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# THE CANADA EDUCATIONAL MONTHLY AND SCHOOL MAGAZINE.

MAY, 1895.

## THE ECONOMICS OF EDUCATION.

BY CHANCELLOR BURWASH, VICTORIA UNIVERSITY.

RUSKIN has taught us to borrow from the sphere of industry, and the production and distribution of wealth, the word economics, and apply it to the production and distribution of spiritual things. It is true that his spiritual things were embodied in the material form of pictures and statuary, and as such were a part of the nation's wealth. But we will venture to press the word a step further. We cannot indeed exchange our sons and daughters for gold as we can our paintings and marbles or bronzes. But none the less we feel that they are our most valuable treasures, and if we cannot part with them for value, they can none the less produce for us wealth, and happy is not the man alone but the country as well that hath its quiver full of them. The prosperity of any country depends upon the power of its population to make the most of its resources. That power depends upon numbers, moral quality, intellectual quality and physical quality. As to numbers, numbers of poor quality become not a help but a dead weight on the prosperity of the country. While numbers are desirable for the full development of a large country like ours, with almost unlimited resources of field, forest, fishery and mine, our first duty is to see

to it that the quality is up to standard, up to the highest practicable standard, morally, intellectually, and physically, and this is the field of education in the broadest sense. If our country is to be truly prosperous we must educate our young population just as a farmer must train his horses if they are to be of any value. And in this work the whole country has a common interest. All classes and sections of the community are one here. True prosperity consists not in one individual getting wealth by taking more than his share and thus stripping his neighbour, but in the more abundant production of new wealth in which all shall share. And to this end the entire working force of the country, *i. e.*, all its people (no drones) must be strong, strong physically, strong intellectually, strong in moral character. We have the land and we can easily get the capital if we have the strength, intelligence and energy necessary to use it. The proper all round education of our young people is the first economic, industrial, political need of our country, the most important plank in the platform of any party who desire to make this country a good land for all the people to live in. Patrons of Industry, Knights of Labour, Reformers, Conservatives, even the

the P.P.A. will make a fatal mistake if from a narrow point of view they forget the fundamental condition for the good which they seek, and they all set some good before them even if they go a long way round to get at it, the good which they all seek is bound up with this interest.

The great forces which largely do the work of raising the quality of our country's population are three or we might say four: (1) The home, upon which the physical man so largely depends for his start in life; (2) the educational or school system, which gives the intellectual nature its start; (3) the Church, which is the centre of a nation's moral life; and (4) the press, including all forms of literature, which contributes to all. It is, of course, quite clear that these forces each affect directly or indirectly the whole field, and yet each has its center at some one point of the field.

From such a point we wish to discuss the economics of education by which we understand not the relations of education to the production of a nation's material wealth, but, taking it for granted that education contributes to a nation's well-being in every direction, the principles by which we can obtain the highest results both in the standard of education and in the general distribution of its advantages.

Education is usually distinguished as primary, secondary and higher, corresponding to the public school, the high school and the university. Again the secondary and higher education is distinguished as general and technical or professional. We have thus in a complete system of education such as we find in the most advanced countries of Europe and America the following classes of schools:

1. Primary Schools. These are frequently preceded by the kindergarten, the object of which is simply, development of the power of acquiring

knowledge through the senses combined with physical development. It is supposed that from one to two years can be gained in the subsequent progress of pupils by means of this preliminary training between four and seven years of age.

The object of the primary school itself is the communication of those elements of knowledge which every man should possess for the practical work of our common life. Every person should be able to read, write, present his thoughts, spoken or written, in simple and correct English, make common arithmetical and commercial calculations, and know the proper form for simple business documents, understand the elements of the history and geography of his country and the duties of citizenship. This education is not only that which every person must have for the common purposes of life, but it is at the same time the basis of all subsequent advance in knowledge. The pupil who is to continue his studies for years and the pupil for whom this is the only school curriculum alike require this course and require that it should be thoroughly mastered, made an accurate and permanent acquisition.

2. Secondary education at once widens the sphere of thought and life. It leads a man beyond the intellectual operations absolutely necessary for the common work of life by unfolding to him first the principles upon which those operations depend. To his Arithmetic and Mensuration the pupil adds the Algebra and Geometry which unfold their scientific basis. To the simple Composition he adds the principles of Rhetoric. To his Geography he adds the elementary principles of Natural Science. Thus in every direction the student in the secondary school passes from the simple mastery of facts to the mastery of the principles upon which the facts depend. At the same time the field of facts and

processes is greatly enlarged. Geography and History are extended. The grammar of other languages is introduced. The simple reading of narrative prose is extended to the study of higher forms of literature. The field of secondary education is no longer the absolutely necessary, but that which satisfies our rational and æsthetic nature as well and which enlarges the uses of life.

3 In the same way the higher or university education builds upon the secondary. 1st.—By perfecting the knowledge of principles by adding the study of various sciences, and in our day by carrying some one of these to its present limits. 2nd.—By extending the knowledge of literature to a wider view including not only our own literature but also those of our European civilizations both ancient and modern. 3rd.—By unfolding the laws of thought upon which all our knowledge is based and of moral action upon which all human history depends.

4. In the present discussion we may for the sake of simplicity set aside the consideration of technical and professional education which is based on one or other of the three stages of general education. That the farmer, the merchant, the mechanic, the journalist, the apothecary, the physician, the teacher or the lawyer should each understand his business goes without saying. But aside from that the excellence of work of one and all of these will depend upon the average intelligence of the profession or business and upon the particular intelligence of the individual. The first problem therefore of the economics of education is: How can we elevate the average intelligence of the whole nation? Then follows the second: How can we perfect and elevate the technical intelligence of the people in the fundamental industries of the nation? Technical intelligence is based upon general and to a people of high

general intelligence the acquisition of technical intelligence becomes easy.

Addressing ourselves therefore to the first problem our answer is this:—

1. The nation must first of all have within itself the resources of the highest intelligence. The education of the individual proceeds from the lower to the higher, that of the state as a whole from the higher to the lower.

Our fathers built wisely when in the last century before they had founded a single elementary school they made provision for a university. Out among the plateaus of the Rocky Mountains there are vast stretches of desert lands, requiring only the fertilizing water to convert them into a Garden of Eden. Men can never accomplish that however by carrying water by the pailful from some little rill. They go to the great lakes lying up amid the melting snows of the mountains and thence they carry great streams which, subdivided into rills, water and fertilize all the plain. So must it be in the work of the education of a nation. The perfection, the power, the very life of the whole work depends upon a strong, rich, abundant source of all needed learning at the fountain head. From this not only teachers but leaders of the highest intelligence and culture are continually flowing out into all the fields of living activity in the country. The nation without a thoroughly efficient university system of its own can only borrow its learning from other lands. This it may do partly through books. But all educators understand the serious and almost fatal defects of mere book learning especially in all the sciences which deal with material nature. It may import learned foreigners to fill its educational offices. But this will always prove expensive. If to-day we were obliged to import our high school teachers from abroad I venture to say that to obtain anything like the same quality the average salary would need

to be increased 50%, i. e., from £200 to £300 sterling, an increase in the item of high school salaries alone of \$260,000 or more than twice the present cost of our provincial university and more than the combined cost of all the universities of Ontario, in fact we could cover with that also the Arts faculty of McGill. But the expense is not the only consideration. Years must elapse before foreigners can feel the interest in our country which is inbred in the hearts of our own best young men. Then from foreign lands we can rarely hope to draw the best. We must be content with second and even third class. It is only an occasional good fortune that brings us the best and then one half of them soon leave us again even when they come to fill our university chairs. If we had only high school work to offer them second class would be the very best that we could expect. Again of our university graduates not more than twenty five per cent. become teachers. The rest becomes our ministers, lawyers, doctors, engineers, journalists, merchants, bankers, farmers and manufacturers and members of Parliament and civil servants. i. e. the country that maintains its own universities in thorough efficiency not only lays the most economical foundation for the highest efficiency in its entire educational work, but provides itself with an abundant supply of men of the broadest intelligence in all other walks of life beside. It may be thought that we can best supply our educational ranks by sending our own young men abroad. But here again we must look at the practical results. First of all, if we send them to the United States we shall lose a large part of the best of them. If we send them to Europe we at once double or treble the expense of higher education, we deprive the country of the educated work of many of its brightest minds who happen to be born in comparative poverty

and again we increase the expense of our whole high school work to an extent more than sufficient to maintain our university system at home and still fail to secure for our country the rich and varied supplies of higher intelligence which our own university system affords.

It thus appears that whether we study efficiency, abundance or economy in the provision of our educational resources for the country we must lay the foundation for the intelligence of the country in a thoroughly efficient university system. To employ another figure the university is the very heart from which the vital fluid is sent to all the extremities of the body politic and only a feeble embryonic circulation can be maintained even from the heart of the mother country. Again, as the heart gathers in the blood from all parts of the body to send it forth renewed with vital energy so the university becomes the center which attracts to itself the best minds from the furthest extremities of our national life to send them forth again to strengthen and enlarge the intelligence of the whole people. In no country is this circulation more important than in one like ours. By it the unity of national life is maintained, The blood that in its last round supplied the foot in its next may feed the hand or eye or brain. The free, untrammelled, vigorous circulation of the units of national life, of which the university is the center, saves us more effectually than any one other force from the evils of class rule, whether that class be an hereditary oligarchy or a plutocracy. No country can make a wiser investment for its educational future than in the founding of an efficient and freely accessible university.

But having thus posited the university as the fountain head or heart of the educational system it is easy to see that the fountain can be efficient

only through distributing channels which reach from the fountain head to the extremities. We have a magnificent reservoir on Rose Hill but from it the distributing mains must traverse all our streets and the branches must enter every house if we would have abundance of water in all our dwellings. Some have indeed thought that we can as a public dispense with our high schools. But the high schools are the universities of the mass of the people. The county collegiate institute is the center of knowledge, the fountain head for all the country round, the heart of all its educational enterprise and vigour. Wherever in this Province you find a secondary school of the highest class you will find the entire system of primary schools in higher efficiency around it. A little less than 2,000 of the young people of this Province each year reach the university, 23 000 reach the secondary schools and there drink in something of the richer learning which comes from the university fountain, while these in turn distribute knowledge to 450,000 pupils of our primary schools. Could the 450,000 be educated as effectively or as economically without the intervening link of the 23,000. Is not every man stimulated by the example of his

neighbor standing on a higher platform? Shame on the petty spirit which says, "Away with the platform, the common level is enough for me; if my neighbor wishes to get up he must use his own stilts." No, if the platform is there you yourself may climb. But if you tear it down some few will find stilts and walk over the heads of the common level. No more short-sighted, selfish, unpatriotic policy was ever dreamed of than that which would cut out the very heart and sever the very arteries of our national education by cutting off its universities and higher schools. And why? To save expense? We pay four millions a year for the support of our public schools. We pay about one-sixth that amount for the support of our secondary schools. Cut off the secondary schools or increase their cost to the pupils and in ten years time you will be paying more than the difference in increased salaries for your public schools. No, make all higher education easily accessible, because inexpensive, to every child of the nation, and it will flow on and out as freely, richly and abundantly as it is given to all the people.

Of all combats the sorest is to conquer ourselves.—*Thomas a Kempis.*

## LITERATURE AND ART.

BY PROFESSOR WM. CLARK, M.A., D.C.L.

(Continued from last issue.)

THE art of Rome, like its literature and more especially its philosophy, was little more than an imitation of Greek models. Its architecture, indeed, has some claims to originality; but to this we shall have to refer in another connexion. If we had time, we might show that the movements in Roman art corresponded essentially with the movements in thought and life.

We shall find, however, more copious illustrations of our theme, when we pass on to the Middle Ages and discuss the origin and development of Christian art; and of this, first of all, in Architecture.

There are three great types of Architecture, represented by the lintel in Greek Architecture, by the Round Arch in Roman, and by the Pointed Arch in what we call Gothic

Architecture. The late Dr. Freeman, in an early work of his, which did not deserve to be forgotten, observes that the Greek appeals to the intellect, the Roman to the will and the Gothic to the heart. And this is precisely what we should expect, since the Greek made his chief appeal to the reason and has never been excelled in subtlety of thought, whilst the Roman was the born and predestined ruler of men, and the Gospel, Christianity, which produced the Gothic Architecture, makes its appeal indeed to the intelligence and the will; but also and chiefly to the affections. Christian and Mediæval art has its beginning in architecture, scarcely touches sculpture in the form of Statuary, and has its consummation in painting. It is, therefore, first of all, of the connexion of architecture with the progress of human thought and intelligence that we have to think; and here the correspondence is close and striking.

Greek Architecture did not lend itself to Christian uses in early times. Not until the period of the Renaissance do we find it fusing with Roman, and, thus fused, employed in the building of Christian Churches. Even then we can hardly say that it is inspired with a Christian sentiment. Few religious hearts will be touched by St. Paul's in London, or St. Peter's in Rome, as they are by Westminster Abbey, and Notre Dame of Paris or of Amiens.

It is different with the Roman Architecture which became transformed at an early period, and in that transformation may be said to have constituted the beginning of Christian architecture.

