRANG, B.A.

I. Translate into good English, Chapter 13, *His constitutis—impetrarent.*

1. Parse *mane, frequentes, fallendo.*
2. Construction of *dici, perfidia, quid.*
3. *Sui purgandi.* Point out the grammatical peculiarity, and account for it if you can.
4. *Natu.* Parse. What peculiarity?
5. *Ut dicebatur* When does *ut* take the indicative after it?
6. *Ne quem.* When is "that no, etc.," to be expressed by *ut nullus*?

II. Translate Chapter 15, *Germani—perierunt.*

1. Parse *relictis, reliqui, vi.*
2. *Audito—viderent.* Account for the change in the construction.
3. *Interfici.* What compounds of *facio* take a regular passive?
4. *Perierunt.* Write the 3rd singular of each tense of the indicative and subjunctive.

III. Translate Chapter 16, *Adquos—bossint.*

1. Parse *aequum, quicquam, satis.*
2. Classify the first four subjunctives in the extract.
3. *Qui uni.* When does *unus* take a plural?
4. Compare *aequum, magnopere, graviter, novissimo, ultimas.*
5. *Responderunt, orabant.* Account for the change of tense.
6. *Exercitum—transportaret.* Point out and account for the syntactical peculiarity.
7. *Aricivisto pulso.* Write an explanatory note.
8. Change to *Oratio recta*, "*Ut siti auxilium—futurum.*"

IV. Translate idiomatically:

1. *His discedendi potestatem fecit.*
2. *Expectare vero summæ dementiæ esse judicabat.*

3. *Navibus transire neque suae neque Populi Romani dignitatis esse statuebat.*

V. Translate into idiomatic Latin:

1. We must not give them time to adopt new plans.
2. It will not be in keeping with my dignity or that of the state to accept such terms.
3. We hope to reach the bridge before they can cross the river.
4. We are in doubt whether it is better to make an attack on them at once, or to wait till the Suevi join us with reinforcements.
5. To make known our plans to the chiefs,—to induce the Germans to join the Roman people, without their doing so by the advice of the Suevi.

VI. 1. Mark the penult of the following words: *pristini, dedunt, remanet, obsequium, comparat.*

2. Distinguish in use *conferre* and *comparatum* est.
3. Distinguish *feret* and *abdere* in *silvas* (*silvis*).
4. Conjugate *gavisus, dimensa, revinctis, defixerat, adegerat, contexebantur.*
5. Give the nominative, genitive and gender of *pedum, dolum, fibulis, pariete, ponti, salutem.*
6. Write all the participles of *transeo* and *abdo*.
7. Inflect the imperative active of *facio* and *fero*.
8. Inflect the present indicative of *voluit*, and the future indicative of *possint*.

Estem your country as your own family; your fellow-citizens as your friends; your friends as your children; and your children as your own life; and study to surpass them all in acts of kindness.—*Xenophon.*

Every time a child tries, the parent should demand that he do his best for the formation of the habit; the best is the way to high character and moral action.—*Parsons.*