





*Photogravure*

*John Andrew & Son, Boston.*

*Sir William Dawson, C.M.G., M.A., LL.D., F.R.S.*

*Principal of McGill University 1855-1893.*

*From a painting now in the Peter Redpath Museum, McGill University.*

1413

THE  
MCGILL UNIVERSITY  
MAGAZINE.



Vol. V.

No. 1.

DECEMBER, 1905.

---

MONTREAL:  
A. T. CHAPMAN.

THE  
MCGILL UNIVERSITY  
MAGAZINE



GAZETTE PRINTING COMPANY  
MONTREAL.

# CONTENTS.

---

Portrait of Sir William Dawson, C.M.G., M.A., LL.D., F.R.S.

*Frontispiece.*

Current Events .....	The Editor-in-Chief.	7
Sir William Dawson.....	Andrew Macphail, '88.	12
The Earliest Universities and the Latest.....	Principal Peterson.	30
The Place of Classics in Education.....	Walter Scott.	45
Biological Sensationalism.....	A. E. Taylor.	69
Politics and Universities.....	A. H. U. Colquhoun, '86.	94
The Unconquered Dead (Poem).....	John McCrae.	97
Schopenhauer .....	W. Caldwell.	98
On the Border.....	Carrie M. Derick, '91.	125
What is Practical Education?.....	James E. Russell.	130
The Fairy Queen's Awakening (Poem).....	Chas. E. Moyse.	141
Some Ideals of Teachers.....	Wellington Dixon, '83.	142
On a Fallacy Affecting Theories of Canadian Education.	Hilda D. Oakeley.	150
Man (Poem).....	Warwick Fielding Chipman, '02.	158
University Publications, Session 1904-5.....		167

# CONTENTS

[All articles and other literary communications should be addressed to the Editor-in-Chief, 802 Sherbrooke Street, Montreal, or to the Secretary, Royal Victoria College, Montreal. Subscriptions (one dollar per annum) should be sent to Mr. A. T. Chapman, 2407 St. Catherine Street, Montreal. The next issue of THE MCGILL UNIVERSITY MAGAZINE, being the second part of Vol. V., will appear in March, 1906.]

## THE MCGILL UNIVERSITY MAGAZINE.

---

In the interval between the end of the last and the beginning of the present session, the usual summer work of the University was resumed. There are, however, some aspects of the summer school in Arts which are not altogether satisfactory. The primary idea of establishing summer courses in Arts was not merely to give weak students an opportunity of redeeming failure or of strengthening themselves in subjects in which they ranked below the average, but also to enable those who were on the point of specializing or had already specialized, to pursue their studies under guidance; in short, the summer courses were intended to touch university work at various points in its range. But the view prevails that these summer classes are, to all intents and purposes, the means by which lost academic standing can be gained, and at the same time there is an idea, although a mistaken idea, that the summer examinations are not so difficult as those which belong to the ordinary session. The day is, perhaps, not distant when the summer school in Arts will be brought into full and organic connection with the prescribed Undergraduate course. That will mean a special endowment and also such regard for various circumstances as was expressed when the momentous question of lengthening the session was discussed.

The summer holiday courses in French again attracted teachers from different parts of Canada and the United States. Although the attendance was not so large as had been expected, the increase of last year's total is sufficient to mark the appreciation of the work of the Modern Language Department, and to stimulate those engaged in it to make it more than ever an integral part of university teaching.

The question of Imperial Federation has been touched on in previous editorials. Some reference may, therefore, be fittingly made to a visit paid to Canada (by Sir Frederic Pollock and Mr. Drage, who came to sound the country regarding a scheme for establishing an Imperial Council which is supposed in some way or other to quicken the sense of Imperial unity. When they were in Montreal they were enter-

tained by various societies, and among them the Political Economy Club, which had invited a number of representative men to hear what was to be said in favour of adding yet another piece of mechanism to the complexities of the Imperial machine. Owing, perhaps, to time-honoured custom merely, or, possibly, to a conviction that the training and wisdom of universities were a factor in the working out of a problem in which many persons are more or less interested at the present juncture of Imperial history, the committee who drew up the list of toasts included the toast of the Universities. In either case, the subject of Imperialism cannot be seen in its full bearings if universities are left out of consideration.

It has been said that wherever the Englishman colonizes he builds a church, secures a cricket ground, and establishes a tavern — openly if the laws allow of it, and secretly if they do not. But it is equally true that wherever he colonizes he very soon begins to found universities. The most interesting and suggestive map of the Empire has not yet been printed. Military and naval maps with garrisons and dockyards and coaling stations marked upon them, and commercial maps with products and trade routes indicated in striking colour, are familiar, but no one has yet seen an academic map of the Empire with educational centres scattered all over it and distinguished according to their importance. Nobody expects to see universities figuring largely in discussions on Imperialism. And yet the part they play, while not ostentatious, is effective. If reciprocity of ideas and unrestrained freedom of intercourse are considered, they seem to occupy a more advanced position than any other of the causes which make for Imperial unity. Could their effect be formulated or rendered visible in its sum, it would arrest and surprise those who, if they think of it at all think of it as a negligible quantity. It was with wisdom indeed that Cecil Rhodes looked upon universities as unifying centres, and that he did not take a leap into the dark by establishing a fund through which able but poor colonial representatives might defray the expenses of journeying to an imperial parliament. His scheme, however, still demands a counterpart, its necessary counterpart, in fact. There is quite as much need to make English youth acquainted with colonial university life and colonial customs as to settle colonial youth for a time in English universities of ancient fame. Amid all the heated discussion of commercial difficulties that for the time seem to be insuperable obstacles to imperialism, it is refreshing to find that the universities of the Empire have been in council. On July 9th, 1903, an Allied Colonial Universities Conference held its first meeting at Burlington House in London. In the course of the address which opened the proceedings, the



chairman, the Right Honourable James Bryce, spoke of the aims of the conference in the following words:

"We have two aims, and those two aims are closely bound together. One aim is to develop the intellectual and moral forces of all the branches of our race wherever they may dwell, and therewith also to promote learning, science and the arts by and through which science is applied to the purposes of life. The other aim is to strengthen the unity of the British people dispersed throughout the world; and the deepest and *most permanent* source of unity is to be found in those elements in which the essence of national life dwells, identity of thought and feeling, a like attachment to those glorious traditions which link us to the past, a like devotion to those ideals which we have to pursue in the future.

Whatever views may be held regarding imperialism it is obvious that the aims thus sketched do not come of imaginings or mere aspiration but emerge from realities. Commonplace as Burke's phrase is, it will always pass current as a truth discerned by profound sagacity, and it applies more fittingly to the place of universities in the life of states than to anything else. The ties, "light as air," yet "strong as links of iron" which bind distant sections of a race together are precisely those which universities are creating. It is scarcely possible to conceive of academic life without regarding it as awakening a sense of joint literary heritage, of combination of effort, of intellectual federation. And the feeling abides "calm, whatsoever storms May shake the world."

But before Canada is ready to be drawn more closely to imperialism, it must become a nation in the real sense of the word, and, apart from mere parliamentary phrase, it has not become so. The destiny of this country will not be realized nor its power and claims as a partner in the Empire made as effective as they ought to be, until the word Canadians is held to be quite sufficient to designate its people. We are called upon to make a nation and not to let a hyphen spoil the making. If this high ideal is not felt to be worth entertaining because lesser aspirations are counted of more moment, Canada will remain what it is in so many important affairs — provincial, and so much the more weak.

To be frank, the Imperial Council which it is proposed to establish for the purpose of drawing the various portions of the Empire closer together seems to be a product rather of the legal than the lay mind. At the dinner of the Political Economy Club matters that are adjusting, or will adjust themselves in the natural growth of commerce, formed the gist of argument. To have to go to twenty or more places before a patent can be secured is, no doubt, vexations, but the number can be reduced to

one without suggesting the faintest reference to Imperial connection. And the same may be said of a half a score of unsatisfactory methods of commercial exchange. The establishment of an Imperial Committee with a variable constituency and one dependent to an appreciable extent on hap-hazard is not exactly the way to make simple-minded people feel that something has been created which can give effect to proposals touching the core of Imperial sentiment and action. To the direct representation of colonies, "there are," we are told in Sir Frederick Pollock's pamphlet on *Imperial Organization*, "at least three fatal objections, besides that which is common to all schemes involving ambitious legislation: the inconvenience of increasing the number of the House of Commons, the enormous difficulty of allotting representation in due proportion to the several constituents of the Empire and the want of probability that the Colonies would send us their best men even if they consented at all." Those who forget that it took longer to travel from Edinburgh to London three hundred years ago than it now does to travel from Montreal to London, would no doubt add the fatal objection of impossibility of distance.

The first objection resolves itself into an "inconvenience" and an inconvenience does not imply anything fatal, but the second is of much graver cast, although in view of what has been effected in politics made up of self-governing districts, it must be regarded as far from insuperable. As to the difficulty of securing good men from the colonies to sit in an Imperial Parliament, it must be remembered that there is now growing up in the colonies a leisure class eminently qualified by character and experience to take part in the deliberations of an Imperial House of Commons and, unless we are mistaken, ready to do so should opportunity arise. What, however, causes the deepest misgiving is the fear lest imperial federation will impair the autonomy which the constituent parts of the Empire now enjoy. Nobody can venture to impair it, but it does not follow that there are not questions with which the Empire, as a whole, must deal with politically, or dissolve away, as we know it. As regards federation through Protection, nobody seems to be able to tell exactly how the balance-sheet would be affected. To become an organic thing imperial federation must be based on the fundamental principle of direct and elective representation in some form or other. It is, however, vain to press the Imperial issue. The forces of imperialism are vague, it is true, but something concrete which happens now and again, proves that they are active. Still the time for representation may never come; meanwhile the establishment of an Imperial Council with its Imperial Secretariat and its Intelligence Department

may prove useful even if it succeeds in doing no more than gathering together "a unique body of information."

As most of our readers are aware, Miss Oakeley resigned the Wardenship of the Royal Victoria Colloge last June in order to take a similar position in the women's residential college connected with the Victoria University of Manchester. She left Montreal in October, to the regret of those who know how unselfishly and assiduously she strove to realize in and through the work of the Royal Victoria Colloge, the high ideals of life which she always kept before her, and she carries with her, we need scarcely add, the warmest wishes of McGill University for her success in a new field.

Scarcely a year passes in which death does not come to some member of the staff and replace a colleague by a memory. The memory of Dr. Frank Buller is one which the University and the Dominion, in which he was born, will long cherish. Endowed with strong mental gifts—among them ingenuity of resource—and with tenacity of purpose, Dr. Buller, when in comparatively early life, became markedly prominent among the specialists in that branch of surgery which he elected to follow. In the record of the Faculty of Medicine since its foundation there has been no instructor for whose talents the medical profession has had greater respect or whose loss it has more deeply felt.

---

*(The Editorial Board reiterates its desire to receive articles not only from members of the staff, but also from persons not connected with the University.)*

## SIR WILLIAM DAWSON

---

Sir William Dawson was Principal of McGill University for thirty-eight years. He was appointed to the post in 1855, and resigned his place in 1893. His public life began in 1843, when he undertook his first formal duties as a lecturer upon Natural History at Dalhousie College, in Halifax, Nova Scotia. His active career covered a period of forty-four years, and his actual life extended to seventy-nine. He was born on October 13th, 1820, in Pictou, and died in Montreal on the 19th November, 1899. His life, therefore, falls into three periods; the thirty-five early years spent chiefly in Nova Scotia and Scotland, thirty-eight years at McGill, and the slow gradations of decay, which occupied six years more.

During this long career many honours were awarded to Sir William Dawson, as a natural and necessary outcome of his work and character. These were academic, scientific, social and theological; and a recital of the more important distinctions which were conferred upon him will best serve to indicate the range of his activities, and his importance in the world.

In 1856, he attained to the degree of Master of Arts in course at Edinburgh, and in 1844, he was made a Doctor of Laws. He had previously obtained the same degree in McGill in 1857, and that of Doctor of Civil Laws at the University of Bishop's College in 1881. His scientific honours would be long even to name. He was made Fellow of the Geological Society of London in 1854; Fellow of the Royal Society in 1862; President of the Royal Society of Canada in 1882, the year of its foundation; President of the American Association in 1882; President of the British Association in 1886, and President of the Geological Society of America in 1893.