Roman architecture assumed two forms under Christian influence. (We are keeping out of sight for the present the Græco-Roman architecture of the Renaissance). The earliest form originated in the East and is known as the Byzantine, the latter,

with which we are much better acquainted, is called by English writers the Norman, by French and German writers, Roman. Both are called Romanesque, as being derived from the Roman, and having this in common that they use the round arch. The principal difference consists in the decorations—those of the Norman being raised, executed with the hatchet and the chisel, those of the Byzantine being inlaid after the manner of Mosaics. The latter was found in the East and in Italy; the Norman in France, Germany, and England. In architecture France usually takes the lead, whilst Italy lags behind. The type of building which appears in France about the middle of the twelfth century is about 40 or 50 years later in England, and often much later in Italy. Italy will, by and by, pay back her debts in art, when the glorious era of her painters arrives.

The beginnings of modern Christian architecture should perhaps be sought in the Saxon, belonging to the tenth and the earlier part of the eleventh century. But the specimens which still remain of this style, altho' some of them of great interest, are small in number, and are valuable chiefly as illustrating the development of the art of building in regard both to material and form. For example, it is plain that some of the oldest Saxon buildings are, in form, mere reproductions of earlier wooden or wooden and plaster buildings in a more enduring material. In the older buildings a frame work of wood was used to bind together the rubble or brickwork of the walls; and in those which followed them the wooden beams were represented by raised courses of stones which became the rudiments of the buttresses in buildings still later. But it is to what we must call the great age of the eleventh and twelfth centuries that we must look for that

splendid outburst of architectural art which is embodied in what we term the Norman style. This style was not a mere foreign importation into England. It sprang up simultaneously in England, in France, and in Germany.

In Normandy we have the two noble churches in which the Conqueror and his Queen, Matilda, were laid to rest. The earlier now generally known as the *Abbaye aux hommes* (St. Etienne, I think) is simple and grand—the first of all the French churches, built with two western towers, and thus furnishing the type for all the great ecclesiastical buildings in that and other countries. The later the *Abbaye aux dames*, in which Queen Matilda still rests undisturbed, having, in that respect, better fortune than her husband, is of a lighter and more ornate style, and remains in the memory of the tourist, and, I doubt not, of the artist, a thing of great beauty. Mention should be made of the beautiful Norman nave at Bayeux (the choir is later and well deserves study). In Germany we have three well-known and noble specimens of this style, the Cathedrals at Mentz, at Worms, and at Speyer. The last mentioned of these, the earliest and the largest, Speyer, is the burial place of eight German Emperors, and has been grandly restored by King Ludwig of Bavaria. Splendid painted windows have been inserted, and the whole building decorated in the most elaborate manner. I suppose it is all quite right; and I cannot profess to have much sympathy with the Dry-asdusts who look upon our ancient churches as monuments and museums, and profess to \*shudder when any changes are made in them, to adapt them to Christian worship in the present day. Still one wanted Speyer to look a little older, however much he might appreciate and admire the devotion which had lavished so

much interest and toil and money upon it. Worms is the very reverse of Speyer, almost neglected—at least when I saw it—yet of great interest as a magnificent specimen of this noble architecture; and the same may be said of Maintz. Before leaving Germany reference might be made to the most sweet church of Strassburg; but it is later—transition from Norman to early pointed.

In England we have no cathedral built throughout in the Norman style, altho' some of the parish churches belong altogether to this period. Indeed, with the exception of Salisbury, there is not one other cathedral church in England, built from end to end in the same style; and this, partly because the building was generally extended over a long series of years; and few architects ever thought of continuing the style of their predecessors, believing their own to be better [a notable exception is Westminster Abbey]; and partly because, as these foundations grew more wealthy, it was customary to pull down the ancient Quires and build larger ones in the style of the period. Thus in the grand nave of Gloucester Cathedral we have an imposing specimen of the architecture of the eleventh century—the Norman part of the church is said to have been completed in 1100—only a generation later than the conquest; whilst the choir and tower belong to the 15th century.

In Ely and Peterborough we have examples of the flat roofs of the early Norman buildings, which were subsequently supplanted by the arch and the vaulted roof.

One of the most splendid examples of Norman is found in the nave and choir of Durham with its grand columns. Norwich, too, is largely Norman, except the clerestory and the spire, and so is Chichester. Altho' Canterbury, in its older portions

the choir and presbytery, is rather transition than Norman, it may be mentioned as one of the most lovely examples of what we may call Norman influence in architecture.

It would not be quite easy to give a particular description of this noble architecture without drawings; but we may note among its characteristics the round arch, the massive pillars, sometimes plain, sometimes carved and decorated, the capitals sometimes almost Doric in their simplicity, sometimes ornamented in the most elaborate manner, and particularly the beautifully carved doorways and windows, often deeply recessed, and covered with the richest sculpture. Among the examples of this kind the visitor to Oxford will at once think of the western and still more of the southern doorway of the Church at Iffley, about two miles distant from the city.

It is not quite easy to satisfy oneself with these few casual remarks on so great a subject as Norman architecture. But it is necessary to say something of the other productions of the age to which it belongs. And here assuredly we find that these splendid works of art were no mere historical accident, but the product of a period rich in great men and great thoughts and deeds.

The first crusade took place whilst the first great Norman churches were being completed. The same period was the age of William the Conqueror, of Pope Gregory VII (the mighty Hildebrand), of Urban II., the preacher, with Peter the Hermit, of the first crusade, of Frederick Barbarossa and Thomas Becket.

Among the writers of the period we note Berengarius of Tours, under whom the theological school of that place rose to great eminence, the most famous opponent of the doctrine of Transubstantiation; and beside him his more famous opponent Lanfranc, the first Archbishop of Canterbury

after the conquest, with a goodly number of contemporaries not unworthy to be named with them; among whom towers, high and pre-eminent, the great Anselm of Canterbury, a native of Aosta, in Italy, and the successor of Lanfranc, first in the Abbey of Bec, and afterwards in the primatial chair of Canterbury, Anselm, who has sometimes been described as the greatest theologian the Church of England ever possessed.

It would not be easy to form an estimate of the greatness of intellect, the beauty of character, or the extent of the influence of this great man, who has been called the first of the schoolmen. As Abbot of Bec he was distinguished alike for his piety, his humility, his affectionateness, and his practical wisdom. Made Archbishop of Canterbury by William Rufus in opposition to his own earnest protest, he was drawn into repeated disputes with a King who regarded himself as absolute dictator and proprietor in Church and State. But the red King found that with the gentle Anselm it was the iron hand in the silken glove. Great, however, as Anselm was as a man, a monk, a bishop, it is as a theologian that he is chiefly known to posterity. He has been designated with truth as the Augustine of the Middle Ages, and the continuer of the school of that great Father. Among several works of great merit should be specially mentioned his best known treatise: *Cur Deus homo*, "Why God became man," a work which not only forms one of the links in the great chain of Pauline doctrine, but which may be said to form the transition from Augustine to Aquinas, and to have largely determined the whole course of evangelical theology down to the present day—more especially in regard to the Incarnation and the Atonement. Only a little later than Anselm, the first of the

Schoolmen (1033-1109, Archbishop, 1093), comes the great doctor and saint, who has been called the last of the fathers, Bernard of Clairvaux (1091-1153), and beside him (about 12 years older) the celebrated Abélard (1079-1142), at whose tomb, in Perè la Chaise, so many tears have been shed over his ashes, and those of Héloïse. Of the intellectual greatness of Abélard there has never been any question, altho' the orthodoxy of his opinions was denied by Bernard and others of his contemporaries. A favorite motto of his will reveal something of his strength and of his weakness: "Dubitando enim ad inquisitionem venimus, inquirendo veritatem percipimus." "By doubting we come to inquiry; and by inquiring we arrive at truth." And, if a sentence like this illustrates the dialectic spirit and method of Abélard, equally does one of S. Bernard display the sweet mystical spirit of that great man: *Tantum Deus cognoscitur, quantum diligitur. Orando facilius quam disputando et dignius Deus quaeritur et invenitur.* "God is known just as much as he is loved. More easily and more worthily is God sought and found by prayer than by disputation." Hardly ever has there been a man in the Christian Church whose influence has been more extensive and more profound. Whether it was a quarrel which had been stirred up between the Kings of the earth, it was Bernard who was called in to arbitrate and to end the strife. Or if it was a heresy that had arisen, or a commotion that had to be appeased, the mellifluous eloquence of the holy abbot of Clairvaux was invoked to silence the adversary or to quiet the multitude. When a successor was elected to fill the chair of Peter it was the nominee of Bernard that was chosen. It is not easy for those who have felt the charm of one whom posterity has commemorated as the mel-

liffuous doctor, to break away from his presence and influence. Sentences and passages of ravishing beauty, in his writings, come back to the memory and kindle and soften the heart. One such from the treatise on the Love of God (*De diligendo Deo*) comes back at this moment. But time and space forbid; and with a glance at some other names of the same period, Bogo of S. Victor and others of his school, Rupert of Dentz, John of Salisbury, and, greater still, the renowned Master of Sentences, Peter Lombard, the disciple of Abélard and Bernard, the theological teacher of the 12th and 13th centuries—even of the great Aquinas himself—I say, with a glance at these, with whom we well might hold converse, we leave them, and pass away from the 11th and 12th centuries, onwards to another far greater, and one of the greatest in the history of the world,—great in thought, great in action, great in art,—the 13th Century.

Where shall we begin? With the churches, or the rulers, or the legislators, or the theologians, or the men of letters? It is not quite easy to decide. But we will leave art for the last place; for it would be difficult to find room for anything else, if we took this first. Let us then begin with the men of action, the men who won for Englishmen and for mankind at large that reasonable, constitutional liberty, without which no people could be either good or great. Early in the century comes the great Archbishop, Stephen Langton, with the barons of the kingdom behind him, demanding of the vicious and perfidious John that he will restore to them the laws of their fathers, the laws of good King Edward, and that he will give them some better guarantee for them than his own untrustworthy promise; and they wrest from him the great Charter, the foundation of all our constitutional liberties, at least in written form.

Half a century later, another great Englishman, of French extraction, Earl Simon of Leicester, the younger Simon de Montfort, with another great bishop, Robert Grossetete of Lincoln for his counsellor, lays the foundation of the English Parliament, in its two houses, the type of every constitutional legislative assembly at this time existing on the face of the earth. How can we think of Earl Simon without being reminded of one greater, even the greatest of the Plantagenets, who, having learnt the art of war from the great Earl, beat him at Evesham,—that Edward the first, the *Malleus Scotorum* (Hammer of the Scotch), who has, in so many ways, left his impress upon the history of England—nor, while we think of the great English King, need we forget the Scottish patriots and heroes, his contemporaries—Wallace and Bruce. To France belong S. Louis and other great names on which we must not linger. There were giants on the earth in those days; and we have but glanced at them; nor can we linger longer in this department. We have spoken of the men of action. Let us turn to the men of devotion and of thought.

For the 13th Century it would have been sufficient honour, from the religious point of view, if it had only produced S. Francis of Assisi, the founder of the Gray Friars, or Franciscans, or Minorites, and S. Dominic, the founder of the Black Friars, or Preaching Brothers, or Dominicans. Whether Dominic was a persecutor or not I will not decide, the Abbe Lacordaise may satisfy my hearers on that point. But it was a great age which was the mother of such men and such movements. Not only were their own lives pure, elevated, self sacrificing, but they had a long line of descendants of whom any church or country might be proud. (Dominic, 1170-1233—canonized 1234; Francis 1182-1226—canonized 1228.)

And some of the children of their order bear names as illustrious as their own, and are separated by no great interval from their time.

Before passing to them may I mention St. Elizabeth of Hungary, wife of the Margrave of Thuringia, whom Kingsley has commemorated in his *Saint's Tragedy*? And that I may connect her name with art, I will remind you of the church raised as a memorial around her shrine, the Elizabethen Kirche, at Marburg, on the Lahn, according to Dr. Freeman, one of the noblest of Gothic churches.

One of the greatest of the Franciscan order was Roger Bacon, born in Somersetshire in 1214, whose great work has been called by an eminent man of Science, "at once the encyclopædia and the *Novum organum* of the 13th Century." His learning was universal, not only embracing Greek and Hebrew little known in those days, but the largest acquaintance with Science in all its departments. Bacon was hardly of the typical saintly character, as he spoke somewhat contemptuously of various of his contemporaries, because of their ignorance of Greek. More than once he was imprisoned, his scientific attainments having exposed him to the suspicion of practising magic.

Prominent among the theologians of the Franciscan order stand Alexander of Hales and John of Fidenza, generally known as Bonaventure. The former, an Englishman was known as the Irrefragable Doctor and King of Theologians on account of the breadth and depth of his theological spirit. Still more famous was the Italian Bonaventure, known as the Seraphic Doctor because of his almost angelic purity. He was a disciple of Alexander of Hales who said of him that he was *Verus Israelita, in quo Adam, non peccasse videtur*; "A true Israelite in whom Adam seems not to have sinned." There is a beautiful atmos-

phere of mysticism surrounding all his works, the mysticism not of indistinctness of thought, but that which is the natural expression of a heart overflowing with the love of God.

Still greater is the reputation of the Schoolmen of the Dominican order, and first among these stand Albert the Great, (born 1193), and Thomas of Aquinum, (born 1227). The former (Albertus Magnus) taught theology at Cologne with such success that the crowds who came to attend his lectures grew to the dimensions of a University. His vast attainments in philosophy, theology, and science gained for him the name of the Universal Doctor. Albert, too, shows the influence of the mystical spirit and was the master of one who is generally considered the first and greatest of the school to which belonged Tauler, and the author of the so-called "German Theology," I mean Eckhard (d. 1329).

But of all the Schoolmen confessedly the greatest was S. Thomas Aquinas, known as the Angelic Doctor (1227-1274). Educated in France and in Cologne, under Albert, he taught for two years at Cologne, and proceeded to his Doctor's degree at Paris. He died at the early age of

47, was canonized forty-nine years after his death by John XXII. and declared by Pius V to be the fifth of the Doctors of the Church—that is, next after Jerome, Augustine, Leo, and Gregory. In Thomas the profound theologian was found united with the eloquent preacher. His great work the *Summa Theologica* is a miracle of acute and profound thought, a storehouse of theology and religion, which was erected by the order to which he belonged as a new test of orthodoxy.

Duns Scotus, who was born about the time of the death of Aquinas, known as the Subtle Doctor, in various ways opposed the teaching of S. Thomas, and his cause being espoused by the members of his order, the Franciscans, there began those long-lived controversies between Thomists and Scotists, Realists and Nominalists, which lasted in full vigour down to the Reformation, and can hardly be said, even now, to have come to an end. Belonging alike to the sphere of literature, of art, and of religion, we have the sweet *Stabat Mater* and the awful *Dies Iræ*, monuments of the depth and intensity of human thought and emotion in this age.

(To be continued.)

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## THE VALUE OF DEPORTMENT TO THE TEACHER.

BY WILLIAM SCOTT, B.A., NORMAL SCHOOL, TORONTO.

### I.

WHAT is deportment? It is carriage, conduct, management, demeanor, or bearing viewed with reference to the proprieties of intercourse. Deportment is said of those exterior actions that have an immediate reference to others.

It will be admitted that each has his own peculiar manner—that each is surrounded by his own subtle, invisible influence, which is as diverse in its manifestations as are the persons themselves—that, like the earth, each has an atmosphere all his own—an aura—an atmosphere, too, that, like the natural one, is not seen but felt.

It will also be admitted that this manner or bearing is merely the outward expression of what is passing in the soul—that an earnest, sympathetic man moves in an atmosphere of sympathy and earnestness, begotten of these qualities of his nature; that a frivolous, careless manner indicates a flighty disposition; that a boorish manner points to the absence of “an inborn grace that nothing lacked of culture or appliance.”

I know there may be seeming exceptions to this law. I know it is quite possible to assume a manner for an occasion, or for a particular purpose at variance with one's disposition. The polished Lord Chesterfield and the æsthetic Oscar Wilde, of sunflower fame, are examples illustrating the possibility that one “may smile and smile and be a villain.” We all recognize that there are shams in the world—persons who at times put on company manners—but in the school-room the intuitions of the children ruthlessly tear down this veil of sham, and at once reveal in all its hideous hatefulness, the hidden nature of such a one. To such, fine airs are merely a veneering.

However, with the majority of people, the outward act reveals the true disposition. The considerate conduct, the courteous manner, the unselfish act, the grace of word and deed, all reveal the true lady or gentleman, the mainspring of whose conduct is a soul considerate, self-respecting, upright and hallowed by the memories of deeds done from the pure and gracious workings of this beneficent spirit. Such must have been the secret of Sir Philip Sidney's conduct, who could forget his own death agonies to perform one more unselfish act to a dying comrade in arms—an act, too, all the more to be wondered at when we remember the disparity in rank, between the knight and the common soldier. In such,

good manners are the genuine wood not the polished veneering.

Without further illustration, I shall take for granted that, in general, manner, deportment is the handwriting of the soul; that conduct is but the revelation of character, but the symbol of the inner man.

## II.

I come now to consider more particularly some of the outward manifestations of proper deportment.

(1) Proper Deportment shows itself in self-respect. The man of good-breeding—the courteous man—not the sham—is sure not to be lacking in self-respect.

Conscious of the rectitude of his purpose, he is of necessity true to the best that is in him. The consciousness of responsibility for the comfort, success and happiness of others, results in an added feeling of self-appreciation and, to the well-balanced mind, a consequent self-respect, for self-respect, like every other quality of the mind—good or bad—“grows on what it feeds.”

I have placed self-respect at the head of my list of the outward manifestations of proper deportment, for, to me, self-respect is the foundation of all true upward and onward progress and to its absence may be directly traced much of what often surprises us in the conduct of others.

Carelessness of personal appearance, general untidiness of dress and surroundings, the use of improper language, the frequenting of places of doubtful odor, associating with persons of evil repute—in short, general grossness of conduct can always, it seems to me, be traced to a lack of self-respect.

On the contrary, attention to personal appearance, cleanliness of person and tidiness of dress, carefulness of word and tone of voice,

consideration for the rights of others, due appreciation of the Golden law of Conduct, "Do to another as you would have that other do to you," all spring from a manly respect for oneself—a motive, too, that keeps self completely out of the question and thinks only of the feelings and interests of others.

(2) Deportment shows itself in *courtesy*, or the external manifestation of a right spirit towards others.

This springs from a proper appreciation of the rights and feelings of those with whom one is brought into contact. It manifests itself in the deference paid to others by the little nothings which after all mean so much—in the thoughtfulness for the comfort, happiness and success of those with whom we come in daily contact—in the consideration one shows for the rights of these—in the anxiety to place them at their ease—and in the entire forgetfulness of self. It completely ignores self and seems to live only for others, but while doing this it imparts geniality to the person, graciousness to his manner, and surrounds him with an atmosphere of sympathy, earnestness and cheerfulness.

(3) Deportment shows itself in the grace of manner—in the grace of speech—in the ease with which one carries himself on all occasions, even the most trying. It is easy to be dignified and gracious when all is going well at school, but proper deportment requires that one shall manifest on all occasions that *suaviter in modo* which often shows itself best in the *fortiter in re*.

The teacher who has the genuine quality, not the spurious veneer, will never be coarse, vulgar, or overbearing in his treatment of even the most graceless. Surely because the pupil is coarse, this is the greater reason the teacher should be refined. His voice will never be raised in

expostulation or anger. He will never be guilty of those lapses of good form which irritate and alienate at the time, and subsequently become matters of jest and ridicule. But there is culture in his voice, in his speech, in his posture, in his walk, in his dress—everything he does, even in the most trying circumstances, is instinct with kindness and consideration and these springing from the genuine source of all refinement, a true manhood or womanhood, render him an unrivalled educator—of such a one it can truthfully be said, "To know him is a liberal education."

### III.

The following is a partial and brief enumeration of what a proper deportment does for the teacher:—

(1) It causes him to so regulate his conduct, his goings and comings, as to secure the esteem and trust of the wisest and best in the neighborhood. Thus he becomes an example of all that is right and proper both in school and out of it. His influence is thus greatly widened and deepened, for, as Prof. Blackie said, "No kind of sermon is so effective as the example of a good man."

(2) The unselfishness of conduct that springs spontaneously from the properly regulated man or woman causes such to consider the well-being of others before his own convenience, hence he is extremely careful of his work. He is always exact—always accurate. He keeps himself abreast of the times, so that his pupils may receive the best he has. This is true courtesy—and in this case his reward is received at once for what is best for the pupil is assuredly best for the teacher.

(3) Remembering the words of Horace. "If thou shouldst have me weep, thou must begin by weeping," he is the perfect embodiment in his

own person of all he would like his pupils to be—punctual and regular, earnest and impressive, enthusiastic and considerate, truthful and devoted.

(4) Proper demeanor induces a self-satisfied frame of mind, which results in a cheerful hopeful spirit; causes one to look on the bright side of school work, begets a good uniform temper, prevents one from giving way to undignified anger or wasting time in irritating scolding, restrains one from committing those petty, annoying things which exasperate and provoke the pupil yet do no good; and above all prevents one from being capricious, vacillating or spasmodic. True dignity and courtesy are enemies of that besetting sin of many teachers—spasm.

(5) Proper demeanor is a great aid in the prevention of school troubles and we all recognize the fact that prevention is better than cure. The teacher of fine sensibilities recognizes with far greater ease the rude word, the impudent look and with all can see beneath the surface and discern the motive far better than the one who is not so blessed—thus he is in a better position to check rising disorder and his intuitions being more refined and sensitive than those of his less fortunate brother, he can deal much more skilfully with all cases of rudeness, boisterousness, failure to show proper respect to others, etc.

(6) Proper demeanor insisting on the teacher regarding his pupils from a proper standpoint causes him to be considerate of their conduct and appreciative of their efforts. This is the best mode of getting one to put forth effort in his own behalf, and as we all know, self-exertion is at the foundation of all true education.

Hence the best way to train self-educating, self-reliant pupils is to place them in a school whose presiding genius is a man with the spirit and feelings of a Sir Philip Sidney or

Pestalozzi—a man who is “everything for others and for himself, nothing.”

We are all willing and ready to work for those whom we know will appreciate our efforts at their true value, but, on the contrary, work is irksome and exertion not to be thought of, for those who nag and worry us and who have yet to learn the stimulus that accompanies the appreciation of honest effort.

(7) Since proper demeanor imparts to his manner dignity and skill and avoids worry and undignified haste—hence the pupils impressed by his superior bearing have confidence in him and thus maintenance of proper order and discipline becomes an easy matter.

Again, as proper deportment is always the result of earnest training and thus a habit—hence the teacher is self-controlled. He is never taken off his guard. He never loses his self-possession. Thus his pupils, coming to regard him as a person of great wisdom and the embodiment of all that is right and proper, find no trouble in consciously doing the right thing at the right time and this, it seems to me, is the essence of order.

(8) Co-operative submission to authority and implicit obedience are easy for a pupil who is under a teacher possessed of such characteristics. The pupils really try to anticipate the wishes of their teacher and mere suggestion is all that is necessary to guide the self-direction of the pupils.

To produce this foundation virtue—obedience—I know of no way so effective as for the teacher to bring into the school day by day a large, sweet nature—in whose heart the fires of youthful enthusiasm are constantly kept burning and from which courtesy has forever expelled blighting, nipping, repressing cynicism. It is easy for such pupils to become

law-abiding, law-respecting members of the community and daily to grow more and more obedient to constituted authority and more and more reverent of the works of the creator and thus ultimately to find themselves in humble submission to the perfect will of the Heavenly Father.

Again obedience is rendered prompt and easy by the confidence which the parents have in their teacher—a confidence begotten largely by that benign influence which a proper demeanor causes to emanate from him. Hence at school his work is much easier and far more effective for this confidence induces the parents to say kindly things of him and so the children are ready—nay anxious—to anticipate his slightest wish.

(9) Courtesy in our dealings with our friends and society generally makes us blind to the little peculiarities of conduct from which none of us is entirely free. So in school courtesy in the form of tact prevents us from noticing many things we ought not to take cognizance of at the moment; i.e., a teacher of proper courtesy, while seeing all things, says nothing, does nothing, and apparently sees nothing of the things he should not see until a fitting opportunity arises of speaking of them without giving unnecessary pain—I know of no more efficient mode of correcting many faults than this simple plan which common courtesy dictates.

Again courtesy requires that one should listen attentively to the speaker and not interrupt him. Many a teacher would be saved from much trouble and much poor teaching too by simply complying with this requisite of the true lady or gentleman.

Why should we be so impolite as to interrupt one in the midst of an answer or statement merely because we think there is—as no doubt there is—something faulty in the facts or diction.

Common politeness says let the speaker finish his answer and then the correction can and should be made. The former plan hectors and discourages the pupil, hinders him from making his best effort and represses the spontaneous exercise of self-activity, and is thus defeating its own purpose; the latter stimulates him to renewed and better efforts for the future and is thus truly educative.

(10) A well-bred man or woman does not go about in society nosing out scandals and difficulties between fellow-men, but is to their “faults a little blind,” so good breeding in the teacher prevents him from making himself ridiculous and offensive by his at times unjust suspicions. He treats his pupils like honest boys and girls and I know of no better way of making them such than by showing them you regard them as worthy of trust, whereas the opposite course tends to make them sly and sneaking—tends to develop that side of human nature from which emanates envy, malice and all uncharitableness.

(11) Good manners cause one to hide any annoyance he may feel at some unexpected occurrence. Proper deportment prevents one from worrying and fretting over the many little troubles to which we are all exposed. Hence the truly well-bred man or woman—not the venerated variety—is never seriously put out by what takes place in the school room. Common courtesy teaches them to keep their troubles to themselves, hence there is no outward evidence of annoyance.

The pupils soon discover that it is useless to play tricks on such, as they have their trouble for their pains—but how different with the other kind the following will show:—

A pupil on being asked by the principal why he had thrown a paper wad in his class replied “Oh it seems to worry her so, we can’t help it.”

I have no doubt such misconduct

did not begin at once, but the weakness in the teacher's armor induced the pupils to advance step by step in misconduct until control was entirely lost.

Fellow teachers—How true is it that the manner discloses the ability or inability of the teacher to govern and discipline.

#### IV.

I now come to consider with a little more detail the effect of the teacher's proper deportment upon the pupils. In considering its effect upon the teacher, it has already been pointed out that this quality in him induces prolonged effort on the part of the pupil and hence is a great stimulus to self-education—that it causes him to be obedient and submissive and thus lays the foundation of character; for the habit of subduing our own impulses and of constantly recognizing the majesty of law and order, and so ordering our life that our actions are made to harmonize with these, is the foundation of self-direction and leads ultimately to self-control.

This is the reason why writers like Locke and others attach so much importance to co-operative submission to authority and also why in this paper I have called obedience the foundation of virtue.