In 1882, he was marked out for social distinction, when he became a companion of the Order of St. Michael and St. George, with the "courtesy title" of Sir. Henceforth he was known as Sir William Dawson, though his name was, in reality, John William, and he habitually subscribed himself J. Wm. Dawson. Finally, his importance in the theological world was recognized when he was made Vice-President of the British and Foreign Bible Society. In addition, he was Associate,

Fellow, Honorary or Corresponding Member of at least thirty other important British or Foreign Academies, Societies, Institutes and Associations. In all these events even a formal biographer would find sufficient material ready at his hand.

The life of Sir William Dawson was one of singular publicity and openness. His career was bound up with the educational, scientific, social and religious movements of nearly half a century in Canada and in the world at large. He touched life at all these points, and there is abundant information as to the part which he played in their development. It would be a worthy enterprise to set forth adequately all the facts in his life, and bring them into relation with contemporary events. The most which can be attempted here is to set forth the facts themselves, to give some impression of the man, and indicate the process by which he stamped indelibly his personality upon McGill University and upon his generation. Yet in this small undertaking we may get some notion, to employ a favourite word of his own, as to what he meant to the world.

The amount of work which Sir William Dawson accomplished was great, and it is only by comparison that one can convey any adequate idea either of its compass or of its volume. Men who are in the habit of writing will gain some notion of his industry from the statement that he left behind him nearly 14,000 pages of printed matter. Professors in the University may be weaned away from brooding over their own wrongs by the reflection that for many years he delivered twenty lectures a week and wrote the text-books besides. Geologists may check their own work by his accumulation of material which is sufficient to fill a museum. And all this was merely a by-product of his main business, which was the direction of a rapidly growing University.

I am not putting forward a claim to having read this mass of printed material, nor should I have understood any considerable portion of it, if I had undertaken that labour. Yet I confess to a knowledge of all which has been written upon the various events of his life, and would mention with especial satisfaction his own record of fifty years of scientific and educational work in Canada, as embodied in his Autobiographical Notes which have been arranged by his son. The ingenuousness and singular sincerity of these Notes make them an adequate source of information, and one of the most charming bits of biography with which I am acquainted. In them also there are passages of beauty and poignancy. Two examples will serve for illustration:

“What shall I say of my mother? What can any one say of a loving mother to the careless world? She was a woman of deep affections, and of many sorrows, aggravated by a disposition not too hopeful

or buoyant. Her girlish years had been saddened by the death of her parents, and by the mournful breaking up of the old home. Her early married life had been clouded by the financial losses of her husband, by the loss of her only brother, and later, by the death of the younger of her two boys, a stroke from which she never fully recovered."

And again: "I remember but one incident in my intercourse with my brother, which I repent of; even yet it causes a pang, though it was sixty years ago. One day, not long before he was seized with the illness which proved fatal to him, he asked me to assist him with a difficult piece of Latin translation. I was busy with some affair of my own, and refused. He went away disappointed. Such little acts of unkindness may form bitter drops in the cup of life, even when repented of and forgiven."

In addition to these notes there is extant a large body of panegyric and eulogy. Creditable as it is to the writers, it is of no great value for purposes of biography.

It is a curious survival of an idea from the days when none but clerics possessed the accomplishments of writing and reading, that a clergyman is best fitted for the work of education. Accordingly, when a Principal for McGill University was required in 1852, diligent search was made for a clergyman who was in possession of certain educational qualifications, in addition to those which are proper to a minister of the gospel. On the other hand there was a body of opinion against giving to the University a tinge of denominationalism, and it was strengthened by the attempt which had been made by Dr. Bethune before his retirement in 1846, to bring the Institution within the pale of the Church of England. After the retirement of Dr. E. A. Meredith to assume a political appointment, the Principalship would have fallen to Archdeacon Leach, had it not been feared that his archidiaconal qualities might revive the old controversy. Accordingly, Sir William Dawson was chosen, a man who, it was believed, possessed the sobriety of a minister, without those qualities which are conferred by ordination. And in truth from this point of view alone the choice could not have fallen upon a better man.

Sir William Dawson was of Scotch descent, of the Dawsons of Crombie, and being a younger branch his people were of the class of farmers. In the family there was an Irish strain, accompanied by a tradition of Catholicism in religion, and of Jacobite leanings in politics. Indeed, Sir William's grandfather had been out with the Pretender in Forty-Five, but he afterwards married a wife of the Protestant faith, a Mitchell of Frendeaght, and went over to the Presbyterian religion with her. His father, James Dawson, being also a younger son, passed

an apprenticeship in Huntly, and, at the age of nineteen, experienced that mysterious change which is commonly called conversion. The following year he came to America, and landed, after many trials, on the shores of the pretty land-locked inlet of Pictou Harbour. He fell upon prosperous times, and in five years found himself in good circumstances, with every prospect of acquiring wealth and influence. When he married, in 1818, he was a merchant and shipowner; but in 1823, he was overwhelmed in the great commercial collapse which befell the community. There is nothing more tragic in life than a good man overtaken by financial necessity, and it was under this shadow that Sir William passed his earliest years. In the end, however, things came right, and the young man had the privilege of contributing to that happy issue out of his first earnings.

In every Scotch family there is a fixed belief that the intellectual attainments of the most gifted member can only find adequate expression in the ministry of the church, and the young child showed aptitude for that service. After his academic course was finished, he applied himself to the study of the Hebrew language, and allied subjects; and even when in Edinburgh, as a student of geology, he did not abandon these pursuits. He never recovered entirely from this bent, and to the end he retained a certain Hebraistic turn of mind; that is why we say he was peculiarly fitted for the principalship of a University, at a time when it was recovering from the thralls of denominationalism.

One of the finest characteristics of the Scotch family is another fixed belief that education is the most useful thing in the world. The Dawsons possessed that belief in all its intensity, and in spite of limited means the young lad, after a preliminary training in a dame's school, was early sent to the Pictou Academy, an institution founded on the plan of the parish schools of Scotland, which are to this day one of most useful inheritances from the days of John Knox. The first ambition of these emigrants was to establish a school, and it is yet on the records of one early community that such an institution was of "more value than a grist-mill and six heifers." From the Pictou Grammar School, which yet sustains its reputation as a *studium generale*, the young man, then in his twentieth year, proceeded to Edinburgh, after due consideration of such an important step in the little family council.

The voyage over was made in 1840 in the *Harvest Home*, laden with timber, John Thompson, Master. The destination of the ship was Newcastle-on-Tyne, rather an indirect method of approach to the capital of Scotland; but in those days passengers had to go where they could, and not where they would. The voyage was not without the usual incidents of storm and boisterous seas, and the *Harvest Home* entered

the English Channel half a wreck. As she passed in leisurely succession the cliffs of Cornwall and Devonshire, the rocks of Portland, the green fields of the Isle of Wight, the banks of Beachy Head and the chalk cliffs of Dover, the young student was enamoured of their beauty, and filled with curiosity as to "what fossils they might contain." Finally, a landing was effected in the busy town of Newcastle, and this nimble minded youth passed the only evening there in "a debating club for young men." The journey to Edinburgh was undertaken in a stage-coach, when it appeared that the inside of the conveyance was wholly occupied by the luxurious young colonial. This was another lesson in economy.

The single year which was spent in Edinburgh was not precisely one of idleness. The diligent student was well equipped for his work by the researches which he had undertaken in Pictou into the Natural Sciences — chemistry, physics and especially geology. He attended lectures; he spent much time in the museum; he read in the library; he made notes, abstracts and drawings from books which had hitherto been inaccessible; he undertook frequent excursions in the neighbourhood of the city for "exercise and practice in observation." Also, he made the discovery, surprising to him, "how little even some of the more eminent geologists seemed to know, and how uncertain was their diagnosis in the field." A similar observation has been made since this time by students who were less astute. Whilst in Edinburgh, he made the acquaintance of Jameson, Forbes, Balfour and Alexander Rose, and of Mr. Sanderson, the lapidary, who taught him "the art of preparing transparent slices for the microscope." There are men yet living who have witnessed Sir William engaged upon that fascinating employment in the basement of the Peter Redpath Museum.

We shall first turn to that side of Sir William Dawson's life which was scientific, and we shall be obliged to commence at an early period in his long career. His home had much in it to foster a study of nature, and both of his parents encouraged him in the pursuit. A wild garden filled with trees and shrubs; rough pastures; woods and swamps, within easy distance; a narrow harbour open to the sea-tides, and fed from the landward side by numerous rivers — these were suitable hunting grounds for a young naturalist, and they yielded a rich store of plants, fossils, insects and birds.

At an early age he was engaged in the familiar occupation of fashioning a slate pencil from a flake of shale, and he was surprised to find upon the stone a "delicate tracing in black of a leaf like that of a fern." This was his earliest discovery in geology, and he prosecuted his researches diligently, until at length he had "a little collection



laid out in a cupboard where he kept his childish treasures." This little cupboard was the birthplace of the Peter Redpath Museum. The specimens were referred with much trepidation to one or two local geologists; exchanges were made, and the scientific career of this assiduous collector had begun.

The treasures of those boyish days were faithfully preserved, and brought to Montreal, where they were long afterwards destroyed by fire. The first book of a scientific nature, which he possessed, was a copy of Mohs's Mineralogy, and from it he learned that most important of all lessons,—correlation of science—that the mysteries of solid geometry and trigonometry had been materialized in the crystals of quartz, calcite, and zeolites, which he had collected from the ballast piles on the wharves, or from the quarries and cliffs of the coast.

These studies bore fruit in a lecture which he delivered before a local society at the rather immature age of sixteen, upon the Structure and History of the Earth, which was a considerable undertaking for so young a child.

There was a visit as far as Boston, and a comparison of the mol-luses to be found south of Cape Cod with those in Northumberland Strait. But the most important excursions were to the cliffs on Cumberland Bay, an arm of the Bay of Fundy, known as the South Joggins; to Minas Basin which afforded intricate studies in the complicated relations of the volcanic rocks with beds of sandstone and carboniferous shales; to Cape Blondin, that remarkable outflow of volcanic rock over the Triassic sandstone which underlies it.

Upon his return from Edinburgh in 1841 he fell in with Sir Charles Lyell and Sir William Logan. From Lyell he learned that great man's secret, which was the continuity of geological history, and the identity of effects. From Logan he learned the importance of correct observation and a reverence for facts as preliminary to a formulation of theories. With him he wrought in many a field, and laid the foundation of much of his fame. The joint discovery with Lyell of reptilian remains in the erect trunk of a fossil tree at the South Joggins was pregnant with results, one of which was the publication, in 1855, of his "Acadian Geology." This important book contained an account of the first discovery of reptilian remains in the coal formations, of the first known palæozoic land shells, and of *albertite*, that curious product of the lower carboniferous age.

When Sir William Dawson was appointed Principal of McGill the demands upon his time and attention were such that he was obliged to forgo largely the work in his favourite fields of investigation. For several years he worked, chiefly in the summer, at the Pleistocene forma-

tions, and to that end established himself at Little Metis. In his little cottage of Birkenshaw, "embowered in trees and overlooking the St. Lawrence estuary," he spent many happy and useful seasons until the end of his life. From that place he went afield, and examined the coast deposits of New England and the formation of the White Mountains. He dredged the lower St. Lawrence, and was able to recognize in the cold Canadian waters nearly every species found in the Pleistocene days. The results of those labours were embodied in "The Ice Age of Canada," which was published in 1894. Two summers were spent in the Gaspé district, and the enquiry was extended to the Chaleur Bay, to the St. John River, and to an examination of fossil remains which had been collected in Ohio and New York. The result was to double the known flora of that early period, and to show that the Devonian age admitted of subdivision into three distinct periods. His guiding principle was to assign dates to the several floras and subfloras, and to make fossil plants the criteria of geological age. This entailed the accumulation of an enormous mass of material, which yet remains as a monument of his industry. More recent researches have shown that the mass of this flora is referable to the carboniferous system; and he appears to have been led into error by trusting too implicitly to the records which were then extant.

Travels still further afield were undertaken. In 1865 he visited Europe again. He remained some time in Paris, and spent a day at Amiens, "to see that ancient city and the gravels of the Somme." This was at the time when certain discoveries had been made of "prehistoric" human remains, which some persons thought gave information upon the genesis and development of the race in addition to that which had been supplied by the Hebrew chroniclers. Sir William Dawson, however, attached no great importance to these discoveries. The journey was continued over the Jura to Mont Blanc and its surrounding peaks, and as a result of his examination he "became a confirmed sceptic as to the erosive action of glaciers." Upon his return to England he was present at the meeting of the British Association for the Advancement of Science, at Birmingham, and twenty years later he occupied the President's chair in the same city. At this latter meeting a curious event occurred. In his Presidential address Sir William referred to the probability of an earthquake occurring on the Atlantic coast, on account of the accumulation of sediment from the American rivers. That very night the city of Charleston was shaken to the ground, and for some unexplained reason Sir William was blamed for the occurrence.