In addition to these, good deportment on the part of the teacher affects the "minor morals," such as politeness and proper manners.

By manners I do not refer merely to the finical questions of etiquette, which, as Pope says, "change with fortunes." I do not wish to be only understood as including such questions as to whether it is good form to eat with chop-sticks, or with a knife, or with the fingers, or with a fork, or whether one should pick his teeth in the presence of the class, or expectorate on the floor, although all

these are important, but also to the doing of the kind and considerate thing from the spontaneous desires of a refined and cultured nature. Such is always good form; such is always right because such springs unbidden from the milk of human kindness.

The former may be veneering only—very good in its way—which is put on for an occasion, but the latter is a part of the nature and can no more be laid aside than can one's identity.

It is difficult to alter the shape of the grown tree, so it is difficult to teach grown men and women not to offend their fellows by their lack of consideration for their feelings, by the rude word or inconsiderate act, by lack of neatness in their persons, by being squalid and filthy in their surroundings, by being wanting in reverence for authority, human and divine; but children, like the young sapling, can and should be taught consideration for the rights of others, to perform the kind and thoughtful act, to be neat and clean in their habits, and to have a horror of whatever may give offence to others, to be reverent of all that stands for authority and right, to know that "Hearts, like doors, can ope with ease,

To very, very little keys;

And don't forget that they are these,

"I thank you sir" and "If you please."

Not to think it demeaning to remove the hat on coming into a room or on meeting with one whose position makes him a leader in the community as, e.g., the minister or the teacher.

In teaching these things it is well not to confound the outward act with the inward impulse; but without the outward manifestation the good impulse, unless acted on, will soon fail to make itself felt. It will be like many another good intention—born of the spirit but never being put into execution is soon forgotten. The streets

of a certain place are said to be paved with such.

The child who is taught to feel and act these, becomes more and more self-respecting, more and more sturdily upright, and less and less likely to be tempted from the path of rectitude. The mere fact that his manners are good—that he is neat and clean—tends to raise himself in his own esteem and keep him from low vices. Many a one who placed his foot on the lowest round of the ladder by merely performing some act of kindly courtesy has climbed into power and affluence by continuing to win approval in the same simple manner.

But time will not permit me to continue. I must bring this to a close by merely mentioning more definitely the three forces concerned in imparting a proper deportment to the child.

The first of these may be called the social forces and include the influence of parents, companions and teachers. These are external and objective.

The second are internal and subjective, such as the feelings arising in the child himself from being a member of the family, school or community.

He naturally feels that he occupies a certain position—has certain duties to perform and responsibilities for which he is accountable. He has a certain line of conduct to maintain and a certain reputation to uphold.

The third are those which are inherent in the child himself. His individuality, the result of heredity.

I cannot discuss these in detail, but will simply call attention once more to the one in which we are most interested—the teacher.

As a social force the influence of the teacher is supreme. The child is early brought under his control and his influence for good or evil, directly and indirectly, is all powerful.

Directly, for it is of no small importance to his moral well-being how the pupil behaves, how he enters the building, salutes the teacher, lays aside his wraps, takes his seat, sets himself to work, comes to his recitation, etc., etc.

Indirectly because we teach whether we will or not by our acts, our speech, our manners, by what we are.

Why should a pupil be mentally and morally maimed by coming into daily contact with a coarse nature—rude in action, uncultured in speech, boorish in manners, unsympathetic in feelings?

Hence the truth is irresistibly borne in upon me that the most important thing in any school is the teacher; that while building and furniture and school appliances play a part, it is a very subordinate one to that played by the teacher in the proper evolving of character.

How fortunate the school with a Trebynius for a teacher, who, on entering the school-room, invariably uncovered his head, to honor, as he said, the consuls, chancellors, doctors, masters, who shall proceed from this school. And because he so honored these boys, is it not more than probable that some of them proved themselves worthy of this honor?

In these respects the school is merely a mirror in which the teacher can see what is best and worst in himself reflected. Then let us know ourselves by studying ourselves as reflected in the manners, habits, language and characters of our pupils.

Apropos to the foregoing is the following quotation from a speech by the late Edward Rowland Hill.

“Money is not the only wage for which men work. Nor the chief wage. They work for honor, for influence, for esteem in the community, and these higher wages will belong to the teachers whenever they are universally deserved.”

"The profession of teaching ought to be so high and so honorable that it would be sought without regard to money profit. "Till then we must expect to see the best talent go where it can earn more money, with a modicum of those higher wages besides.

"It is for us to do our utmost that the schools may not have a man or woman for teacher who is not worthy in every respect of the highest honor and esteem of the community."

In addition to the rewards mentioned above, I think he should have added one more as does the poet in the following:—

NOW AND AFTERWARD.

"Now the sowing and the weeping,  
Working hard and waiting long;  
Afterward, the golden reaping,  
Harvest home and grateful song.

Now, the long and toilsome duty  
Stone by stone to carve and bring;  
Afterward, the perfect beauty,  
Of the palace of the King.

Now, the spirit, conflict-riven,  
Wounded heart and painful strife;  
Afterward, the triumph given  
And the victor's crown of life.

Now, the training, hard and lowly,  
Weary feet and aching brow;  
Afterward, the service holy,  
And the Master's "Enter thou."

The plain rule is to do nothing in the dark, to be a party to nothing underhand or mysterious.—*Dicken's*.

Each good thought or action moves the dark world nearer to the sun.—*Whittier*.

## THE RIGHT OF APPEAL.

IN nearly all sections of the teaching profession there has arisen lately a question of appeal against personal authority. This phenomenon is, without doubt, in harmony with the times. In these days we do not easily acquiesce in a state of things in which the irresponsible will or unchecked judgment of one man decides the fate of other men. This feeling is not always due to impatience of authority, or a general belief in the equity of levelling up. It may spring simply from a desire to perfect the machinery of education, so that individual error of judgment may be automatically remedied, as the working of inanimate machinery is corrected by safety-valves, automatic brakes, Austin's lubricators, and so on.

The methods of Richard Busby,

of Westminster, of Keate, of Eton, or of any other Plagosus Orbilius of the middle ages, are, to a great extent, anachronisms. Appeals were soon settled in their day. For instance, E. Bagshawe, the undermaster of Westminster, asked the governors to give him the opportunity of proving that he was better qualified for the headship than Busby. The history of the school records that Bagshawe was dismissed for insolence, May, 1658. The offence and remedy are alike out of date.

On the other hand, when modern sentiments are applied to the management of schools and scholars, they require to be carefully qualified lest they should interfere with the necessary conditions of discipline and education. Schools exist for the sake, not of the masters, but of the scholars,

and absence of harmony and want of agreement of method or aim are fatal to the success of the school. Even Arnold would have failed to raise Rugby if he could not have surrounded himself with men after his own heart. A weak master, whether head or assistant, is not simply a neutral element in a school: he is a cause of difficulty and mischief. The evil resulting from his retention is only slightly less in degree than that arising from positive defects of moral character. Such a man should be removed, and the only question is: Who shall have the responsibility of removing him; who shall have the thankless duty?

The difficulties of the question are admitted on all sides and in regard to every grade of education. For instance, a few nights ago, Major Rasch asked Mr. Acland "whether he had considered the position of teachers who were now liable to dismissal at the will of the managers of schools; and whether he would grant them some security of tenure by permitting an appeal to the Department, without which no dismissal should be valid." In reply, Mr. Acland said: "This question has been frequently under my consideration, and I should be very glad if I could do something to mitigate the hardships which arise in connexion with this matter. It is very difficult to discover a satisfactory remedy, though the Department has given much attention to the subject. I may, however, say that I do not think a general power of appeal to the Department would work well."

In endowed schools the question has cropped up in connexion with both headmasters and assistants. The conditions of tenure of office in both cases are arranged by the schemes of the Charity Commission. There is no absolute fixity of tenure in either case. The Commission leaves it to the headmaster to judge

of the fitness of his assistants, and holds him responsible for the successful working, and often the economical working, of the school. He must keep the salary list below an assigned limit, or make up the deficiency. In some schools with small endowment he must finance the institution as well as manage it. Hence, he has not only the appointment, but also the dismissal, of his assistants. At the same time, if the governors are dissatisfied with his management, they have the power of dismissing him without reason assigned. Moreover, where there are funds, the governors hold the purse strings and annually vote the amount to be devoted to salaries. Hence the usual custom amounts to this, that the headmaster has the power and responsibility of appointing and dismissing assistants, subject to the approval of the governing body. This plan has been in operation for a quarter of a century, and has worked well. It would be very difficult to devise any single method which would better suit the very varied circumstances of the endowed schools of the country. No doubt it is true that a power in the hands of one man is always liable to abuse, but in twenty-five years probably not more cases of alleged arbitrary or cruel conduct on the part of a headmaster have occurred than can be counted on the fingers. Very little, therefore, could be gained by changing the arrangement, and the administration of the schools might very easily be enfeebled by a weakening of authority. It is very clear, moreover, that, if an appeal is to be granted to assistants against their headmasters, the appeal should not be to the governors. They know too much of the case to take up a strictly impartial or judicial attitude. If they disapprove, they have their remedy. An appeal to them would amount to little more than a challenge to them

to declare confidence, or want of confidence, in the headmaster. No good whatever could arise from such an appeal.

The Headmasters' Association discussed this question with much sympathy and great fairness at the January meeting, and came to the following resolutions :—

1. That this Association is of opinion that, in the interests of secondary schools, it is desirable that the appointment and dismissal of assistant-masters should remain entirely in the hands of the headmaster.

2. That this Association is opposed to any appeal in cases of the dismissal of assistant-masters.

Shall we conclude, then, that no appeal is needed under any circumstances? Even the headmasters admit that there may be special and exceptional circumstances in which an appeal or inquiry may be desirable. A new headmaster on joining a school might legally dismiss all the assistants simply because they were unknown to him, and in order to replace them by men of his own choosing. Indifferent or apathetic governors might have no inclination to interfere. It is true that, as a rule, popular opinion cannot be ignored, but even that is sometimes torpid as regards the rights of individuals. Such a case never has occurred, but it is possible; and, if it did occur, the dismissed masters should have the right of calling for an inquiry. Hence, when all sides are considered, there appears a residue of special cases in which injustice is possible and a right of appeal is desirable. A complete organization cannot ignore the exceptional cases. How are they to be provided for?

We have but to turn to the reasons why for so many years a scheme of registration for teachers in secondary schools has been asked for. They are (1) that teaching may be made to have the status of a profession, (2) that the profession shall manage its

own professional affairs through its own professional council, (3) that it shall purify itself by excluding incompetent and disreputable men, (4) that it shall protect and help its needy members, (5) that it shall labour to improve its own methods, and shall place at the disposal of the State its collective professional knowledge, and finally (6) that it shall render impossible the imposition of a rigid, uniform, and centralized State system which would destroy the elasticity and variety in education necessary to national prosperity. The Registration Council is evidently the right authority to hold inquiries in matters involving professional conduct, and, if there are to be appeals in such matters, it should hear them. Moreover, the regulations of the Council should set forth both the nature of the cases in which appeals may lie and the form of the report to be issued in each case after inquiry. This is the natural solution of some of the chief difficulties of the question.

—*The Educational Times.*

MY TEMPER.—As for myself, I had to strive patiently and earnestly for five years before being able perfectly to control my temper. Of course those who are not so unfortunate as to possess this natural defect, escape all the many perplexing difficulties and embarrassments attendant upon it. First of all, the teacher *must control his temper* at whatever cost. Each morning he should firmly resolve before starting to his day's work that, come what will, he will maintain his mental equilibrium. Let any teacher show to his pupils, even for a moment, that he is weak and lacking in the ability to control himself, and his hold upon the school is weakened in the same proportion, or sometimes, unfortunately for the teacher, in a multiple ratio.—*M. E. Headley.*

## EDUCATIONAL REFORM.

CAREFUL students of the history of education have noticed the fact that its reforms swing from extreme to extreme. At one time it will become the fashion to lay great stress on the training of the will. Schools will accordingly become places where children are submitted to semi-mechanical processes of discipline to the neglect of individual insight and ability to think. Gradually the pendulum will swing to the other extreme and discipline will be neglected for the intellectual self-activity of the pupils. At first it is astonishing to see this incompatibility between will-training and intellectual development. Any one would suppose that the better the school as regards obedience to rule, the formation of correct habits and the subordination of selfish inclinations to the good of the institution, the better would be the intellectual progress. "Intellectual development must be based on moral character." It does not seem possible that there can be such a mistake as over-education in the direction of morality and good behavior. And yet it has always happened that schools managed by pronounced disciplinarians become more or less mechanical in their methods of instruction and are prone to encourage verbal memorizing rather than original thought. This, too, is a matter of race.

The protest of the new education against the old education strengthens its cause by an appeal to the scientific method, and to the importance of comprehension and insight over mere verbal memory and parrot repetition. But it gets so far in some of its applications that it develops weak traits of its own. It leaves the children so much to their caprice that they fail to develop what is called character

or moral tone. They are self-indulgent and have to be amused or else do not choose to give their attention. They are great at play but good for nothing at real work. They do not respect the organization of the school in which they are enrolled and they will not respect the social whole in which they grow up. They will pass through life stumbling over themselves—not able to discriminate their idiosyncrasies from their rational aims and purposes or from their moral duties. In the end even their mastery of scientific method will not avail to save them from becoming sour and misanthropic. For they will not be able to combine with their fellow men—they will have no directive power. I do not know of any educational reform so much needed as a theory and practice of education which unites and adjusts these two tendencies—that of the old education toward will-training and that of the new education toward intellectual insight and power of independent thought.

It is the unconscious conviction of the advocates of the older education that character is more important than knowledge. This conviction steels them against the adoption of the good that the new education offers. They see something amiss in the theory of the new education. But they do not realize how fully they could unite what is good in both systems by rigidly confining their mechanical methods to discipline of will training and adopting the methods of the new education for instruction or intellectual education. The disciplinary side would retain its military exactness without harshness, for the pupil would be permitted to understand and appreciate its motives. On the other hand, in his intellectual work

the teacher would constantly press him toward original investigation, which is the highest of scholastic methods. This reform of reforms is urgently needed now, because of the increasing influence of the method of natural science and the consequent tendency to break completely with tradition. Inasmuch as the interest of the pupil is an essential item in effective education, it is held by some that there should be free election of studies, even in the primary school. "The pupil should study only what interests him." "One study is as good as another, provided the pupil pursue it with equal zeal." Here we are on the point of losing sight of the most valuable heritage of the old education, namely, the ideal of a liberal or rounded education, which

contains within it the means of opening all the five windows of the soul. For mathematics and natural science open only two of these windows, while literature opens another and history still a fourth. The fifth window is opened by such studies as grammatical syntax, logic, psychology and philosophical studies. The course of studies adopted is as a whole something psychologically complete. The reform of education that I recommend will discriminate between the individual and social elements in education and provide amply for the retention of both so as to save the moral education of the old and add to it the individuality and self-activity of the new education. —*Prof. William T. Harris, Commissioner of Education, in the Kingdom.*

### EXCELLENT RULES OF CONDUCT.

SOME years ago the late Professor Blackie penned some admirable "Rules of Conduct" for young men. He stated they had guided his own life and had contributed largely to any good work he had been able to achieve. They are as follows :

1. Never indulge the notion that you have any absolute right to choose the sphere or the circumstances in which you are to put forth your powers of social action; but let your daily wisdom of life be in making a good use of the opportunities given you.

2. We live in a real, and a solid, and a truthful world. In such a world only truth, in the long run, can hope to prosper. Therefore avoid lies, mere show and sham, and hollow superficiality of all kinds, which is at the best a painted lie. Let whatever you are and whatever you do grow out of a firm root of truth and a strong soil of reality.

3. The nobility of life is work. We live in a working world. The lazy and idle man does not count in the plan of campaign. "My Father worketh hitherto, and I work." Let that text be enough.

4. Never forget St. Paul's sentence, "Love is the fulfilment of the law." This is the steam of the social machine.

5. But the steam requires regulation. It is regulated by intelligence and moderation. Healthy action is always a balance of forces; and all extremes are dangerous; the excess of a good thing being often more dangerous in its social consequences than the excess of what is radically bad.

6. Do one thing well; "be a whole man," as Chancellor Thurlow said, "to one thing at one time." Make clean work, and leave no tags. Allow no delays when you are at a thing; do it and be done with it.

7. Avoid miscellaneous reading. Read nothing that you do not care to remember; and remember nothing that you do not mean to use.

8. Never desire to appear clever and make a show of your talents before men. Be honest, loving, kindly and sympathetic in all you say and do. Cleverness will flow from you naturally, if you have it; and applause will come to you unsought from those who know what to applaud; but the applause of fools is to be shunned.

9. Above all things avoid fault-finding, and a habit of criticism. To see your own faults distinctly will do you good; to scan those of your brother curiously can serve only to foster conceit and to pamper insolence. Learn to look on the good side of all things, and let the evil drop. When you smell the rose learn to forget the thorn. Never condemn the conduct of your fellow-mortal till you have put yourself dramatically into his place and taken a full measure of his capacities, his opportunities, and his temptations. Let your rule in reference to your social sentiments be simply this: pray for the bad, pity the weak, enjoy the good, and reverence both the great and the small, as playing each his part aptly in the Divine Symphony of the universe.

"THE REVENGE."—Many comments have been passed on the works of the late Laureate, but, if we are not much mistaken, he was never subjected in his lifetime to the ordeal of criticism at the hands of a School Board. This feat, however, has now been accomplished, and to Dundee attaches the credit of this courageous onslaught. It appears that Tennyson's "Revenge" was studied in one of the local schools, and that Her Majesty's inspector, in his report, complained of the selection on the score that there was nothing of "an educative character in the poem." And now a prom-

inent member of the Dundee School Board has vehemently endorsed this unfavourable verdict. "How any teacher," he declared, "could have asked the children to study such an empty, inane production beat him. There was nothing in it worthy of remembrance." And it is satisfactory to learn that the fatuous complacency of the gentleman who pronounced "The Revenge" inane has met with hard knocks from the local Press.—*Globe*.

THE "UNEXPLORED DESERT"  
OF SCIENCE.

[In the Marquess of Salisbury's noble address at Oxford I find the following passage: "We live in a small bright oasis of knowledge, surrounded on all sides by a vast unexplored region of impenetrable mystery. From age to age the strenuous labor of successive generations wins a small strip from the desert, and pushes forward the boundary of knowledge."]

FORWARD I send my soul  
Across the coming ages, and I see  
Science unfolding every mystery,  
And graving on her scroll

The Cosmic plan complete;  
Tracing the power that fashioned germ  
and cell,

Evolved the living form ineffable,  
Set earth beneath man's feet,

Above him rear'd the sky—  
The power that works anear and works  
afar,

That moves in mite and man, in spark  
and star,  
The Sole Divinity!

I see the outstretch'd plan,  
The chart of perfect knowledge full  
and fair;

Man of the Master's utmost thought  
aware,

And God aface with man.

St. James's Gazette. E. J. REED.

## ASTRONOMICAL NOTES.

BY THOS. LINDSAY, TORONTO.

The observer has now little more than a month during which to observe the satellites of Jupiter; the angular distance between the giant planet and the sun is rapidly diminishing so that the moons will soon be lost in the solar rays. The observations of Jupiter, during the past year, have resulted in the determining accurately of the elements of the 5th satellite; a series of measures of the planet's diameter have also been reduced with the result that it is found to subtend an angle of 36.11 seconds of arc at the mean distance of 5.2 astronomical units.

Saturn, coming to the meridian now at convenient hours for observation, is slowly passing westward and the retrograde motion may be very readily detected. On May 5th the planet is in conjunction in R. A. with Kappa Virginis, a star of the 4th magnitude, and about 13 minutes of arc south of it. Then the planet passes to the west of the star, northwards, and on the evening of May 14 will be seen in almost the same declination as the star but a full moon's breadth west. The northern surface of the ring is broadly and beautifully in view.

Venus, now so brilliant in the western evening sky, attains in May about one-half its greatest brightness. The disc being still more than half illuminated, the planet is not yet a very interesting object in the telescope. Any one who has ever observed Venus, even under the most favorable circumstances, must marvel at the long and persistent study of the planet which was necessary before even an opinion could be expressed regarding its rotation period. The amateur with a 3-inch

telescope will find it quite impossible to fix any markings upon the disc that will assist in framing any hypothesis on this question.

Mercury is evening star at the end of May, reaching greatest elongation on June 4. On the 8th of June the tiny planet will be picked up in the telescope more readily than usual as it will then be about 47 mins. north of Jupiter, in the same field of view with low power.

For some time past the sun has been an object of particular interest to the theorists, and they are many. The old question about sun spots, whether they are depressions or elevations, has been revived. Considerable space is given in the *Monthly Notices* of the Royal Astronomical Society to a discussion of the cavernous theory. Rev. Father Sidgreaves, of Stonyhurst, sums up the evidence of a long series of drawings and decides against depressions. The notched appearance of the limb of the sun when a spot is just upon it seems to be a proof of a mountainous rather than a cavernous form. The question, however, is an open one, as is also the real physical character of the spots and their cause. The sun, however, is gradually giving up its secrets; there are strong grounds for believing that the unknown element, helium, (named so for convenience) and known to exist in the sun by a line in the spectrum hitherto unidentified, exists in terrestrial water and is the same gas which has been found in connection with argon, the new constituent of the atmosphere. The mysterious line, the spectrum of the aurora, is also probably, in some way, connected with the latter.

## NOTES FOR TEACHERS.

**BANK NOTES.**—It has been stated that the invention of banknotes belongs to the Chinese. At the commencement of the reign of Hian-Tsoug, of the Thang dynasty, in the year 807 of the Christian era, and on the occasion of a great famine, the Emperor decreed that all merchants and wealthy persons should deposit the whole of their gold and silver in the public treasury, and in return there were delivered to them notes called “Fey Thsian” or “flying-money.” Three years afterwards this paper-money was called in at Peking, but its circulation continued to be authorised in the provinces.

In A.D. 960 the paper currency was revised by another Emperor, merchants being permitted to deposit their bullion in the Exchequer, and to receive in exchange notes called “running-money.” In 1021 this currency represented a value of nearly three million ounces of silver. Whether these bank-notes were printed from metallic plates has not yet been ascertained; but taking into consideration the statements made by the Jesuit missionaries that what is known as “block-printing” had been practised in China from the very earliest years of our era, it is extremely probable that the ancient Chinese bank-notes were impressions taken from engraved blocks of wood.

In what manner the mediæval European banks of deposit made acknowledgement of their indebtedness is a mystery. The first banks of deposit and exchange were established in Italy very possibly on ancient Roman lines. The early Italian “banco” was simply a money-changer’s desk or counter; and when the financier was unable to discharge his pecuniary obligations, his bench or counter was hewn in twain, and the insolvent financier was

said to be “banco rotto” or bankrupt.

As for the bank-note, it seems to have had a double origin, partaking equally of the character of a certificate of deposit and of a promissory note or bill of exchange. The acceptor of the note confided to the banker a certain sum of specie or coin, which the banker kept in his vaults, this saving his customer the expense and the danger of carrying large sums of money from place to place, at a time when Europe was almost constantly convulsed by war, and the distinction between soldiers and brigands was of the thinnest possible description.

The banks of Venice and of Amsterdam issued these certificates and promissory notes long before the establishment of the Bank of England in 1694; and the earliest notes of the bank established by William Paterson were known as “bills.” A merchant who wished to remit a sum of money to a correspondent living in some distant place proceeded to the bank, deposited so much hard cash, and received a “bill” containing a promise to repay the sum deposited on demand.—*New Zealand Schoolmaster.*

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**PROCEED BY NATURAL STEPS.**—The natural order of exercising the mental powers must be followed. There are seven “maxims” that are considered by teachers to condense important conclusions respecting the natural order of proceeding in teaching children under the age of fourteen or fifteen: (1) Observation before reasoning. (2) The concrete before the abstract. (3) Facts before definition. (4) Processes before rules. (5) From the particular to the general. (6) From the simple to the complex. (7) From the known to the unknown.—*The School Journal.*

## PUBLIC OPINION.

RELIGIOUS LIBERTY.—Lord Salisbury looks for improvement in the School Board system by an extension to other religious bodies of the privileges enjoyed by the Jews under the London School Board. For the redress of the injustice under which Churchmen suffer in having to pay for religious teaching of which they disapprove while their own schools are, so far as public aid is concerned, starved, he looks to some system that will enable a man to pay his rates for the teaching of his own religion; but he is fully conscious of the enormous difficulties that at present attend the adoption of such a plan. When we pass from principles to the ways in which they may be most advantageously carried out, we feel that we are stepping from solid ground to a footing that is more or less doubtful; but the solutions of existing difficulties suggested by Lord Salisbury indicate, with unquestionable accuracy, the general direction in which future educational legislation must move. The religious convictions of the parent must be respected, and in some way or other religious people must not be persecuted by having to bear a double educational burden, simply because they are religious. What, perhaps, is of more importance than the policy of the future is the duty of to-day. The friends of distinctive religious teaching must see, said Lord Salisbury, "that the interests and the efforts of those that come after are not jeopardised or compromised by our faintness of heart or weakness of effort." Justice must come, and it will come all the sooner by our doing all that lies in our power under the oppression of injustice. The love of religious liberty is too deeply rooted in Englishmen for them to tolerate much longer the denial to parents of the right to have

their children educated in their own faith. Already they are beginning to ask why citizens, who have no religion or are indifferent about religion, should be a privileged class, enjoying boons that are refused to other citizens, whose sole offence is that they value religion.—*The School Guardian*.

THE HOME THE UNIT OF SOCIETY.—The unit of society is the home. Enrollment that assumes to be thorough is not a registration by individuals but by families. If we were to say that the structure of society is cellular we should have to say that it is the family that constitutes each separate cell. No man, however entire, is a cell. No woman, however complete, is a cell. There is no finished cell except in the grouping of several individuals bound by the ties of domesticity. A bachelor is a dislocated fragment. His female counterpart is in the same category. It may not be their fault. It may lie in the necessity of their case. Still, all in all, it is a condition reprov'd by nature and foreign to divine intention. The strength and health of society are to be measured by the amount of affectionate emphasis that is laid on the home idea; and the wholesomeness of society is simply the sanctity of the home.—*Rev. C. H. Parkhurst, D. D., in the Ladies' Home Journal*.

THE GREATEST MISTAKE.—There is a growing conviction among the leading educators that one of the greatest mistakes we have made in our schools, public and private, is the education of the brain while comparatively little attention is paid to heart-culture. Christianity should be the basis of our whole system of elementary education, and its principles should pervade that system throughout.