Another visit to Europe was made in 1870, when he became acquainted with the work of Wyville Thomson upon deep-sea sponges,

which was of great importance when he afterwards became interested in the extinct species of the Quebec Group. Also he visited Ireland, and in addition to much other information he gained "a strong impression of the abundant moisture of its climate." In 1883, he visited Europe again, and extended his travels to "Bible Lands," being under the impression that "everything from the site of Eden to the scenery of St. John's visions in Patmos, appeared to admit of further illustration from nature." Nothing very satisfactory came of these researches, an account of which was contained in two books, "Egypt and Syria," and "Modern Science in Bible Lands," published by the Tract Society, London. His last formal work was a series of studies in 1884-85, upon the fossil plants which had been collected by the Geological Survey of the North-West Territories. These were published in successive volumes of the Transactions of the Royal Society of Canada, and collected in 1890 as the "Geological History of Plants."

We shall now be compelled to undertake a long adventure if we would follow Sir William Dawson in his educational career. It began formally in 1850, by his appointment as Superintendent of Education in Nova Scotia, at the suggestion of Joseph Howe and John Young, who had known him in his boyhood, and were then members of the Government, as well as of the Board of Dalhousie College, where their favourite candidate was delivering a course of lectures and "first obtained some confidence in his ability to interest students." An argument which carried some weight in deciding him to accept the appointment of Superintendent was the opportunity it would afford for visiting all parts of the Provinces and coming in touch with local collectors of fossil remains. His behaviour in this office was characteristic. He introduced improvements "without interfering in any good work already in operation"; by "certain conciliatory arrangements" he kept denominationalism out of education; as preliminary to a meeting to discuss educational needs, he "would be in the locality before the day fixed, conferring with the leading men." At the meeting he would "invite discussion as to the special needs of the district, which almost invariably brought out statements respecting the defects of education in that locality much stronger than any he could have ventured to make."

One can readily imagine the pain which these revelations gave to the young superintendent, and how in "summing up the proceedings," he would point the way out of the evils which they themselves had confessed. During these three active years one of his labours was "A Contribution towards the Improvement of Agriculture, with practical hints to Farmers on the Management of Live Stock and on General Husbandry." Before he left Nova Scotia he saw a Normal School

established, and shortly afterwards a compulsory assessment for the purposes of education.

To one who loved Sir William there is a delight in re-creating the scenes of those early days; to picture him as the "shy and rustic boy" thrown amongst his "superiors in some kinds of culture, and in knowledge of the world" whom he encountered in the metropolitan city of Halifax of the year 1835; to see him "travelling in a vehicle of his own" through the wilds of Nova Scotia to give aid and encouragement to distressed teachers; skirting those rugged shores in open boats, or sleeping in a "house lathed but not yet plastered, so that when lighted at night it resembled a series of bird-cages." Even after his removal to Montreal we may imagine him on his way to Toronto, "crossing the St. Lawrence in a canoe, amidst floating ice, and travelling by way of Albany, Niagara and Hamilton." It seems incredible that this great city of Ontario was ever so isolated from the civilized world.

We now approach the circumstances of Sir William Dawson's appointment as Principal of McGill University. Sir Charles Lyell introduced him on board ship to Sir Edmund Head who was then Governor of New Brunswick. When the Governor required expert advice in connexion with the University of Fredericton, he sent for the Superintendent of Education of Nova Scotia. In 1854, Edward Forbes was removed by death from the professorship of Natural History in Edinburgh, and at the suggestion of Lyell, Mr. Dawson, as he then was, became a candidate for the position. The candidature was unsuccessful, but almost at the moment of its failure a letter arrived from Judge Day, President of the Board of Governors of McGill University, containing an offer of the position of principal. It transpired afterwards that this letter was instigated by Sir Edmund Head, who had now become Governor-General of Canada. Under these favourable auspices the offer was accepted, and McGill University obtained its great Principal. Upon his journey to Montreal he fell in with Mrs. Molson, which was another lucky chance.

McGill University was at that time little more than a name to its Principal. He knew that it had been founded by James McGill, that a Royal Charter had been obtained in 1821, which was amended into a less cumbersome form in 1852. He was also aware that little had been done to carry out the terms of the endowment, save for the work of the medical school, but he did not suspect the condition of affairs which he was to find upon his arrival in Montreal:

The University, materially, was represented by two blocks of unfinished and partly ruinous buildings, standing amid a wilderness of excavators' and masons' rubbish, overgrown with weeds and bushes.

The grounds were unfenced, and pastured at will by herds of cattle, which not only cropped the grass but browsed on the shrubs, leaving unhurt only one great elm, which still stands as the "founder's tree," and a few old oaks and butternut trees. The only access from the town was by a circuitous and ungraded cart track, almost impassable at night. The buildings had been abandoned by the new Board, and the classes of the Faculty of Arts were held in the upper storey of a brick building in the town, the lower part of which was occupied by the High School. The Principal's residence was a portion of one of the detached buildings, the present East Wing. It had been imperfectly finished, was destitute of nearly every requisite of civilized life, and in front of it was a bank of rubbish and loose stones, with a swamp below while the interior was in an indescribable state of dust and disrepair. The University comprised three faculties—those of Law, Medicine and Arts. The Faculty of Law, then recently organized, had two professors and two lecturers. The Faculty of Medicine, the oldest and most prosperous of the three, had ten professors and a demonstrator. The Faculty of Arts had four professors and a lecturer, and all of these, except one, gave only a part of their time to college work.

In 1893, when he resigned the Principalship, this University had 35 students in Law, 311 in Medicine, 348 in Arts, 159 in Applied Science, 58 in Veterinary Medicine, and 54 in affiliated colleges, 105 teachers in training at the Normal School, making a grand total of 1,074. The financial balance sheet for the year ending 30th June, 1893, showed an investment account of only five thousand dollars short of two millions, and an income considerably over one hundred and fifty thousand dollars. The life of Sir William Dawson lay between these two events.

One of the most important problems with which the Principal had to deal was the education of women. About the years 1880 certain opinions became prevalent as to the relative status of women, and a question which had been regarded as settled by "nature" was opened up for fresh consideration. This disturbance was not confined to Montreal. In New England a campaign had been undertaken, long before, "to arouse women from their prone and slavish attitude," and their champions with more gallantry than sense proclaimed their superiority to men in some relations and at least an equality in all: "Let them be sea-captains if they will," cried one enthusiast!

In Montreal, the controversy turned upon the question of education, and a demand was made that the University should apply to women the methods which were employed for men—not on the ground that they were the best for women, or for men either, but that they were the same. As if this were not enough, the demand was made that the

educational process should be carried on with the two sexes side by side. The Principal held the opinion that there was an essential distinction between the male and the female in nature, character and temperament, and that there were certain other peculiarities also, which suggested distinct educational methods. In short, he held that it was a fundamental educational error to give university lectures to mixed classes, and there are many perfectly sensible persons who still adhere to that view. Much of history and nearly the whole of literature is concerned with the relationships between the sexes, and not fit subject, he held, for discussion in a mixed company of inexperienced young persons.

As early as 1869 the higher education of women, as it was termed with a certain assumption of fact, was a subject of formal consideration by the University. Even before that, things had come to such a pass that Hannah Willard Lyman, who conducted a university school, was invited to attend with her young ladies a course of lectures in Natural Science, which were being given in the Normal School. Sir William was the lecturer; the classes of men were small; the ladies occupied a separate part of the hall; Miss Lyman always accompanied them, so we can well believe that "no difficulty arose, so far as he knew." Yet, "the experiment was unsatisfactory, and it was tacitly dropped by mutual consent." The Principal spent several years in collecting information, in order that he might "be armed for all contingencies"; and at length the contingency arose. In 1884 an adventurous band of young women made formal demand for University teaching, in mixed classes if no other method were available. The situation was embarrassing; but, by a singular coincidence, a friend of the University came forward with an adequate endowment for separate classes. Sir William had his way and the "Donalds" (as young men who are now old used to designate them) went together to their own place in the East Wing.

This incident is typical, and it is related at some length to illustrate the Principal's tenacity of purpose and abundance of resource. Once his mind was made up difficulties did not exist. If a Chair required to be filled, a casual meeting occurred between a desirable candidate and some of the more important Governors. If a department required strengthening, an important official personage called attention at the proper moment to the woful lack of means,—it might be when another important financial personage was receiving some academic distinction. Again, the Principal might be obliged to confess with despair that he was compelled to abandon some University project dear to his heart, or to acknowledge the humiliation which he felt over an approaching meeting of some great association which would spy out the nakedness of the land. Somehow, these events were usually marked by an

announcement which was of as much importance to McGill as to the association of scientists referred to.

There is one matter of the chiefest importance which it is necessary to apprehend clearly, for it lies at the root of the success of McGill University. The Principal entertained views of the most singular distinctness upon all possible subjects, which he was resolute to hold and propagate. He was equally resolute that other men should hold their own views, and be free to set them forth. In matters of administration he required no interference, nor did he seek with eagerness for advice, suggestion or opinion. Sir William Dawson was Principal of McGill University, and his mind was quite clear as to the fact. Right or wrong, he entertained a firm belief that it was his business to direct its policy, and he expected support from every member of the staff for the policy which had been laid down. He did not regard it as an inalienable right of a professor to express contrary views, or protest in public against a line of action which had been decided upon. But in the matter of teaching he permitted every man to teach what seemed good in his own eyes. Of course appointments were made with due care. He took no exception, for example, to the philosophical application of a theory which he refused to accept as a working hypothesis in science. This independence of thought, this sanctity of opinion, and freedom of expression has ever been the glory of McGill.

Any writing is the merest trifling, which does not give some account of that side of Sir William Dawson's character which was religious. He came of Calvinistic parents. His father was of an intensely religious temperament, which some Calvinists are not, and his mother was a woman of deep piety. In addition to this, the Dawson home in Pictou was the meeting place of that noble band of missionaries, James Ross, James McGregor and Thomas McCulloch — such men as, happily, were found in the early communities, and prevented the people from lapsing into savagery. These early settlements were also in touch with the New England emigration, where the debased Puritanism which had succeeded to the lofty enthusiasm of the earlier emigrants had broken down utterly as a working force in the world, and was succeeded by that wide humanitarian movement which so quickly spread over New England.

The leaders of this movement had finished with justification, covenants, assurance and the perplexities of eschatology, and were more concerned with righteousness, temperance, peace, unity and the abolition of slavery. The Dawsons were brought into an intimacy of relation with this spiritual brotherhood, and Sir William preserved the tincture to the end of his life. In the matter of temperance alone — which,

however we may qualify it, means abstinence from alcohol—he was faithful to the end; and there is yet no evidence that the forty generations of students who frequented his hospitable house suffered materially from the absence of that form of beverage. His views upon the use of tobacco also were entirely in accord with those which were so sedulously propagated by that eminent moralist, James the First.

Indeed, it is probable that Sir William Dawson accomplished his great work for the University by reason of his religious temperament. The sentiment of religion is widespread, and it attracted many friends. The more openly religious amongst the students gloried in his formal teaching in places set apart for that purpose, and those of a Gallionian habit of mind were more indirectly influenced. There are many men to-day, who, through natural incapacity, did not profit greatly by his lectures upon geology and biology, and yet retain as one of their most precious memories the evenings spent in the delicate atmosphere of his home.

The dignified personality of Lady Dawson was not the least of the attractions of these evenings. She was of the Mercers of Edinburgh, and Sir William first met her when he was a student in 1841. A long correspondence followed, and upon his second visit they were married. It was permitted to them to realize the prayer of Tobias: "Grant that we may grow aged together"; for, in 1897, they celebrated the fiftieth anniversary of their marriage. Six children were born to them, and five survived their father, though Dr. G. M. Dawson, Director of the Geological Survey of Canada, has since died.