GEOGRAPHY.

PROBLEMS IN GEOGRAPHY.

1. If a cold wave caused the thermometer to drop 20° in fifteen hours, how long before freezing point would be reached if it stood at 80 when the wave arrived ?

2. If this wave moved at the rate of 1,000 miles a day, how long before it would reach a place 2,000 miles to the south-east, if it came from British America, and proceeded with full force ?

3. A low-area storm is moving easterly from Chicago to Boston ; if it moves 500 miles a day, and is central at Chicago at 7 o'clock p.m., when will it probably be felt at Boston, if not diverted ?

4. A hurricane from the West Indies is advancing up the Atlantic coast at 100 miles an hour. It is central at St. Augustine at 6 p.m. When will it reach a place 200 (300, 400, or more,) miles north ?

5. One knot equals one nautical mile, or 6,080 feet. If a log book of a sailing vessel records 11 knots an hour for 6½ hours, 12 knots for 5 hours, how many feet ? If port was 1,000 miles from a certain point, and the vessel proceeded at 10 knots an hour, how long before it arrived there?—*Popular Educator.*

METEOROLOGY.

*The Thermometer* rises with the East, South east and South winds, indicating foul weather conditions, and falls with the West, North-west, and North winds, indicating clear or colder conditions.

*The Barometer* rises with the West, North-west and North winds, indicating clear air, and cooler ; falls with the East, South-east and South

winds, Indicating foul or stormy weather.

Wind is air moving near the surface of the earth in a generally horizontal direction. Above this the air motions are called currents or upper winds.

Wind is estimated by direction, force, and velocity. Direction is shown by vanes, which move easily on an elevated pole.

Wind is called from the direction whence it comes, and these are N., E., S., W., and points between.

FORCE AND VELOCITY OF THE WIND.

<i>Terms.</i>	<i>Miles per Hour.</i>
Calm.....	0
Very light breeze.....	2
Gentle breeze.....	7 or less
Fresh breeze.....	11
Strong wind.....	18
High Wind.....	27
Gale.....	36
Strong gale.....	45
Violent gale... ..	58
Hurricane.....	76
Most violent hurricane....	95

—*Popular Educator.*

MY BOOK.—“And thus my book hath been so much my pleasure, and bringeth daily to me more pleasure and more, that in respect of it, all other pleasures in very deed, be but trifles and troubles unto me.”—*Lady Jane Gray.*

Life is *effectiveness*. The live tree is the tree that bears the apples. The live brain is the brain that thinks. The live truth is the truth that makes character and action.—*Phillip Brooks.*

Celerity is never more admired, than by the negligent.—*Antony and Cleopatra, iii. 7.*

## EDITORIAL NOTES.

## EDUCATIONAL ASSOCIATIONS.

The following are the officers elected for the various Educational Associations and Departments for the year 1895-6 at the Convention held at Toronto on 16th, 17th and 18th of April, 1895.

## THE DOMINION EDUCATIONAL ASSOCIATION.

President—Dr. A. H. McKay, Chief Superintendent of Education, Nova Scotia. Vice-Presidents—Col. James Baker, Minister of Education, British Columbia; Clifford Sifton, Attorney-General, Manitoba; John Millar, Deputy Minister of Education, Ont.; D. H. Goggin, N. W. T.; J. M. Harper, Quebec; Dr. J. B. Hall, Truro, N.S.; J. R. Tuck, Fredericton, N.B.; D. J. McLeod, Charlottetown, P.E.I. Secretary—A. McKay, St. John's. N.B. Treasurer—G. W. Parmelee, Quebec. Director—Principal McCabe, Ottawa. Inspectors—J. W. McOuat, Lachute; B. de la Bruere, Quebec; J. L. Hughes, Toronto; G. W. Hay, New Brunswick; Dr. McLellan, Toronto; Rev. Dr. Anderson, Charlottetown, P.E.I.

## THE ONTARIO EDUCATIONAL ASSOCIATION.

President—Prof. Alfred Baker, M. A. Vice-Presidents—Chancellor Burwash, Toronto; W. D. Young, Guelph; Miss Bolton, Ottawa; Dr. McCabe, Ottawa; W. J. Summerby, Russell; Rev. Alex. Jackson, M.A., Galt. Secretary—R. W. Doane, Toronto. Treasurer—W. J. Hendry, Toronto.

## COLLEGE AND HIGH SCHOOL DEPARTMENT.

Chairman—Chancellor Burwash. Secretary—F. F. Manley, M.A.

## MODERN LANGUAGE ASSOCIATION.

President—Mr. D. R. Keys, University College. Vice-President—Mr. A. W. Wright. Secretary-Treasurer and representative to the Central Association—Mr. W. H. Fraser. Councillors—Mr. J. Squair, University College; Mr. T. A. Brough, Owen Sound; Mr. F. Libby, Toronto; Mr. George E. Shaw, Toronto; Miss E. Balmer, Toronto; Miss H. Charles, Goderich; Mr. W. S. McLay, Toronto; and Mr. George A. Chase, Toronto.

## CLASSICAL ASSOCIATION.

The officers for the year are:—President—Mr. J. Henderson, M.A. Vice-President—Mr. J. E. Wetherell, M.A. Secretary-Treasurer, Mr. W. S. Milne. B.A. Councillors—Mr. L. C. Smith, Prof. Hutton, Prof. Bell, Miss Fitzgerald, Messrs. Jolliffe, McMillan, and Mayberry.

## MATHEMATICAL AND PHYSICAL ASSOCIATION.

Honorary President—Prof. Dupuis, Queen's University, Kingston. President—Mr. R. A. Thompson, M.A., Hamilton. Vice-President—Mr. Fred F. Manley, M.A., Toronto. Secretary-Treasurer—Mr. C. A. Chant, B.A., Toronto. Executive Committee, the officers and Messrs. A. H. McDougall, B.A., Ottawa; R. A. Gray, B.A., London; C. L. Crassweller, B.A., Essex; M. Haight, B.A. Strathroy; and Dr. Birchard, Toronto. Dr. Birchard was appointed representative to the Central Association.

## COMMERCIAL ASSOCIATION.

President—J. A. Wismer, M.A. Vice-President—Miss C. McCutcheon. Secretary-Treasurer—R. H. Eldon. Councillors—Miss M. Aiken, W. H. Fletcher, G. W. Johnson, W

J. Dobbie, W. E. Evans, and W. Grant.

HISTORICAL ASSOCIATION.

President—W. J. Robertson, M.A., LL.B. Vice-President—T. G. Marquis, B.A. Secretary—P. McEachern, B.A. Committee—Prof. Ferguson, Queen's University; Prof. Clark, Trinity University; Miss Scott, Toronto; A. W. Reavely, B.A., Thorold; A. Patterson, B.A., Hamilton; W. I. Harlton, Toronto.

PUBLIC SCHOOL DEPARTMENT.

President—Mr. W. D. Young, Guelph. Vice-President—M. P. McMaster, East Toronto. Secretary—W. H. Harlton, Toronto. Director—J. H. Putman, Ottawa. Executive Committee—The above named officers and Miss Hendrie, Hamilton; and Messrs. L. Rees and A. Weidenhammer, Berlin. Auditors—Messrs. L. J. Clark, Toronto, and H. Ward, Guelph.

KINDERGARTEN DEPARTMENT.

Chairman—Miss Bolton, Ottawa. Director—Miss McIntyre, Toronto. Secretary—Miss Bowditch, Hamilton.

TRAINING DEPARTMENT.

Chairman—Dr. McCabe, Ottawa. Secretary—Mr. W. H. Elliott, B.A., Hamilton. Director—Mr. J. A. Brown, Whitby. And for the Model school branch Mr. Wilkinson, Brantford, Chairman, and Secretary, Mr. J. C. Linklater, Gananoque.

INSPECTORS' DEPARTMENT.

President—Mr. W. J. Summerby. Secretary—Mr. Chapman. Director—Dr. Libbey.

PUBLIC AND HIGH SCHOOL TRUSTEES' DEPARTMENT.

President—Rev. Alex. Jackson, M.A., Galt. 1st. Vice-President—Mr. Jas. H. Burritt, B.A., Pembroke. 2nd. Vice-President—Mr. J. W. Brown, L.D.S., Dunnville. Secretary—

Treasurer—Mr. Geo. Anson, Aylesworth, Addington County. Director—Mr. John Ball Dow, B.A., Whitby.

APPOINTMENTS.

This month we reprint from the *Educational Times*, London, Eng., an article on the much-discussed and perplexing question of appointment and dismissal of principals and assistants and the right of appeal in cases of dismissal for either principals or assistants. The question is a most difficult one to deal with, but it is one which requires attention and a remedy. We all know that the plan, only in vogue in young countries, of "hiring" a teacher for a year, subjects the country to a heavy annual loss. The tenure of office should be much more permanent than this. The remedy suggested by the *Educational Times* is one which, in spirit, we have commended. It seems to us a most reasonable arrangement—concession, if you will—that teachers should have a decidedly prevailing voice in matters affecting the professional standing of teachers. We commend the article, especially the latter part thereof, to the earnest consideration of our readers.

THE EDUCATIONAL CONVENTION.

The Dominion and the Ontario Associations met this year in Toronto at the same time. Every one seems to feel that Easter is the most suitable time for these conferences of all our educational workers. The Hon. the Minister of Education for Ontario is the President of the Dominion Association and members were present from all parts of the Dominion. Timely and valuable addresses were delivered by Dr. Harper, Quebec; Dr. McKay, Nova Scotia; Col. Baker, British Columbia and Mr. Adams,

Principal of Lennoxville College. The Hon. G. W. Ross gave an address to a very large audience on Wednesday night, in the course of which he explained the proposed changes in the school regulations for Ontario. There is much valuable work now done in the different departments of the Ontario Association. We hope to be able to give our readers the benefit of reading most of the papers. In this number we publish the important paper read by Chancellor Burwash, Victoria University, and also that read by Mr. William Scott, B.A., of the Normal School, Toronto. Our readers will find both these papers suggestive.

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#### PENSIONS FOR TEACHERS.

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“Provision is made very properly for teachers in their old age, after having served so many years in what is not only a most useful but an increasingly laborious profession. The Education Department’s Committee, of Britain, on teacher’s pension has presented its report. It favors the compulsory retirement and pensioning of teachers at sixty-five. Male teachers would pay £3, and female teachers £2, a year, which at sixty-five would afford in standard cases annuities of

£40 and £20 respectively. To these the State would add 10s. for each complete year of service, thereby bringing the pensions up respectively to a trifle over £61 and £41. There are 56,000 teachers, and it is calculated that the cost to the State would be about £100,000 in the fifth year after the scheme was established, about £300 000 in the fifteenth year, and about £560 000 twenty years later, ultimately reaching high-water mark at £600,000.”

The above we clip from one of our contemporaries. The spirit of it pleased us much. Ontario had a pension system instituted and carried forward by the influence and energy of the Rev. Dr. Ryerson. Nothing could show more clearly his enlightened statesmanship and far-sighted love for the educational interests of his native province. The pension system for Ontario has been practically closed for some years past. The doings of other countries show that this course on the part of our rulers was neither just nor wise.

The teaching of the years since this line of treatment was adopted seems to us to point to the same conclusion. Is there any good reason why the system of pension should not be revived?

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#### SCHOOL WORK.

##### SCIENCE.

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J. B. TURNER, B.A., EDITOR.

##### I.

SCIENCE SECTION OF THE ONTARIO EDUCATIONAL ASSOCIATION.

The meeting of the Science Section was quite up to that of past years and the number who take part in its proceedings is annually increasing. There are, however, yet many of the

science teachers throughout the province who could by their attendance and assistance greatly improve the meetings of the section. It is hoped that these will avail themselves of the earliest opportunity to enrol themselves as members and participate in the work of the Association.

Valuable papers, on various subjects, were presented by different members of the Association. The Honorary President, A. B. McCallum, Ph.D.,

gave a most interesting paper on the cell and illustrated his lecture by projections and microscopical preparations. It is hoped that in future the Association will be favored with more papers of a character similar to this one.

Mr. A. C. Chant's paper on "Work and Energy," their relation to each other, was useful, as showing the method which the writer employs in dealing with this subject before a class under somewhat different conditions than obtain in our collegiate institutes and high schools. A thoroughly practical paper, indicative of a large amount of labor in its preparation are "A Wider Botany" was read by Mr. A. Stevenson, B.A., of Arthur. Of the paper itself, nothing need be said at the present, as Mr. Stevenson has promised a synopsis of it for the Science column of the Monthly in a future number.

A paper on "Flying Machines," by Mr. Fessenden, M.A., and one by Mr. T. H. Smyth, M. A., B. Sc., on "Induction Currents" completed the more formal part of the programme.

The subject of "Practical Examinations in Science," introduced by Mr. J. B. Turner, B.A., resulted in a spirited discussion which found expression in a series of resolutions, dealing with this very important matter.

Mr. W. H. Jenkins, B.A., moved a set of resolutions dealing with proposed curriculum of science study in the High Schools. The resolutions met with considerable opposition but, in the form in which they finally passed the association, they express an approval of the changes in connection with the subjects for Junior and Senior Leaving work in Science.

A general discussion of "Professional Training in Science Teaching" took place, and much satisfaction was

felt with the statement of the Minister that he was desirous of having a model school in connection with the school of pedagogy as soon as practicable. The Association adopted a resolution expressing its pleasure at the statement of the minister and strongly endorsing his position in this respect. A committee, consisting of the President of the section, Mr. Jenkins, and Mr. McEachern, was appointed to take charge of the several resolutions adopted by the Association and lay them before the minister for his consideration.

The following officers were elected for the ensuing year:—

Hon. President, A. B. McCallum, M.A., Ph.D.; President, J. B. Turner, B.A.; Vice-President, W. H. Jenkins, B.A.; Secy.-Treas., E. L. Hill, B.A., Guelph.

Councillors:—N. MacMurchy, B. A., J. R. Hamilton, B.A., T. H. Lennox, B.A., J. A. Fife, B.A., W. H. Steven, B.A.

Representative to College and High School Department: E. L. Hill, B.A.

## II.

The following are review questions on chapters XVII-XXI in the High School chemistry:

1. Describe the physical properties and allotropic modifications of sulphur. How are the different forms of sulphur prepared?
2. Describe, in detail, the changes which sulphur undergoes as its temperature rises up to  $1000^{\circ}$  C.
3. How is sulphur dioxide prepared? Explain the reaction by means of equations. Explain the action of this oxide as a bleaching agent.
4. Explain by equations the reactions which occur in the preparation of Sulphuric Acid (see Remsen).
5. Describe the preparation and state the properties of sulphuretted

hydrogen. What are the products of its combustion in air?

6. Define acid, base, salt and state the principles of nomenclature applicable to these.

7. Explain by equations the preparation of nitric acid. Illustrate, by experiment, its oxidizing action.

8. By what experiment would you shew that nitric oxide contains one-half its own volume of oxygen? How can this fact be used to assist in determining the formula of the oxide.

9. By a reference to the oxides of nitrogen illustrate the law of multiple proportions.

10. How would you distinguish between:

(a) Sulphur dioxide and hydric sulphide?

(b) Sulphurous and sulphuric acids?

(c) Nitrous and nitric acids?

(d) Oxygen and nitrous oxide?

(e) Nitrous and nitric oxides?

11. Describe the preparation of ammonia gas. What are the products of its combustion. Explain by means of an equation.

12. How can it be shown that three volumes of hydrogen and one volume of nitrogen are contained in two volumes of ammonia gas. What important deduction can be made from this with regard to the nitrogen and hydrogen molecules?

### ENGLISH GRAMMAR.

PASSAGES FOR ANALYSIS, PARSING,  
AND QUESTIONS. SELECTED BY  
H. I. STRANG.

*For Senior Leaving, Junior Leaving  
and Primary.*

- (a) For what am I? What profits  
me my name  
Of greatest knight? I fought  
for it, and have it:

Pleasure to have it, none; to  
lose it, pain;

Now grown a part of me; but  
what use in it?

To make men worse by making  
my sin known?

Or sin seem less, the sinner  
seeming great?

Alas for Arthur's greatest  
knight, a man

Not after Arthur's heart! I  
needs must break

These bonds that so defame me:  
not without

She wills it: would I, if she  
willed it? Nay.

Who knows?

*Lancelot and Elaine.*

- (b) Thus he read:

And ever, in the reading, lords  
and dames

Wept, looking often from his  
face who read

To hers which lay so silent, and  
at times,

So touched were they, half-  
thinking that her lips,

Who had devised the letter,  
moved again.

*Lancelot and Elaine.*

- (c) But as a man to whom a dread-  
ful loss

Falls in a far land and he knows  
it not,

But coming back he learns it,  
and the loss

So pains him that he sickens  
nigh to death;

So fared it with Geraint, who  
being pricked

In combat with the follower  
of Limours,

Bled underneath his armor  
secretly,

And so rode on, nor told his  
gentle wife

What ailed him, hardly know-  
ing it himself,

Till his eye darkened and his  
helmet wagged ;  
And at a sudden swerving of  
the road,  
Though happily down on a bank  
of grass,  
The Prince, without a word,  
from his horse fell.

*Geraint and Enid.*

- (d) For me, I thank the saints, I  
am not great.  
For if there ever come a grief  
to me  
I cry my cry in silence, and  
have done.  
None knows it, and my tears  
have brought me good :  
But even were the griefs of little  
ones  
As great as those of great ones,  
yet this grief  
Is added to the griefs the great  
must bear,  
That howsoever much they may  
desire  
Silence, they cannot weep be-  
hind a cloud.

*Guinevere.*

*For Public School Leaving and  
Entrance.*

- (a) Then she, who held her eyes  
upon the ground,  
Elaine, and heard her name so  
tost about,  
Flushed slightly at the slight  
disparagement  
Before the stranger knight, who,  
looking at her,  
Full courtly, yet not falsely,  
thus returned :  
“ If what is fair be but for what  
is fair,  
And only queens are to be  
counted so,  
Rash were my judgments then,  
who deem this maid  
Might wear as fair a jewel as is  
on earth,  
Not violating the bond of like  
to like.”

*Lancelot and Elaine.*

- (b) These are slanders : never yet  
Was noble man but made ig-  
noble talk.  
He makes no friend who never  
made a foe.  
But now it is my glory to have  
loved  
One peerless, without stain : so  
let me pass,  
My father, howsoe'er I seem  
to you,  
Not all unhappy, having loved  
God's best  
And greatest, though my love  
had no return ;  
Yet, seeing you desire your  
child to live,  
Thanks, but you work against  
your own desire ;  
For if I could believe the things  
you say  
I should but die the sooner.

*Lancelot and Elaine*

- (c) When on my bed the moonlight  
falls,  
I know that in thy place of rest  
By that broad water of the west,  
There comes a glory on the  
walls ;  
The marble bright in dark ap-  
pears  
As slowly steals a silver flame  
Along the letters of thy name  
And o'er the number of thy  
years.

*In Memoriam.*

- (d) We leave the well-beloved  
place  
Where first we gazed upon the  
sky ;  
The roofs that heard our  
earliest cry,  
Will shelter one of stranger race.  
We go, but ere we go from  
home,  
As down the garden walks I  
move,  
Two spirits of a diverse love  
Contend for loving masterdom.

*In Memoriam.*

## QUESTIONS ON CÆSAR.

## BOOK V.—CHAPTERS 32-37.

I. Translate into good idiomatic English chapter 33: *Tum demum consistenter.*

1. *Trepidare.* What is this use of the infinitive called? How does it differ from the ordinary use?

2. *Quod.* What is the antecedent?

3. Classify the subjunctives in the passage.

4. *Praestabat.* Why this tense rather than *praestitit*?

5. Exemplify from the passages four affixes used in forming nouns.

6. *Impedimenta.* Mention other words you have met within Cæsar, differing in meaning in singular and plural.

II. Translate chapter 35: *Tamen tot ——— vulneratur.*

1. Construction of *ipsis, anno, viro, auctoritatis, funda.*

2. Account for the mood of *pugnaretur* and *esset* respectively.

3. *Confictati.* Kind of Verb? How formed? Give other examples.

4. *Filio.* What irregularity in declining this word?

5. Give dat. sing. and gen. pl. of *utrumque femur*, and abl. sing. and acc. pl. of *adversum os.*

6. *Interficietur.* What compounds of *facio* have *facior* instead of *fio* in the passive?

III. Translate into good English.

(a) *Practerea accidit quod fieri necesse erat, ut vulgo milites ab signis discederent.*

(b) *Sperare amultitudine impetrari posse quod ad militum salutem pertineat; ipsi vero nihil nocitum iri, inque cam rem se suam fidem interponere.*

(c) *Illi ægre ad noctem oppugnationem sustinent; noctu ad unum omnes desperata salute se ipsi interficiunt.*

IV. (1) Exemplify as many dif-

ferent uses of *qui* with the subjunctive as you can.

(2) Exemplify the use of *neu* (neve).

(3) Conjugate the compounds of *facio* with *ex, pateo* and *signum*, and give the present subjunctive active and present infinitive passive of each.

(4) Compare *alacriores, facile, ægre, velocissime, propius.*

(5) Give the perfect infinitive of *cadebat, tollunt, parcat, resistebant, disponere.*

(6) Gender of *salute, orbem, latere, luce, ordinis, femur, more.*

7. Give two examples each of indeclinable nouns, indeclinable adjectives, nouns having no singular, nouns having no plural, adjectives having no positive, adjectives having no comparative.

8. Name and exemplify six of the commonest uses of the ablative case without a verb, adjective or preposition to govern it.

V. Give idiomatic Latin phrases for:

To become aware of their approach, to attack the rear of the enemy, to leave the ranks and form a circle, to rely wholly on their valor for safety, to fight from daylight till noon, to do as they were ordered, they refused to accept these terms, to inform him of what had happened, he pledged his word to do that.

EXAMINATION PAPERS ON  
ENGLISH LITERATURE.

By C. CLARKSON, B.A., Seaforth  
Collegiate Institute.

*Junior Leaving, April, 1895.*

1. Mention some of the salient qualities of Tennyson's style.

2. State briefly a few of the leading events in his life.

3. In what respects do *The Day-*

*Dream* and *The Brook* resemble each other? In what respects do they differ? Try to give a full answer.

4. Compare *The Poet* and *The Lotus-Eaters* in as many ways as you can. Which is the more original? Which the more pleasing? State reasons as far as you can.

5. How do *The Poet* and *The Voyage* agree or differ in regard to (a) Form of Presentation, (b) Subject-matter, (c) Method of Development, (d) Intensity of Emotion, (e) Picturesqueness, (f) Impressiveness and Moral Sublimity. State your preference and assign reasons for it.

6. Explain the following words and quote if you can the lines in which they are used:—tears, bulbul, tamarisks, obelisks, Calpe, arrow-seeds, Indian reeds, red-cross Knight, wattles, galaxy, baldric, tirra, lirra, lotus, galingale, moly, acanthus, nectar, lorbord, macaw, pardy. Give the source of each word where you can.

7. Write a short note on Tennyson's blank verse, and point out its chief varieties. What are its merits?

8. Explain the general construction of *The Idylls of the King* and mark the position of *The Holy Grail* in the general scheme.

9. Quote the best 15 or 20 lines of Tennyson's poetry you know and remark briefly on its merits and on its limitations.

10. Determine whether the following extract could have been written by Tennyson, and if so at what period of his life. Give as many and as substantial reasons for your opinion as possible.

The twilight's laces fringe the sea,  
While far beyond yon mountain's  
crest

The lingering, lovely sun seeks rest,  
And life seems lost in reverie!

No sound from woodland, shore or  
lea,

Save from yon airy sea bird's nest,  
Where fledgelings greet a mother  
guest

Returned from wanderings wild and  
free.

Dark spectral fingers clasp the land  
And daylight smiles her last goodby,  
While far beyond the reverent strand,  
The vanquished hosts of evening fly,  
As night's victorious, restful hand  
Flings jeweled banners o'er the sky.

N.B.—The author's spelling is retained. (Two hours and a half.)

*Primary, April, 1895.*

1. "Mark the year, and mark the night." Give the exact date.

2. "Fond impious man, think'st thou, etc." Name the man.

3. "Since Cambria's fatal day." Name the place, give the date.

4. "Gone to salute the rising morn." Name the figure; give other examples.

"Why, then the devil give him good of it! I'll stay no longer question."

5. Scan this extract, and name the author. When did he die?

6. Name the speaker, the person addressed, and the person meant by "him."

7. Explain the meaning of "question." Why does he so resolve?

8. Give the reply to these words, properly arranged in metrical lines.

9. "The poetry of earth is ceasing never." Quote the line that rhymes with this.

10. Make a diagram to exhibit the metrical form of the whole poem.

11. "The Monarchs march'd in evil day, and Britain join'd the dire array." Who wrote this? When? Why? What is the method of developing the subject? Quote the hexameter line of the poem.

12. COMPLAINT AND REPROOF. What is the complaint?

13. Quote the reproof. Mark the scansion of the lines.

"The lake, the bay, the waterfall ;  
and thee, the spirit of them all !"

14. Who is the writer? What does he say about each of these four things?

15. "The phantom with the beckoning hand." What is meant?

16. Name the figure. State the purpose and plan of the whole poem.

17. Compare "The Forsaken Garden" and "The Return of the Swallows" in three respects. Which poem pleases most? Why?

"If your person were as gigantic as your desires, the world itself would not contain you. Your right hand would touch the East, and your left the West, at the same time. You grasp at more than you are equal to. From Europe you reach to Asia; from Asia you lay hold on Europe. And if you should conquer all mankind, you seem disposed to wage war with woods and snows, with rivers and wild beasts, and to attempt to subdue Nature. But have you considered the usual course of things? Have you reflected that, etc. Take care lest, etc., etc."

18. State clearly and definitely (a) The literary form, (b) The subject matter, (c) The method of development, (d) The artifices of construction.

19 Give your opinion about the sentence grouping.

20 Characterise the style as far as you can.

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### EXAMINATION PAPERS IN ENGLISH LITERATURE

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By MISS H. CHARLES, B.A., Col-  
legiate Institute, Goderich.

Form IV.—Chaucer.

1. Describe the personal appearance, dress and other equipment of the Squyer, the Prioress, and the Doctour.

2. Discuss the question whether

Chaucer is indulging in satire at the expense of the learned professions, and indicate the statements that might give rise to such an inference.