In spite of all which Sir William Dawson accomplished, his name will be remembered not so much for what he did as for what he was. Those who were brought in contact with him will understand what is meant by that. Those who knew him not will fail to understand, for personality is too subtle a thing to be transmitted by other means than personal contact. There was something peculiarly benignant in his presence, something gracious and gentle in his aspect, a winsomeness in his speech and a tenderness and benevolence in his manner. Young men are peculiarly sensitive to the influence of those qualities, and Sir William created in the hearts of the students a sentiment of unbounded affection. Even the medical students who are especially sure in their instincts, though not generally credited with the gentler virtues, were touched with emotion at the habitual graciousness of his demeanour towards that outcast faculty.

Sir William Dawson was a great man and a good man, and when all is said his greatness lay in his goodness, in his character; for there have been educationalists with a wider outlook upon life, and it may be



a deeper perception of its meaning; there have been scientists of a clearer vision, with a more detached viewpoint and a colder gaze; there have been teachers more closely in touch with the spirit of the time; religious men with a wider toleration of the weakness and foolishness of humanity, and a keener realization of the force of the temptations by which it is beset.

With all his love for rocks and fossils Sir William Dawson was more interested in life than in geology, and still more in those elusive manifestations of life, which do not lend themselves readily to scientific demonstration. To stop at the plain and ordinary nature of things was infidelity. To look alone at things as they are was robbing Nature of its spiritual import. Therefore, in all his observations he kept one eye upon Nature and the other upon its "presiding divinity." This habit of mind is well revealed in those tracts and books which would be long to name: "The Case against Evolution," "Points of Contact between Revelation and Natural Science," "Science the Ally of Religion," "Gold, Bedolah and Shoham Stone," "The Origin of the World according to Revelation and Science," "Nature and the Bible." These writings did not increase Sir William Dawson's reputation amongst men of science.

Any account of the life of Sir William Dawson would be glaringly deficient, which did not make some formal mention of his eminence as a homilist. Indeed, towards the end, most of his energy was employed in the proclamation of divine truth, in the expounding, and application of Scripture for the correction of heretical opinion. Upon the great questions which lie beyond the normal range of the human mind he was disposed to arrive at conclusions, and adhere to them in the face of considerable evidence to the contrary. Indeed, when he had attained to the plenitude of his power, and the fullness of his years he was inclined to play the part of a pontiff, and *trancher* a discussion with this stroke — that those who withstood him were actuated by a zeal for the truth, which was less disinterested than his own.

Strange to say, his failure as a homilist lay in this — that he did not go far enough. Like other good and great men he allowed himself to assume the existence of a conflict between science and religion, between two spheres of activity which have nothing to do with each other; and, in his "endeavour to discover points of contact between the teachings of nature and those of the Lord from Heaven," he lost sight of the great truth which Paul proclaimed from Mars Hill: that it is in Him all nature lives, and moves, and has its being. He spent too much time in proving what does not require proof, which indeed is not susceptible of being "proved" by the methods which he employed.

Scientific truth is of little value in comparison with those emotions which we call religious. The great Hebrew prophets neither knew, nor cared, how the world was created, though they do occasionally give fascinating accounts of the event, to which too much importance need not now be attached. An operation which was finished in six days was to them as productive of great thoughts, as if it had occupied as many periods of geological time. To them it was as unimportant that the thing could not be satisfactorily done in six days, as it was that a golden calf could not be manufactured in a night. But Sir William Dawson took his stand by the printed word, even though he was willing to admit that "the subject was encompassed with difficulties and misapprehensions." He was of the same mind as Boswell when he said to Lady MacLeod: "If once you quit this rock there is no knowing where you may settle. You move five miles first, then to St. Andrews, then to Edinburgh, and so on till you end up in Hampstead or in France." Once leave a man free upon these subjects, he thought, and he will take the liberty of becoming an atheist. We now know that such a result does not necessarily follow.

Nor did Sir William Dawson disdain to enter upon the dangerous ground of prophecy on his own account — led away by the example of the Seer of Patmos, a name which he applies to an article of thirty-eight pages, reprinted from the Homilitic Review, June and July, 1898. But that great visionary was content to cast his thought into the form of allegory, hyperbole and metaphor, and so effectually that his ecstatic writing — to employ Balzac's phrase — is yet involved in "difficulty and obscurity." In his interpretation of this apocalypse Sir William Dawson ventured to be precise, and in a chart which is annexed to this little book, he assigns to the Beast or Little Horn, the years 1897-99, as "the number of his name."

The fascinating task of revealing the mystery of this revelation has always possessed an attraction for religious men; but, as a rule, they have been content to fix their dates in the far-distant future. Sir William Dawson, with that fearlessness which characterized him, was careless of the curious fool of the future, who can find no sillier occupation than unearthing exploded prophecies; and he boldly wrote down the year 1898. When the year had passed without any sign, some mocked, and said that the *Eozoon Canadense* was as mythical as the Beast.

He did not perceive that religion is a thing quite apart from theology, that science is quite apart from both, and that the conflict between them was merely a figment of the theological imagination. In this respect he was not in advance of his generation, but in the end he got left behind and alone, save for the company of that eminent pseudo-

scientist the Duke of Argyll. Much of his energy was consumed in theological activity, reconciling differences which did not exist. Himself, a religious and scientific man, he developed a position of antagonism towards other men of science, and towards men who were neither scientific nor religious.

Sir William Dawson habitually adopted the Calvinistic view as to the worthlessness of humanity. This is well illustrated in the concluding passage of the preface to his Autobiographical Notes, in which he says: "Whether the object referred to be the scale of a moth's wing, or the structure of a mountain, it has for the time being to be regarded as the work of God, and therefore transcendentally above either the speaker or the hearer." The modern view is that speaker and hearer, professor and undergraduates, theological students and medical students also are the handiwork of God, and at least equal in value to the scale of a moth's wing. Indeed, there is independent authority for estimating their place in the universe to be even higher than that which is assigned to the sparrow. This self-abasement was one of the doctrines of Calvinism. But we now believe that humanity is not a poor worm of the dust, but a noble creation for a divinely appointed purpose. And yet this humility was one of Sir William Dawson's most winsome qualities. He abased himself, and so was exalted in the eyes of the world.

Sir William Dawson was an eminent controversialist, and was able to give as good as he got. By a sly turn of phrase, or by a certain indirect implication, he was often able to turn a position which looked difficult to face.

These qualifications for argument were abundantly developed in those numerous excursions which he made into regions with which science has nothing to do, but he became really formidable in defence of the scientific positions which he adopted. The controversy over the *Eozoon Canadense* is a case in point. This humble material thing was put forward by him as the earliest example of life which was known to biologists, and by his opponents the innocent mass of rock was "assailed with as much bitterness as if it were a personal enemy." Probably the animus was directed as much against the discoverer as against the thing itself. What the present state of the case may be, the present writer does not undertake to say, but certainly an account of the disturbance which it created affords instructive and amusing reading, even in these days when we have more important things to bother about.

Up to the year 1892, Sir William Dawson, being then in his seventy-second year, "felt strong and well, and was not aware of any failure in energy." In September of that year he suffered from an attack of pneumonia, "the friend of the aged." After addressing to the students

who were "ever his dear young friends," a letter which was suffused with love and vibrating with feeling, he spent the winter in the South. On the 26th of May following, he sent a formal communication to the Governors resigning the Principal's post, which he had occupied so worthily and so long. Then he repaired to his little cottage at Metis. In the autumn he returned to Montreal, and took up a private residence on University Street, within easy reach of the Museum and Library, where he hoped to spend a few more years "in the study of God's wondrous works as well of His Word."

Six years were so spent, and recent students will remember the venerable and bowed figure, clad in the long silk gown and academic cap. This was Sir William Dawson, pursuing his avocation with all the enthusiasm of youth, going to and from library and museum under the arching elms and spreading maples of the Campus, which he had caused to be planted forty years before. Students who knew him not in the days of his strength would pause as if for a benediction, and the gracious uplifting of the hand, the gentle inclination of the head, the sweet voice were rarely wanting. The end came on the 19th of November, 1899.

Sir William Dawson's life "signifies once more this word: "*The removing of those things which can be shaken, that those things which cannot be shaken may remain.*" Much of his geological theory has been shaken, and his theological speculations have largely passed away. The influence which he exerted, consciously or unconsciously, upon those with whom he came in contact, by reason of his fidelity to the great trusts which had been imposed upon him, by reason of the nobility of his nature, his generosity and kindness, his goodness of heart and pureness of life — these will endure.

In conclusion I cannot refrain from adding the verses which were made by Mr. Logan upon the occasion of Sir William Dawson's burial. They contain much truth, and are good poetry besides.

I knew him not as those who shared the way  
He traversed, or who came beneath his sway;

But, casual crossing of his path, I found  
That where he walked it was perpetual day.

Perpetual day of noble act and thought,  
Science and faith unto one purpose brought,

Good for his fellow beings, and our lives  
Are better for the lessons he has taught.

His school of thought abided not the new,  
(Yet who has come that hath the perfect view?)  
But, if a life that profiteth be aught,  
His life, his work, his thought, his faith, were true,

All to one cadence like a perfect chord,—  
And as the clod beat on the hollow board,  
The sunlight broke, and from the sky a voice,  
"Blessed are they who slumber in the Lord."

ANDREW MACPHAIL.

## THE EARLIEST UNIVERSITIES AND THE LATEST.

---

*An Address delivered on the occasion of the Fifty-fifth Convocation of  
Chicago University, June 13th, 1905.*

My main qualification for standing here to-day is sincere appreciation of the work you have been privileged to accomplish during the short period of your existence as a University. I want to say this at the outset of my address; for it is no more than should be said. You may perhaps be aware that many older institutions have been apt to cherish something like a grudge against you. The lightning-like rapidity of your academic progress has shocked from time to time their quiet repose. You have disturbed their standards by crowding into little more than a single decade what ought, according to all previous experience, to have taken at least a century. You have seemed to discredit, in a way, their methods by keeping open all the year round, and so turning your backs as it were, on that most time-honoured of all university institutions—the three-months-long vacation. Instead of having one annual commencement, like all the rest of the world, you hold this graduation ceremonial at the end of every quarter. The consequence is that, although you are only fourteen years old, this is already your fifty-fifth celebration; and at this rate of progress you will soon overtake and outstrip the oldest universities in Europe as well as in America. Again, you stand charged with the crime of making it a practice to engage professors for piecemeal, returning them, after they have done temporary duty with you, to their native establishments. This procedure, it is almost needless to state, is apt to cause some heart-burning among those whom you do not honour with your choice. Even the size, shape, and colour of your *Annual Register*, so different from every other known calendar or catalogue, has been made a rock of offence and a stone of stumbling. I know what the attitude was towards your early efforts of such old-world centres as Oxford and Edinburgh and St. Andrews, and it is all the more pleasurable on that account to have this oppor-

tunity of paying the tribute you have so fully merited in spite of, or rather by reason of, your manifold innovations. To the great wonder-worker who has watched over your academic childhood I would convey an expression of my homage and admiration. Perhaps none are so fully qualified as those who are themselves university presidents to estimate what Chicago owes to President Harper. His masterly report, published as the first volume of the first series of your Decennial Publications, will long remain as a standing monument of clear-sighted, courageous, and comprehensive academic policy. In these latter days a college head is called on to play many parts. He must be a man of affairs as well as a scholar. What he does not know himself he must be able to appreciate in others, whether it be mining or metaphysics, hydraulics or Hebrew. He is organizer and administrator: happy is he, too, if he can continue for a time to give the best that is in him as teacher also! And, apart from all that, he has to keep in touch with his staff, collectively and individually, to study the interests of his undergraduate constituents, to stimulate his board of trustees, and to be ever ready—day or night, and often even on Sundays—to represent his university before the public. His function has been well said to consist in putting pressure upon everybody—including the benefactor! How well Dr. Harper has discharged these manifold duties you know even better than I do. But in the dark days through which he passed this winter, even those of us who live at a distance from this great centre, and are not in close touch with your affairs, did not fail to associate ourselves with your anxiety and grief. If anything was capable of sustaining your President during that trying time, in addition to his trust in God, it must have been the knowledge that he had the sympathy of every academic community on this continent, as well as elsewhere.

If the federation of the world ever comes to pass, it will be largely through the influence of the universities. The earliest of them was the outcome of that thirst for knowledge which, after a dark age, marked the rising nationalities of modern Europe. These institutions possessed the highest culture of their day and generation, and were recognized as the best exponents of that culture, not only by the nations to which they respectively belonged, but throughout the European continent. The latest universities are but the most recently forged links in the chain that binds together all the peoples of the earth, uniting them in a common purpose and leading them to work for a common end. One of the most interesting suggestions of the present day is the possibility of increased intercommunication among these universities. We cannot know too much, in my judgment, of what is going on in other countries—

what progress is being made, what experiments are being tried and with what results, what is the general trend of academic thought in regard to the various problems that engross attention. This is true not only of the various seats of learning which belong to the same century, but also of the attitude in which the universities of different countries might stand to one another. Now that they are coming to be more closely related to life and citizenship, they may be expected to be increasingly conscious of the fact that they have before them a common task, in the execution of which they must rest on the basis of common principles and the inspiration of a common field.

Certainly throughout the English-speaking world we do well to cherish every academic aim that may make for community of sentiment. And most of all can it be predicated of the modern university in the commercial city — whether that city be Manchester, or Birmingham, or Chicago, or Montreal — that the atmosphere which surrounds it, as well as the tasks it has to face, is one and the same for all. The academic view is sometimes obscured, especially in the Old World, by the assumption that all universities, whether in small or large centres of population, ought to be cast in the same mould and fashioned after the same type. This is obviously not the case. Oxford and Cambridge differ to some extent from each other, and both present a strong contrast in traditions and tendencies to Manchester, Leeds, Birmingham, or Liverpool. Each type has much to learn from the other. The problems of life which have become urgent in a great city such as Chicago are closely connected with the economic and historical studies pursued in the older universities, and, as Mr. James Bryce has lately expressed it,<sup>1</sup> “the relation between those studies and the plans fit to be followed in handling social problems may be compared to the relations between theoretic and applied science. Among the practical questions of educational methods, there are some in which Oxford can give light to Manchester, and some in which Manchester can give light to Oxford.”

On this side of the Atlantic we have shown our superiority to tradition by introducing even a new connotation for the word “university,” distinguishing the type, as we have it here, with its graduate and professional schools, from the old “college of arts and sciences.” There is little, if any, ground for this in history. It is one of our bold American innovations. May I hope to interest you if I ask you to look back from the developed product, as we know it now, to the mediæval beginnings in which the modern university had its origin? A brief retrospect may enable us to grasp more clearly the essential points in which the

---

<sup>1</sup> *University Review*, May, 1905, p. 5.



new differentiates itself from the old, as well as the points of contact and resemblance. The study of origins is always among the most fascinating of all studies, and not least when applied to the consideration of the lineal succession in which the universities of the modern world stand to their prototypes. For me this chapter of history has lately acquired something of a personal interest by the discovery that the founder of the college and university which I represent was, before he came to Canada in the third quarter of the eighteenth century, a duly matriculated student of the University of Glasgow. Now, Glasgow was founded by a papal bull on the model of the oldest of all universities — the University of Bologna, famous for the study of the civil and canon law; so that from Bologna in the twelfth century to Glasgow in the fifteenth, and from Glasgow in the fifteenth century to McGill and Montreal in the twentieth, is but a step.

But, apart from that particular and personal reference, some degree of general interest may attach to a comparison of the forces to which the earliest foundations owed their origin, and the conditions that have given birth to such a University as this. In spite of the great and obvious differences in the surrounding circumstances, there is nevertheless much of the same spirit that led to their establishment to be descried in the missionary energy and enterprise which have marked your efforts during the last fourteen years. One point of contrast, however, suggests itself at once. The various universities which were founded many centuries ago at short intervals on the European continent were the nurslings of the church — the church which, after keeping alive the sacred lamp of learning from the fall of the Western Empire to the eleventh century of our era, had become the great centralizing agency of the then known world. They had grown out of the schools attached to monasteries and cathedrals in which facilities were offered for the education of young "clerks," the only teachers being the monks. Princes and people might unite with learned men to supply the impetus which resulted in the elevation of such schools into universities; but it was from the popes that there came the immunities and privileges conferred on the corporations thus formed, of which the most important was the power of granting degrees, that is, licences to teach anywhere throughout the world. The first chapter in the history of university extension was introduced when, in addition to the professional training of priests and monks, the more practical studies of medicine and law began to press for recognition. Before the beginning of the twelfth century the rudiments of physical science and some branches of mathematics had emerged more clearly into view. Next came the scholastic philosophy, arising out of the study of Aristotle, and claiming attention,

not only because of its intrinsic value as a mental discipline, but also as the key to the proper interpretation of theological doctrine.

The earliest universities were too spontaneous in their origin for us to connect their first beginnings with the name of any personal founder. In spite of the accretions of tradition, which would associate Paris with Charles the Great and Oxford with King Alfred, we may say that they did not owe their establishment, in the first instance, to individuals. They arose out of the spontaneous and enthusiastic desire for knowledge, which drew together — not, be it noted, in seclusion and retirement, but in great towns — a concourse of the most learned men of the day. The busy centres of commerce — Bologna, Paris, Naples, Florence, Vienna — became great seats of learning because they were already great cities. Privileges conceded by the local authorities to teachers and taught kept them generally faithful to the place of their choice, though unfortunate disagreements sometimes led to the migration of a whole university to a neighbouring centre. It was the papal bull which, by constituting what is called a *studium generale*, a centre of study open to all comers, elevated each new foundation to a place in the ever-widening circle of those seats of learning which, by the use of a common language and the acceptance of a common faith, held together for a time in bonds of unity the various peoples of the European world. The rapidity with which the movement spread may be judged from the fact that before the year 1400 — by which date the word *universitas* had come to be used in the sense we now attach to it — some forty universities had been established in Italy, France, Germany, Spain and Portugal.

As soon as the cloister or cathedral school had received papal authorization, its fortunes began rapidly to improve. Its future was now altogether in the hands of the learned men who had first given it a name, and hence the growth of every university centre is linked with the fame of some individual teacher whose prelections on some special subject of study drew crowds of ardent young men to hear him from all quarters of the country, and even from foreign parts. For before the days of printed books the power of the living voice and of personal intercourse with the teacher was a higher element in education than it can be now. By the majority of students knowledge could then only be acquired orally. And they knew the value of those at whose feet they elected to sit, pressing after them with an ardour which summoned the great Abelard, for example, when the romance of his life was over, back from the cell in which he had thought to spend the rest of his days in solitary meditation, to do battle once again for the spirit of liberty and free thought.

The wandering life which many students led in search of new knowledge is, indeed, in curious contrast with life at a university to-day. It was a reversal of the circumstances under which the higher education had risen first in Greece, where the early sophists went from city to city, sometimes accompanied by enthusiastic pupils, to incite the youth of the Hellenic people to apply themselves to the new learning of which they had constituted themselves the first professors. Now, the university was to have more of a fixed home for the teachers, but not for the ideal students of the Middle Age, who cherished too lofty an ambition to be satisfied with rudimentary education, even though it might lead to immediate advancement in the profession with which the universities were so intimately connected — the profession of the church. For years together, sometimes for a whole lifetime, they would journey on from university to university, attracted by the fame of some rising teacher who had made some new subject his own. Travelling was made easy for them; they were a specially privileged caste, for whom the roads were kept open and free of toll by royal or imperial decree, and they could depend upon being able to maintain communication with their homes and on having supplies forwarded them without fear of robbery. But the poorest scholars felt no shame in begging by the way, and in the cities through which their journeys lay they would even employ this system for the purpose of raising the fees on which their unendowed professors were so obviously dependent. For if a man might ask alms to keep body and soul together, why should he not invite the charity of the rich to assist him in the studies that were to revolutionize the world?

Arrived at a university, students from the same provinces — from which they often came up in bands — showed a tendency to herd together in a way which powerfully influenced mediæval organization. The jealousies of the rival sets who came from different parts of the country, roused into action, perhaps, by different views of the merits of some individual teacher, often developed tumults such as in some centres have not even yet been altogether dissociated from academic life; though, on the other hand, the provincial organizations must have done good service in preventing the danger of isolation on the part of poor scholars coming up for the first time, and in assisting them with advice and counsel. In Paris the system was extended into the organization of what was called the "Four Nations," whose existence is ample proof of the cosmopolitan character of the universities of that early time. Each nation had its separate houses for the sick and poor among its members, its separate officers, and separate funds on which it could draw to assist its needy scholars, or "bursars," as they began to be called

when the students came to be housed in *bursae* or "inns"—the germ of the future colleges.

Of the life of the students we have some glimpses which will enable us to contrast with present circumstances and surroundings, and which will account for the survival at Oxford of some of the regulations at which we are told our American Rhodes scholars are apt to chafe. It was a life, not of ease and freedom, but of discipline and stern control. At Paris lecturing went on from sunrise to noon, the hour of dinner, not in comfortably equipped classrooms, but in any vacant space where an audience could be housed, the students sitting on the floor, or sometimes on the ground at the porch of some great church. History records that the legates of the pope censured the university on one occasion for introducing the use of wooden benches, as subversive of academic discipline and tending to effeminacy of manners. Dinner over, the afternoon was comparatively free. Then came supper about sunset, after which study was resumed.

Three hours before midnight, the chains which barred the narrow streets began to be fastened up; watches patrolled in the name of the various authorities who claimed a share in the police of Paris; and every son of learning was expected to be in bed, unless he had access to some of the towers where the votaries of astrology outwatched the stars.

Of the inner life of some at least of the students we have a terrible account in the writings of Erasmus, whose evil fate it was to pass the early years of his life in the most poverty-stricken college of the Paris University—the College of Montaigu (*Montacutum*). It is to be hoped the picture he draws was not true of any other place:

The students lived, packed three or four together, in a damp room, filled with pestilential air from the neighbouring cesspools; their bed was the floor; their food, coarse bread and scanty, varied with rotten eggs; their drink, putrid water, diversified occasionally with wine of so vingarish a quality that it obtained for the college the nickname of *Montacutum*. Fireplaces or stoves they had none; filth and vermin (*pediculorum largissima copia*) assisted in keeping them from the cold, and their circulation was sometimes artificially accelerated by the aid of corporal punishment.

Not altogether dissimilar, though fortunately free from revolting features, is the description given of student life at Cambridge not long afterwards by the old chronicler, Antony à Wood:

There be divers there who rise daily betwixt four and five o'clock in the morning, and from five until six of the clock use common prayer . . . and from six unto ten o'clock use ever either private study or common lectures.

At that hour they had their frugal dinner. It was composed of a "penny piece of beef among four, having a few porage made of the broth of the same beef, with salt and oatmeal and nothing else." From

dinner to supper, at five o'clock, the time was spent, we are told, either in teaching or study; and after supper the students discussed problems or pursued other studies until ten, when, being without hearth or stove, "they were fain," says the old chronicler, "to walk or run up and down half an hour to give an heat to their feet when they go to bed. These men be not weary of their pains, but very sorry to leave their study."

It would lead us too far into the domain of history to trace the consequences for the universities of that double revolution in learning and religion, the two phases of which were each so intimately connected with the other. The Renaissance, by the revival of Greek and Latin literature, first freed men's minds from the fetters of a dead scholasticism, whose depressing weight had long crushed all individuality out of them; the Reformation was an assertion of spiritual independence, breaking the bonds of the ecclesiastical system which for centuries had held together the nations of the West, and producing changes of a radical nature, not only in religion, but also in politics and education. The spirit of independent free thought had been aroused, never again to slumber; and though in church centres which still remained Catholic the new learning met with great opposition, the old traditionary system had received its death-blow. The universities were no longer to be mere "links in the chain which the church had thrown over Europe"; they had become independent units, and they progressed toward a distinct individual existence in which different types of nationality were now allowed to impose something of their own peculiar character. Thus it has been pointed out how France, with her centralizing instincts, concentrated the study of law at Orleans or Bourges; of medicine, at Montpellier; of theology, at Paris; how England, with her natural inclination toward competition, produced till within recent years two universities alone, designed, as it were, to keep each other mutually up to the mark; while the various subdivisions of mediæval Germany were faithfully reproduced in the numerous seats of learning which sprang up within her boundaries.

In most universities there existed the time-honoured four faculties—arts (sometimes called philosophy), theology, law, and medicine; though none more cultivated all four in the same degree. At Paris, for instance, theology was supreme, or rather theology and philosophy welded together in the system forged by the schoolmen when they first took the dogmas of the church under their care. This accounts for the small consideration given to medicine and law by the English and German universities, modelled, as they were, after Paris. In course of time the division according to faculties, as based on difference of studies, supplanted the

old organization of the students according to their "nations," which now became of less practical consequence.