3. Describe Chaucer as he appeared to the other pilgrims.

4. Quote or refer to facts that show whether or not the pilgrims were a luxury loving company.

Form IV.—Richard II.

1. Trace the fluctuations of King Richard's feelings in Act III, Scene II, giving reasons.

2. Give Aumerle's part in this scene.

3. Describe York's conduct from the King's departure for Ireland till the meeting at Flint Castle.

Form III.—Tennyson.

1. Describe the course of the Voyage.

2. Compare (a) The Voyage and The Quest.

(b) Those who embarked on the Voyage, those who followed the Quest, and the Mariners in the Lotos-Eaters.

3. Describe Philip Willows.

4. Tell from what poem each of the following is taken and explain the meaning of the italicised parts.

(a) I make the netted *sunbeams*  
*dance*

Against my *sandy shallows*.

(b) By peaks that *flamed*, or, *all in shade*,

*Gloomed* the low coast and  
*quivering brine*

With *ashy rains*.

(c) Nor of those  
Who dabbling in the *fount of*  
*fictive tears*,

And nursed by mealy-mouthed  
philanthropies.

Form II.

—*Merchant of Venice*.

1. Discuss fully whether the reader's sympathies are moved on behalf of Shylock.

2. (a) Relate the part that Gratiano takes in the Trial Scene.

(b) Discuss whether the rest of those present sympathize with him in his treatment of Skylock towards the end of the Scene.

3. Was Portia's decision in the case in accordance with law and

justice? Give reasons for your answer.

4. Quote lines from the Trial Scene in which the following are mentioned; Lorenzo, Jessica, Padua, Venice, Pythagoras. Bellario.

SENIOR LEAVING TRIGONOMETRY.

BY PROF. N. F. DUPUIS, QUEEN'S COLLEGE, KINGSTON.

(Continued from last issue.)

1. (a). If an arc of 5 feet on a circle 8 feet in diameter subtends at the centre an angle of  $71^{\circ} 37' 11''$ , find the value of  $\pi$  to four places of decimals.

Take the general solution, and let  $d$  = the diameter,  $a$  = the arc, and  $\theta$  = the angle in radians and  $A^{\circ}$  in degrees. Then  $a = \frac{1}{2}d\theta$ ; and  $\theta = \frac{\pi}{180} \cdot A^{\circ}$

$$\therefore \pi = \frac{180\theta}{A^{\circ}} = \frac{180}{A^{\circ}} \frac{2a}{d} = \frac{180}{71.61972\dots} \frac{10}{8} = 3.14159\dots$$

(b) This is mere book work.

2. (a) If  $\tan A = \frac{m}{n}$ , find the value of  $\sin A$  and of  $\cos A$ ; supposing  $A$  an angle between  $90^{\circ}$  and  $180^{\circ}$ .

$$\sin A = \frac{\tan A}{\sec A} = \frac{\tan A}{\sqrt{1 + \tan^2 A}} = \frac{m}{\sqrt{m^2 + n^2}}$$

$$\cos A = \frac{1}{\sec A} = \frac{1}{\sqrt{1 + \tan^2 A}} = \frac{n}{\sqrt{m^2 + n^2}}$$

(b) Show that  $\cos A(2 \sec A + \tan A)(\sec A - 2 \tan A) = 2 \cos A - 3 \tan A$ .

Multiplying the brackets, the left-hand member becomes

$$\cos A \left\{ \frac{2}{\cos^2 A} - \frac{3 \sin A}{\cos^2 A} - \frac{2 \sin^2 A}{\cos^2 A} \right\} = \cos A \left\{ \frac{2 \cos^2 A}{\cos^2 A} - \frac{3 \sin A}{\cos^2 A} \right\}$$

$$= 2 \cos A - 3 \tan A.$$

3. (a). Let OP, OQ, OR be three concurrent lines, having the  $\angle POQ = B$ , and  $\angle POR = A$ . Then  $\angle QOR = A - B$ . Also let QP be perpendicular upon OP. The projection of the sides, in order, of the triangle OPQ, upon OR is zero.

i. e. Proj. OP + proj. PQ + proj. QO = 0

$$\therefore OP \cos A + PQ \sin A - QO \cos (A - B) = 0$$

$$\therefore \cos (A - B) = \frac{OP}{QO} \cos A + \frac{PQ}{QO} \sin A = \cos B \cos A + \sin B \sin A.$$

This method of obtaining these relations, by projection, is preferable to any other, not only on account of the importance of the principle, but because of its conciseness and also on account of its generality, and the ease with which it admits of extensions and modifications.

Thus if OP lie between OQ and OR while everything else remains the same, we readily obtain the expression for  $\cos (A + B)$ . While if we project on a line perpendicular to OR we get expressions for  $\sin (A - B)$  and  $\sin (A + B)$ .

(b) Show that  $\cos^2 A + \cos^2 (120^{\circ} + A) + \cos^2 (120^{\circ} - A) = \frac{3}{2}$ .

On account of the relation  $\cos^2 \theta = \frac{1}{2}(1 + \cos 2\theta)$ , this becomes  $\frac{1}{2}[3 + \cos 2A + \cos (240^{\circ} + 2A) + \cos (240^{\circ} - 2A)] = \frac{1}{2}(3 + \cos 2A + 2 \cos 240^{\circ} \cos 2A)$ . But  $\cos 240^{\circ} = -\frac{1}{2}$ ;  $\therefore$  The expression becomes  $\frac{1}{2}(3 + \cos 2A - \cos 2A) = \frac{3}{2}$ .

## CONTEMPORARY LITERATURE.

## "THE FOUNDATIONS OF BELIEF."

Mr. Gladstone's great name will be associated with classical studies and religious literature as well as with statesmanship; Lord Salisbury's noble address at Oxford is sufficient evidence that he himself is one of that bright band who, from age to age, by strenuous endeavour "pushes forward the boundary of human knowledge, and wins a small strip from the desert of the unknown;" and now the Hon. Arthur Balfour is author of a book on *The Foundations of Belief*, which few men could have written. It invigorates the reader by the power and grasp with which it is instinct and contains passages on which the memory dwells with delight. It will go hard with Mr. Balfour if he does not stand some day as near the British Throne as Mr. Gladstone and Lord Salisbury have stood. Happy and glorious the country whose servants live above low and narrow aims and in the presence of the great realities of life.

"Naturalism" is Mr. Balfour's name for the belief that we may know phenomena, and the laws by which they are connected and nothing more. Apply this belief rigidly to our ideas of what is good, beautiful, rational, and mark the consequence. Nothing ethical is left to us—conscience and duty are no better than the meanest, most repellent contrivance of nature to assist the propagation of life.

A brilliant piece of reasoning, passing from music to fashion and art, shows that if Naturalism be true, we must regard a great composer as ranking only with a good cook; though, indeed, one who ever had a vision of true beauty "knows that somewhere and for some Being there shines an unchanging splendour of beauty, of

which in Nature and in Art we see, each of us from our own standpoint only passing gleams and stray reflections." And Reason? Reason is only one of the many experiments tried by Nature to secure the survival of man. Instinct is superior in every respect save this—it is not adaptable. It is true that Mr. Herbert Spencer looks forward to a perfect development which will make conscience superfluous. But the same reasoning which proves conscience superfluous makes mind superfluous too, and so "when we are all perfectly good we shall also be all perfectly idiotic." So vanish the artist, the poet, the hero, and the saint, and with them "all that gives dignity to life, all that gives value to effort." "We have learned too much." The human race is educated above its position in life.

Are we then compelled to accept these intolerable consequences (which are inevitable if Naturalism be true) on scientific grounds? Why do we accept the "facts" of Science without demur? And on what do they rest? Take an ordinary case of seeing. We see a green tree. Leaving out the tremendous difficulty of how matter acts on mind so as produce the mental effect of seeing a green tree, we have to presuppose the production of light, the undulations of the ether, the reflection of the green undulations (the others being absorbed), the image formed on the retina by a few of these reflected undulations, the action of the optic nerve, and that molecular change in the brain which in some way produces the complex mental effect of seeing a green tree.

Now to prove this and other scientific "facts" we have only one witness, viz: the perception of our

senses, and science itself teaches us that there are frequent errors of sense-perception. Further, to correct these errors we have nothing but other equally untrustworthy sense-perceptions.

Why must we accept scientific "facts" upon grounds which science itself declares erroneous? The psychic world produces the material world, and both worlds are assumed. What has been called the "real" is either a sensation or a group of sensations and needs the "I" before it is at all.

But if science thus discredits its own foundations, if it does not find its own grasp on truth secure, then it cannot be the universal standard for truth. It will not do to assume that religion, if unsupported by science, is doubtful, or, if inconsistent with science, false.

Applying one method to decide all questions is the great mistake which Rationalism has made. If a certain belief accorded "with a view of the universe based exclusively upon the prevalent mode of interpreting sense-perception" it might be tolerated. If not—away with it. And Naturalism is the product of Rationalism.

But since sense-perception is untrustworthy, and since there are as many passing modes of interpreting sense-perceptions as there are passing phases of scientific thought, no reason can be given why the mind of man, and his search for truth must be ruled by these things.

Since then the consequences of accepting Naturalism are intolerable, and since no reason can be found why we must bow to the domination arrogantly claimed for the "facts" of science, let us now turn to the positive side.

There is a natural world, says the scientific man. There is a spiritual world, says the spiritual man. And

many, with needs and aspirations which science can never satisfy, and hearing a Voice speak to them out of a silence which science can never break, are more sure of that spiritual world than of this present world.

They rest their faith, as the prophets have all done, not on miracles mainly, nor mainly on historical evidence and criticism, but on the consciousness of spiritual life and the great truth that man's spiritual nature is satisfied by a spiritual religion. "What man knoweth the things of a man, save the spirit of man which is in him?"

Still the mind of man longs to reconcile the natural and the spiritual worlds—longs for knowledge which shall give "rational unity to an adequate creed."

From this point of view we have a remarkable vindication of Authority. It is too often assumed in our day that Reason is good, safe, and true, and that Authority is bigoted, erroneous, and absurd. Reason, as Mr. Balfour shows, is not always our guide in the formation of belief, but the real cause of most of the higher scientific, social and spiritual beliefs formed by each of us in his own "psychological climate" is Authority. "If we would find the quality in which we most notably excel the brute creation, we should look for it, not so much in our faculty of convincing and being convinced by the exercise of reasoning, as in our capacity for influencing and being influenced through the action of Authority."

The practical necessity, the philosophic proof, and the scientific origin of beliefs have now been considered. It remains to enquire whether there may be found a general view to which a provisional assent may be given.

It has been assumed that scientific beliefs, as compared with other beliefs, stand on a different and more solid platform. But this cannot be proved,

and there is no reason to think it true. Nor is there any reason why we should hold religious beliefs less strongly than scientific beliefs. "We do not step over a precipice because we are dissatisfied with all attempts to account for gravitation." Then why should we give up believing in the Atonement because we cannot accept any theory for it?

"What kind of a universe would that be which we could understand?"

When we come to the question of Formulas, Mr. Balfour is at his best. "I like to think of the human race, from whatever stock its members may have sprung, in whatever age they may be born, whatever creed they may profess, together in the presence of the One Reality, engaged, not wholly in vain, in spelling out some fragments of its message. All share its being; to none are its oracles wholly dumb. And if both in the natural world and in the spiritual the advancement we have made on our forefathers be so great that our interpretation seems indefinitely removed from that which primitive man could alone comprehend, and where-with he had to be content, it may be, indeed, I think it is, the case that our approximate guesses are still closer to his than they are to their common object, and that, far as we seem to have travelled, yet, measured on the celestial scale, our intellectual progress is scarcely to be discerned. So minute is the parallax of infinite truth."

Another chapter is devoted to "Ultimate Scientific Ideas" which seem very simple until we investigate them, and then they crumble and vanish; they are, to quote Mr. Spencer, inconsistent and incomprehensible. And there is no escape from these perplexities unless we study the world as the work of a Supreme Reason, who made it intelligible and us intelligent.

And for beauty, we refer our feeling of it to God.

"In the thrill of some deep emotion we have for an instant caught a far-off reflection of divine beauty. This is indeed my faith, and in it the differences of taste, which divide mankind, lose all their harshness. For we may liken ourselves to the members of some endless procession winding along the borders of a sunlit lake. Towards each individual there will shine along its surface a moving lane of splendor, where the ripples catch and deflect the light in his direction; while on either hand the waters, which to his neighbor's eyes are brilliant in the sun, for him lie dull and undistinguished. So may all possess a like enjoyment of loveliness. So do all owe it to one unchanging Source. And if there be an endless variety in the immediate objects from which we severally derive it, I know not, after all, that this should furnish any matter for regret."

Mr. Benjamin Kidd, in his work on *Social Evolution*, has proved from first principles that, without religion, social science phenomena are inexplicable, and that social science demands, as the indispensable condition of progress, that religion which teaches the individual to live for the social organism around him. That religion is Christianity.

It has been left for Mr. Balfour to show that the doctrine of the Incarnation saves us from the ruinous influence of the success of our age in material discovery and scientific progress. The true proportion is restored. Infinite material grandeur cannot compare with the feeblest moral attainment.

No other close could be so fitting or so sublime as this: Christ is the Foundation. Other foundation can no man lay. We rise to see Him over very different obstacles, along innumerable paths, and after widely divergent experience of life. But belief rests at last on Him, of Whom and to Whom and through Whom are all things, in Whom all fulness dwells.