While the universities of the North, both in England and Scotland, mainly adopted Paris as their model, those of Italy, Spain, and a great part of France itself followed the lead of Bologna. Paris stood for a general mental training, with the speculative bent natural to the study of dialectic; Bologna laid more weight on the idea of a professional training in law, with a definite practical aim. But the growth of the institutions which came after Bologna and Paris were marked by very different conditions. By the fifteenth century colleges had been numerous founded both in the French and the English universities; though the system never took much hold of either Italy or Germany. These colleges had developed originally out of "inns" or *bursae*, already mentioned,—provided under the supervision of a resident graduate, as special homes for the students; and which the beneficence of the rich, by endowing lectureships and scholarships, and furnishing separate chapels and halls, had gradually enabled to fix a deep hold on the constitution of the university—in fact, to grow to even greater importance than the very corporations themselves to which they had been intended as subsidiary. As many of you may be aware, this is still the case with the English universities. In Scotland, on the other hand, lack of funds—as well as the sturdy independence of the Scottish student, who even to this day is usually left to seek out his own home for himself—prevented the establishment of the collegiate system. American universities have done well to reproduce, in their dormitories and halls of residence, this feature of the life of the earliest seats of learning. Too much cannot be said of the advantage to our students of a healthful and helpful environment; it is necessary, in fact, for the application of the doctrine that education consists, not only in the training of the intellect, but also in the supply and the use of opportunities and experience that shall go to the upbuilding of a manly and well-mannered type of character.

For centuries after their first organization the universities of Europe, with frequent internal changes, kept pretty much to the lines that were originally laid down for them. They met the requirements of their constituents by providing, under the head of "arts," a general literary culture, and also by furnishing the means of preparation for the special professions of law, medicine, and theology. The demand of the present day is different and more extensive. It is a twofold demand; first, that the spheres of professional activity recognized and countenanced by the universities shall be greatly widened; and secondly that the universities shall supply, not merely the training required by scholars and

specialists, but also the liberal culture proper for the ordinary citizen. What is it that, during the last quarter of a century, has drawn toward so many departments of our work the benevolent attentions of practical men? Surely, the acceptance of the view that the university is no longer a thing apart from the life of the people, exists no longer only for the scholar and the recluse, but is eager to come into practical touch with every interest that may be helpful in preparation for citizenship and public service. The day is past and gone when it could content itself with being a mere academic ornament, instead of striving to make itself a centre of usefulness to the community. Rather has the word gone forth that learning and science are, and must ever remain, "incomplete and unsatisfying unless they can be adapted to the service and the use of man." All this can be said without incurring any reasonable censure from those who wish to warn us that it is no part of the office and function of a university to teach its *students how money can be made*. The mere statement of the point is enough to remind us of the great extension which has been given in recent times to the field of university work. Many additions have been made to the system under which law, medicine, and theology were recognized as the only technical applications of our academic studies. Why, all the marvels of modern scientific and practical activity rest on the basis of the abstract and theoretical learning which the university fosters. And there seems no reason in the nature of things why engineers and chemists should not have just as broad and sound an education as doctors and lawyers.

No country in the world has had more success than the United States in meeting the demand for uniting the old traditional education with one that shall have a direct practical bearing on the life and occupations of the people. On this continent no influences have been at work to obscure the view that it is for the interest of society at large that each member of it shall be able to claim, so far as circumstances allow, the opportunity for the full development of the talents with which nature has endowed him, to the end that he and his fellow-men may reap the benefit of their proper exercise. We have never regarded it as worse than useless—even dangerous—to give education to those whose lives are to be spent in the practice of the manual arts. "He who seeks to limit education for fear nobody would be left to *black his boots* is a slave-holder at heart"—that is a dictum which would surely be rejected by none. If you say that education breeds discontent, so much the better; discontent is the parent of progress. Let the educated man and the trained workman, in every profession and in every industry take precedence over the uneducated and the untrained; society will be the better for it.

This extension of the sphere of its activities has brought the modern university one clear and obvious gain. It may be confidently stated that at no time has so great an amount of public interest been taken in its operations. Like the tyrant of old, the university has "taken the people into partnership." The many share the tastes, sympathies, aspirations and studies that only a generation ago were the hall-mark of the fortunate and highly-favoured few. That a large section of the general public feel a direct interest in university matters is evidenced by the amount of space which the press is ready to devote to them. One important New York journal gives its readers the benefit of a valuable weekly budget of "News of the College World," and does not seem to grudge the room thus withdrawn from its financial and other sections. This is one result of that policy of making its affairs known to the public which changed conditions have rendered it expedient for the modern university to adopt—not with the view of advertising itself, but rather on the ground, as Dr. Harper says in his Decennial Report, that

the institution is a public institution, and that everything relating to its inside history, including its financial condition, should be made known. Its deficits have been published as well as its surpluses, and we attribute largely to this policy of public statement, not only the interest of the public, but the confidence which has been shown on so many occasions.

There is much in this that more conservative institutions in other countries would do well to imitate. It was not of such a university as yours that the late Mr. Cecil Rhodes was thinking when he said that college people know nothing of affairs, and are as "children in finance." Listen to another extract from your President's report:

The establishment of the budget from year to year, and the rigid adherence to its provisions, have made it possible to reduce the work of the University to a thoroughly business basis, and it may fairly be claimed that the affairs of no business corporation are conducted more strictly on business lines than are those of the University.

Business administration is, of course, quite a different matter from educational organization. But it is an indispensable for our universities as it is in other departments, and I think it is to be counted clear gain that the business men who are generally found on the board of trustees have been allowed the opportunity of securing increased efficiency in university administration. College people are sometimes a little shy about admitting suggestions or criticisms from the outside world. To understand colleges, they say, you must be a college man yourself; railroad people, for example, need not apply. But college accounts, after all, are just like other accounts. It is true that we are not in education for the purpose of declaring a dividend to shareholders at the close of each financial year; our returns are made in



another way — by adding to what may be called, for short, the “brain power” of the community. But, on the other hand, we are all the better for keeping as closely as possible, so far as regards business management, to the methods of business. We cannot go all lengths with the churches, for example, which are often compelled by the circumstances of their work to leave a large margin for faith and trust on the credit side of their accounts. As an illustration, then, of how the affairs of the modern university have come into close relation with the facts of life, it is well to acknowledge that where efficient administration has been secured, it is mainly to be credited, not to the professors and the faculty, but to the keen insight and the wise judgment of those business men who form so important an element in our boards of trustees. Those who still deprecate the share in university administration thus given to me who need not themselves be college bred, may care to read the following extract from an address given to the students of Girard College, May 20th, 1905, by Mr. Frank A. Vanderlip, ex-assistant secretary of the treasury, and now vice-president of the National City Bank:

The professional educator is quite as likely to become narrow and provincial as is any other specialist. The president of one of our great eastern universities told me a few days ago that he had been making an exhaustive examination of the history of his institution, and he had discovered that the great progressive steps which the university had taken in 150 years had been against the protest and the opposition of the faculty. The trustees from time to time brought forward new plans of organization, and broader ideas regarding the curriculum. The faculty had in every case voted adversely, and when the changes were made, they were made only by the trustees taking the responsibility upon themselves. Now, in the light of years of experience, these changes have been seen to be wise in the main. The unavailing protests of the learned men who made up the institution's faculty are discovered sometimes to have been based on narrow grounds, lacking the impersonal view and judgment that should have been brought to bear upon the questions.

You will benefit by your connection with the business men of this city also in another way. I understand that your President has been looking around for some new world to conquer, and that it has been decided to institute in connection with the University a completely equipped school of technology. In no department have the business men, both of this and of other countries, shown greater appreciation of the practical value which attaches to the *highest* theoretical instruction, and nowhere has generous giving been more fully illustrated. I am not unaware of what has already been accomplished in this connection. The report of the Mosely Commission, which recently visited America, is full of information as to what has been done, even apart from our universities, to give our workmen the scientific basis of the occupation which is to be theirs in life. With the spread of technical education, unskilled labour, work by rule-of-thumb, is everywhere going to the

wall before the intelligence of the skilled workman who has studied the abstract principles of the science which is applicable to his particular industry. But here as elsewhere there is always room at the top. The field of our industries and manufactures is so vast and various that America, like Germany, is finding instruction of *the highest type* in regard to the application of science to practical enterprise a very remunerative investment. It is stated that in Germany the number of men of university training (including schools of technology, mining, agriculture, forestry, and veterinary science) has doubled itself within the last thirty years. The industrial activity of the country has gone on developing itself in close contact with its academic life. So, too, in the United States, the phenomenal increase in the number of students enrolled in schools of technology, and in university faculties of applied science, is a good index of the marvellous development of the scientific and industrial activity of the nation. The new departure which your Board of Trustees is now about to take springs no doubt from the conviction that one of the most effective methods of strengthening industry by education is to provide the highest and most thorough scientific training for those who are to be the leaders of industry. A few highly trained specialists will always be found to be of more value to the industrial progress of the nation than a whole array of smatterers.

But I do not wish to pose as one whose main interest is in science and its application to industry. Applied science is by no means everything. Far from it: you might as well try to get bread from stones as a stimulating culture from applied science alone. Its exclusive cultivation would lead to a distortion of the true work and office of the university, which must ever have a higher aim than to qualify a man for any particular department of practical or professional activity. This fact may be in need of some restatement, for the opposite view is abroad in the land, and is at times put forward in somewhat precocious fashion. Let me cite, as an illustration of the contrast in spirit and methods between the earliest universities and the latest, an extract from a letter recently addressed to me. It was from a young man, who begins by telling me that he "expects to enter one of the large colleges of America on graduating from ——— High School in about a year." He then submits a list of seven questions, which I am asked to answer "as nearly as I can." Here are three of them:

1. What thing do you believe is the best for a young man to follow, and from which he can obtain the largest returns?
2. About how much can an electrical engineer graduate from your college get, and how much can he obtain in later years, as nearly as you know?
3. If you think something else is better, how much can a graduate obtain in wages after mastering that something?

I do not know how many college presidents the writer of this letter may have honoured with his confidence. He is probably a very young man. If I had replied to him, I should have been tempted to quote from Plato, who said that education "must not be undertaken in the spirit of merchants or traders, with a view to buying or selling; but *for the sake of the soul herself.*" It is with the educational value of science, and its effect on the mental training of the individual, that the university is primarily concerned, and it should give no encouragement to anyone who looks on scientific knowledge merely as a means of profit and material advancement. I often think that in these days of electives, and the glorification of "Departments" and even graduate studies, we are too apt to lose sight of the old ideal of a "Faculty of Arts." The university must be something more than a mere nursery for specialists. We all know what it is to have to deal with an uneducated specialist. It is here, as it seems to me, that the small college, with its more or less fixed curriculum, is having at once its opportunity and its revenge. The university must not give up the attempt to define the sphere of liberal instruction and culture. Specialization is, of course, one of the most important functions; but, after all, there is no greater service it can render the community than that which is implied in turning out, year by year, a number of students who have received the benefits of a sound and comprehensive education, and who are fitted thereby to take their places worthily in the arena of life. When I go back in memory to the days of the Scottish universities, when the whole student body came into contact — albeit in huge, unwieldy, and overgrown classes — with arts professors, each of whom was a worthy representative of an important and almost essential subject, I realize the loss — as well as the gain — that has come to us from the revision of our methods and standards. Many of our greatest universities are now looking around for some corrective to apply to what has been described as "haphazardness" in the choice of studies. You are probably aware that at Harvard, for example, students may graduate without either classics or mathematics; a recent return showed that forty-five per cent. drop classics altogether in entering college, and seventy-five per cent. drop mathematics. These time-honoured subjects are being displaced in favour of studies which are described as "more likely to be serviceable in the actual activities of modern society." I have grave doubts about the wisdom of making so large a departure from what may be regarded as of permanent value in the traditional basis of a liberal education. Such an education ought not to be a thing of the past for those who have the opportunity of acquiring it. For them it is attainable within the limits of school and college life, provided they

do not begin to apply themselves exclusively to some special training in the very first year of their academic course. There ought always to be some order, some definition, some regulation of university studies. Wherever the attitude is adopted that is implied in the well-known formula of one subject being "as good as another," we are likely, in my judgment, to be called on to pay the penalty. The university, so far as concerns what is called its "academic" side, will be cut up into fragments. Departments will be apt to be treated as wholes in themselves, rather than in their organic relation to fundamental branches of knowledge.

But, however that may be, one thing is certain: No university can be in a healthy condition which is not spending a large part of its energies on those subjects which *do not* offer any preparation for professional life, which *cannot* be converted immediately into wage-earning products, and in regard to which young men are *not* told that "their brains are merchandise, and that the college is the mill that will best coin them." In short, we must not accept a purely utilitarian theory of education. The humanities must always be allowed to go hand in hand with the utilities. And we must bear in mind that education ought to be a preparation, not for a special career, but for the whole after-life. Many of us do not command, and never can command, the leisure that would enable us fully to satisfy tastes that lie outside our daily avocations. But we do not want to forget them, or to lose sight of them. For we know that, if we would avoid that narrowing of the mental and intellectual horizon which is generally the penalty of absorption in some special calling, such tastes and such pursuits should be considered valuable in proportion as they are removed from the environment of our daily life. Students who come to this University under such favourable conditions as seem everywhere to surround it, ought to realize that, if they neglect the opportunities of culture now, they will come hereafter to regret the loss of an abiding source of satisfaction. There is always the danger that in such a centre as this material interests and material prosperity may take the edge off intellectual aspiration. Let the students of the University of Chicago look beyond the horizon of the pursuit to which they may be destined, and, by using every means of self-cultivation that may be within their reach, endeavour "sincerely to give a true account of their gift of reason to the benefit and use of men."

W. PETERSON.

# THE PLACE OF CLASSICS IN EDUCATION.

---

## THE ANNUAL UNIVERSITY LECTURE FOR 1905.

In addressing you on this occasion, I am entering on an audacious undertaking. For I am speaking to those who are engaged in, and familiar with, the working of a great Canadian institution; and I must talk to you about things of which you know much that I have still to learn. But since the duty of delivering the University Lecture has been assigned to me, I suppose I can best discharge it by saying something about the nature and aim of the special department of university work in which it will be my business to take part. The subject which I have been appointed to teach is Classics—that is, Greek and Latin; which must be taken to mean the languages, literature and history of the ancient Greeks and Romans. I propose, therefore, to discuss the place of Classics in education. What is meant by learning Greek and Latin? And what is the use of learning Greek and Latin?

Some people would answer that there is *no* use in it—that classical study is a waste of time, or at best a mere amusement, as innocent in itself perhaps as chess or golf, but mischievous so far as it takes the place of more profitable employments. A good example of this view may be found in the Romanes Lecture lately delivered in Oxford by that eminent biologist, Dr. Ray Lankester. “We desire,” he says, “to make the chief subject of education both in school and in college a knowledge of Nature, as set forth in the sciences which are spoken of as physics, chemistry, geology and biology. We think that all education should consist in the first place of this kind of knowledge, on account of its commanding importance both to the individual and the community . . . In fact, we should wish to see the classical and historical scheme of education entirely abandoned, and its place taken by a scheme of education in the knowledge of Nature” (that is, as the context shows, in the knowledge of the inanimate and non-human world). It is true that the lecturer subsequently qualifies this sweeping statement by adding that he does not desire “to abolish all study of literature, history and

philosophy," and that he would not wish "to remove the acquirement of the use of languages, the training in the knowledge and perception of beauty in literary art, and the feeding of the mind with the great stories of the past, from a high and necessary position in every grade of education"; and, accordingly, he suggests that "about one-third of the time and effort of school and college life" might be spent on other things than natural science, and that among these other things might be included the acquisition of "a serviceable knowledge of foreign languages, and a real acquaintance with the beauties of English and other literatures." But the languages and literatures studied must on no account be those of ancient Greece and Rome. The classical scholar, as Dr. Ray Lankester sees him, is a person who "remains fixed in the old ruts of traditional ignorance, and obstinately turns his face towards the past, still believing that the teachings and sayings of antiquity, and the contemplation, not to say the detailed enumeration of the blunders and crimes of its ancestors, can furnish mankind with the knowledge necessary for its future progress." Classical study means the "employment of man's thought and ingenuity in the delineation and imaginative resurrection of the youthful follies and excesses of his race"; it is to "sit listening to the fairy-tales of our boyhood, and shrink from manhood's task"; it is a traditional training in "amusing elegancies"; it is the acquisition of "entertaining information and elegant accomplishments." Making a generous effort to concede something to his opponents, the lecturer admits that "the great joys of Art, the delights and entertainment to be derived from the romance and history of human character . . . must never be neglected"; but when he sees these "entertainments" pursued "in the name of the highest education and study" he is filled with horror and disgust. In short, the studies of the classical scholar are "comparatively unimportant, though fascinating (even too fascinating) studies"; they must be swept away, to leave a free field for things of serious importance, that is, for those studies of physics and chemistry, geology and biology, through which alone man can enter into possession of his kingdom; and when one and all of us have been duly instructed in those sciences, then human misery will be no more — and so, I suppose, we shall find ourselves arrived at the Millennium.

This is, I think, a fair summary of the views expressed by Dr. Ray Lankester. It is refreshing to meet with such a candid and thorough-going statement of the anticlassical position; and perhaps it may be instructive. For the most serious dangers with which classical study is beset come not from without, but from within; not from the assaults of open and professed opponents, but from the misdirection of effort, the perverted aims and methods, the blind following of a dull routine, through which

the teachers of these subjects, as of other subjects also, are liable to fail; and when we are seeking to guard against these dangers, we may sometimes learn a profitable lesson from our friend the enemy — if I may be permitted, in a wholly impersonal sense, so to speak of Dr. Ray Lankester. Yet I cannot help thinking that the lecture from which I have been quoting would have been still more instructive, if the lecturer had taken a wider survey of the matter. So far as he is urging the importance of the natural sciences, there is, I need hardly say, no controversy between us. The chief difficulty is to determine by what compromise the competing claims of the different branches of knowledge may be best satisfied, and the aim of an adequate and well-balanced education best attained. Here is a boy who has so many years to spend at school and college; and the practical question is, what subjects he is to study, and how many hours a week he is to give to each of them. This is not the time and place for discussing the details of the curriculum; but it is clear that the problem is not likely to be satisfactorily solved by those who fix their attention solely on a certain limited group of human needs, and ignore the rest. Dr. Ray Lankester tells us that Man is engaged in a struggle with that extra-human Nature against which he has rebelled, and must discover the secrets of the material universe in order that he may issue victorious from the conflict. Well and good; but who and what is this "Man" of whom we are speaking? Not an abstract idea of logic, or an average struck by the statistician; but a vast aggregate of individual persons, each living his own inner life of thought and feeling, each day by day pursuing his own aims for good or ill, and each, at every moment, influencing and influenced by his fellows in manifold relations. How can men hope to "enter into their kingdom" until each and all have learnt to live and work harmoniously together as members of the organism of human society? It therefore seems desirable that they should get some knowledge and understanding of themselves and their human environment; and things which serve as means and helps to this sort of knowledge are surely something more than "amusing elegancies." To this aspect of the matter, Dr. Ray Lankester seems strangely indifferent. And yet, in the very fact of speaking of Man and his activities, he is of necessity moving in those regions of thought to which he professedly attaches so little significance. He tells us, for instance, that the acquirement and application of knowledge of extra-human Nature is "an absolute duty"; and I do not dispute the statement. But how does he know this? What does he know about man's duties? Far be it from me to suggest that his conception of duty is less clear and comprehensive, or his devotion to duty less ardent, than that of the profoundest student of the humanities. He

speaks as one who knows what duty is; but it was certainly not from his researches in physics and chemistry, geology and biology, that he acquired that knowledge. And so it would seem that there are after all some things worth serious attention which lie outside the range of those sciences. When therefore we are told that "all education should consist *in the first place*" of a knowledge of the physical sciences, "on account of its *commanding* importance both to the individual and to the community," I find myself unable to concur; and against what appears to me an exaggerated estimate of the function of physical science, I would set some sentences written by that eminently temperate and judicious thinker, Henry Sidgwick. "If science and literature," he says, "are presented as alternative instruments of education, between which a choice must be made; . . . if one or other must be abandoned, if we must inevitably remain either comparatively ignorant of the external world, or comparatively ignorant of the products of the human mind, all but a few exceptional natures must choose that study which best fits them for communion with their fellowmen. . . . Let us demand," he concludes, "that all boys, whatever be their special bent and destination, be really taught literature; so that . . . their views and sympathies may be enlarged and expanded by apprehending noble, subtle and profound thoughts, refined and lofty feelings," and "that some comprehension of the varied development of human nature may ever after abide with them."

Happily, however, we are not in fact confined to these alternatives; we are free to decide what is the result which we should wish our system of education to produce — what sort of character and intellectual equipment we desire for our children or our pupils — and to select, not from one limited group of sciences alone, but from the whole range of thought, whatever may seem to us, in each particular case, best suited to contribute to that result. The end to be aimed at has been well stated by another biologist, Huxley, whose addresses on education seem to me to supply an excellent corrective to the narrow and one-sided views of some specialists in natural science and in literature alike; and I cannot do better than quote once again his often quoted words. "That man," he says, "has had a liberal education, who has been so trained in youth that his body is the ready instrument of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold logic engine, with all the parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic,



is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of Art, to hate all vileness, and to respect others as himself. Such an one and no other," says Huxley, "has had a liberal education."

He speaks of "the fundamental truths of *Nature*" as the things it is desirable to know; but in which of the senses of that ambiguous word *Nature* are we to understand it here? On that point Huxley's answer is clear. "Education," he says, "is the instruction of the intellect in the laws of Nature, under which name I include *not merely things and their forces*, but *men and their ways*; and the fashioning of the affections and the will into an earnest and loving desire to move in harmony with those laws."

"Not merely things and their forces, but men and their ways"; that is the point which Dr. Ray Lankester unduly neglects, but which Huxley adequately recognises. Only, when "men and their ways" are spoken of as included under the "laws of nature," the term "laws" needs some qualification. In the study of man, the formulation of "laws," in the sense of wide and abstract generalizations, has, no doubt, its legitimate place; to ascertain such laws is the aim of psychology and moral and social science. But these sciences are far from covering the whole field. They deal with man in the general; but it is man the individual, through the whole range of his spiritual life and experience, actual and potential, that we want to know and understand — this and that man and woman — ourselves, and those with whom we have to do; and in general statements about Man, much of what is most significant is necessarily omitted. In the case of inanimate and non-human nature it is otherwise; one flask of oxygen is exactly like another flask of oxygen under similar conditions; one beetle is very much like another of the same species. But in dealing with men, we are dealing with thought and feeling; and in thought and feeling no two men are alike; indeed, no one man is like himself in two successive hours. And yet, while the variety of human life is inexhaustible, we are so constituted that each of us is capable of entering into the thoughts and feelings of others, and making them his own; and it is thus that we are knit together in one brotherhood — first and chiefly, no doubt, through living intercourse, but also through the medium of written words. In reading the works of the great writers, we are brought into communion with those who have thought and felt most deeply on all that concerns the life of men, and have been gifted with exceptional power to communicate to us that which they thought and felt; and seeing and feeling with them, we learn to realize the meaning of the lives of others and our own as we could never have done without

their aid. Knowledge of "men and their ways" then, so far as it is attainable by study, is to be sought, not in natural science, but in those studies of literature and kindred matters which are collectively spoken of as "the humanities."

The poet of the *Odyssey* describes his hero as one who "had seen many cities, and learnt to know the thoughts of many men." Ulysses, indeed, was a traveller, and acquired that knowledge in the course of his wanderings. But a traveller sees only what he has eyes to see; some people in our day wander more widely than Ulysses, and gather little from their travels beyond a certain familiarity with the chatter of the *table d'hôte*, and the habits of foreign waiters. There are open to us, however, means by which, without leaving our own homes, we may acquire the sort of knowledge which the ancient traveller gained, and learn to know not only "the thoughts of many men," but something of the best that has been thought and felt in each successive age; and if I were asked to sum up in one phrase the benefit which a student of history and literature gains, or should gain, from his studies, I could hardly do it better than by saying, in words suggested by the Homeric verse, that he who has been so occupied has observed the life of many societies, and has learnt to know the thoughts of many men. And surely he who is thus well-travelled in the world of human thought is so much the better fitted to discharge his duties in his own society, and to acquit himself with credit in his dealings with those around him.

If we speak of education in the widest sense, as including all development of mind and character together, the larger part of it, no doubt, is obtained otherwise than through study, in the daily intercourse of home and street, workshop and playground. In this sense, education is carried on in every social group alike; in the school of social life every one is at every moment both a learner and a teacher; and it is chiefly by these mutual influences that the character is formed. And, since a University is a gathering of men, it must necessarily in this sense give a certain education to all its members, and impart to each of them something of that prevailing tone which is the outcome of the collective influence of all. For those who pass through a University course, this incidental result may well outweigh in importance all the rest; but it is incidental, in the sense that it is something common to all gatherings of men alike, and not directly connected with that training of the intellect in the pursuit of knowledge which is the special function of a University as such. Yet, it might be held that University life brings men together under specially favourable conditions; and certainly everything is to be welcomed which tends to maintain, among those who are thus brought into contact, a strong and hearty feeling of corporate life and a union,

and to ensure that all who enter their society shall be the better for its influence.

My present subject, however, is education in the more limited sense of systematic study; and the question is, what subjects of study will best serve as means to the result desired. To that question no general answer can be given; no one curriculum could be laid down which would be the best for all alike. For those who enter a University, there is, to begin with, a choice between the general education of a course in Arts, and the special training for some particular profession. One has sometimes heard the work of professional schools spoken of slightly, as mere "bread-and-butter study," in contrast to something assumed to be higher and nobler, which is called "culture" or "liberal education." But that attitude cannot be justified. All of us alike, unless we would be content to join the ranks of the unemployed, and live as parasites on our more industrious neighbours, must qualify ourselves to do some sort of work by which a living may be earned. For the specialists in literature and history, for those who are to find employment in teaching or writing on these subjects, their occupations are "bread-and-butter studies," no less than those of the medical and engineering schools. And on the other hand, technical work done in the right spirit may be as truly a means of mental culture as the study of a Greek or Latin poet. In such professions as Medicine or Engineering, a large part of the training consists of scientific study indistinguishable in kind from that of the disinterested seeker after knowledge; and the fact that the science learnt is hereafter to be applied to practical ends need in no way detract from its efficacy as an instrument of intellectual education.

But at the same time, there is in some places a certain undesirable tendency to hurry on prematurely to the practical end in view, to the detriment of the complete and all-round training of the man. For the man, after all, is more than the wage-earner. It is part of the business of a University to train men to do good work in this or that profession; but those who have passed through a University should go forth from it trained, not for the work of one profession only, but for all the functions of later life — not narrow specialists, deaf and blind to all that lies outside their professional occupation, but enlightened and wide-minded men, ready to take an intelligent interest in the varied life around them, and well qualified for every duty that may fall to them. It is therefore to be wished that all students, as far as may be practicable, should carry on to a further stage that training for life in general which has been begun by the preliminary lessons of their school days, before they concentrate their whole attention on the learning of one special trade; and in particular, that those whose professional work lies wholly

in the region of natural science should find time to advance far enough in the study of at least one national literature to make their knowledge of it a lasting possession, and a source of permanent interest. Whether the literature chosen for the purpose is English, French or German, Latin or Greek, matters comparatively little; any one of them judiciously employed, will supply sufficient food for thought in the field of the humanities to counteract any tendency to an ill-balanced mental development, or an unduly narrowed range of ideas.

But classical study belongs to the non-professional side of University work, and falls under the province of the Faculty of Arts. What is its place and function among the studies of that Faculty?

A University has been defined as "a place where any one may learn anything"; or we might rather speak of it, not as a place, but as a community of persons, collectively engaged in the quest of knowledge — a quest in which it is the duty and the privilege of the more advanced to help the less advanced upon their way. But since no one student can cover the whole field of knowledge, there must be provision for many different lines of study side by side, and each individual must take his choice among them. The more freedom of choice the better, provided that the group of studies selected in each case, taking the school and University course together, is such as to satisfy the essential needs of education. And among those essential needs, due account must be taken of one art for which all alike will have occasion at every moment of their lives; that is, the art of speech, the use and understanding of spoken and written words. Speaking no more comes by nature than reading and writing; and in the use of words, and the understanding of the words of others, there are all degrees of proficiency. All of us, no doubt, have in some sense learnt to talk; but most of us have learnt that lesson very imperfectly. Speech is, or should be, the expression of thought; and we can think clearly only so far as we have learned to speak with precision. How many or how few of us attach a clear and definite sense to every word we speak or hear or read? Familiar phrases flow from our lips, or strike upon our ears; and because the sounds are familiar, we are apt to imagine that we know what they mean, when, in fact, they mean nothing to us. Language thus misused, language devoid of clear and definite meaning, is, in the true sense of the term, *dead* language; and among the essentials of education must certainly be included some form of training in the use of language, some study which will qualify us to put life and meaning into the words we use, and to understand the meaning (or, if need be, to detect the want of meaning) of the words of others which we hear and read. Study of language is sometimes depreciated as a study of mere words instead of things. But those

who thus describe it miss the point. Language is the instrument by which we express, to ourselves as well as to others, our thoughts about things and persons; and he who has not learnt to handle that instrument cannot think to good purpose about anything whatever.

First and chiefly, then, we need to master our native language, the language in which we do our thinking, and by which we communicate with our immediate neighbours. And this mastery is not to be gained without well directed effort.

But it is certainly desirable, if less urgently necessary, to open up communications beyond the bounds of our own neighbourhood and our own race, and do our part towards annulling the curse of Babel, by learning at least one foreign language. On the obvious practical uses of this it is needless to enlarge; and those uses, I should suppose, must be indefinitely greater for those who live in a country in which a large part of their fellow-citizens speak a different tongue; so that in this province at least, a working knowledge of French might almost be regarded as a necessity. But it is of the educational benefits to be gained by learning a foreign tongue that I am now speaking. He who knows another language is the better qualified to understand his own and use it with effect; for he has the advantage of a wider range of observation and experience in the use of verbal symbols, the advantage of comparing and contrasting different modes of expressing thought.

Moreover, the use of language can hardly be fully mastered, unless it has not only been acquired as a knack or habit, but analyzed and investigated by scientific method. The study of the grammar of any language is a strictly scientific study, and one of no small value for mental training; though, like other sciences, it may be, and often has been, in the hands of stupid teachers, perverted into something as nearly as possible useless and unmeaning, or may even become an instrument of torture. It is no doubt possible to get this sort of training by intelligent study of the English language alone; but I think that the principles of grammar can *best* be got at through study of another language, and comparison of that language with our own. For, in the effort to discover the meaning of unfamiliar forms, the learner is forced to apply to the words a close and detailed attention, which he is apt to regard as superfluous in dealing with his mother tongue.

And among the languages which present themselves for study are those of the ancient Greeks and Romans. It is true that Latin and Greek will not serve our purpose if we want to order a meal in a foreign hotel, or to write a business letter; but for the uses of which I have been speaking, they have certain advantages over any other tongues at our disposal. It has often been argued that a knowledge of the Latin

or Greek language is useless except as the means of gaining access to the literature; that of the boys who learn the elements of those languages only a small proportion will ever advance far enough to appreciate the thoughts of the ancient writers; and that, consequently, for the majority the time spent in learning the elements is wasted. No doubt, the further the study is carried, the greater is the profit to be gained; but those who maintain that beginners gain nothing, overlook the value of the study of language in itself, apart from its use as a key to literature. If our object is to gain insight into the meaning of words, or the relation between words and thoughts, the Latin language serves that purpose better than French or German, just because it differs more widely from English; that is, because the structure of the sentence, the mode of combining words together to make connected sense, is radically different. In translating Latin into English, and still more in translating English into Latin, you are compelled to pull the sentences to pieces, and construct fresh sentences of different form; and in doing this you are forced to ask yourself what the words mean, and go down below them to the underlying thought. Thus, translation from and into Latin is a valuable exercise in English, and supplies a training, not only in correct speech but in clear and precise thinking, for which it would not be easy to find an adequate substitute. Besides, Latin opens up to the learner a new and wider region of the comparative science of language. From French and German some notion may be gathered of the origin and connexions of the English language, and the derivations of English words; but those who learn both French and Latin are in a position to trace the French language, and the French element in English, back to their remoter sources, and to follow through a period of some two thousand years the changes in the form and meaning of the words they use.

And the objection that the amount of time required for learning Latin is greater than the results can justify, is partly met by the saving of time elsewhere. Since the learner is gaining in command of his own language by the very fact of learning Latin, he can without loss diminish the number of hours which he would otherwise need to spend in the study of English *eo nomine*. Moreover, some knowledge of Latin greatly facilitates the task of learning French; and if one who has learnt both Latin and French should at any time have occasion to read or speak Italian or Spanish, he can learn to do so with little further effort.

I have been speaking of Latin, as the more generally studied of the two classical languages; but what I have said of Latin as a means to clear thinking applies, with certain differences, to Greek also. It certainly does not follow, however, that every schoolboy and schoolgirl should be compelled to learn both Latin and Greek. If it is merely a

question of the languages, apart from the literatures to which they give access, it cannot be maintained that the advantages gained by learning one ancient language will be doubled by learning two. No doubt all knowledge is good; a knowledge of Greek and Latin is better than a knowledge of Latin alone, and each helps towards a fuller understanding of the other. But it must be considered in each case whether this or some other employment of the pupil's time will be most profitable for his education. It would be absurd to say that every boy and girl in the country ought to be taught even one ancient language; but it might not unreasonably be considered desirable that most of those at least who intend to proceed to a University should learn something of Latin, even if the special line of study which they may afterwards select does not leave them time enough to advance far in knowledge of Latin literature. Whatever may be the particular occupation for which they are seeking to fit themselves, they will be the better for the greater mastery of their own and other languages, and the habit of clear thinking, to which their Latin lessons will have contributed. And if it is once settled that Latin is to be one of the subjects of a boy's education, it is probably better that he should begin it at an early stage of his school course, and carry it on concurrently with his other studies, until the time comes for him either to pursue it further as part of a specialized study of literature, or to drop it, and devote his whole attention to some other group of subjects.

But if it is important to recognize the use of linguistic study, it is no less important to guard against its misuse. For it has often been, and I am afraid still sometimes is, so greatly misused as almost to justify the view of those who desire to sweep the classics away as antiquated lumber. How it may be in Canadian schools I do not know; but in a certain class of English schools, and in those especially to which the richer people send their sons, certain methods are established which would be laughable if they were not so seriously mischievous. You may find a small boy of ten or little more, who is still at a rudimentary stage in the use of his native language, attending a preparatory school where he is compelled to spend a large part of his time in learning by rote the grammatical forms and inflections of Latin and Greek at once, and perhaps of French as well. It would be difficult to devise a more unprofitable occupation for a child than this dreary treadmill exercise, or a method better calculated to dishearten the young scholar, and make him hate his lessons; and if these small boys grow up, as I hope most of them will, into intelligent and capable men, it will be in spite of this part of their school curriculum, and certainly not as a result of it. It would seem obvious enough that if a boy

is to learn both Latin and Greek, he should have made some progress in the one before he begins the other. When the learner is far enough advanced in Latin to feel himself at home among the grammatical forms and usages of that language, and has begun to appreciate the literary significance of the books he reads—a stage which an intelligent boy may very well have reached by the age of fifteen or sixteen, without spending more time on Latin than a due attention to other subjects allows—it will then be time to consider whether he is to learn Greek also. If he has shown aptitude for linguistic and literary study, and if it is thought desirable that he should specialise in that direction, then he may very well proceed at this stage to learn the elements of Greek. His previous training in Latin will have made the new task so much the easier; he will be spared the bewilderment of trying to fix in his memory two masses of unfamiliar forms at once; and experience shows, as might have been anticipated, that a boy or girl who begins Greek at this stage may, in a couple of years or so, overtake and outstrip others who, from the very beginning of their school course, have been struggling with the elementary difficulties of the two languages together.

Moreover, Latin and Greek alike should be taught by rational methods. In the first stages of learning a new language there are certain word-forms, inflections of nouns and verbs and so on, which must be fixed in the mind by an effort of memory. A sensible teacher will aim at reducing this burden on the memory to the indispensable minimum; and if the language is so treated, if the pupil is made to learn from day to day just so much elementary grammar as is needed for his reading and translation, and no more, and if the reading and translation are so graduated that a few grammatical forms at a time will serve the purpose, even the very first steps in the learning of Latin or any other language may be made both interesting and instructive.

But a certain traditional method of language-teaching is not yet extinct, which seems to combine the maximum amount of drudgery with the minimum of mental benefit. One may find young schoolboys set to learn by rote, for instance, lists of irregular and exceptional forms, many of which are of rare occurrence. What business has a small boy to know such things? Or rather, what business has his teacher to ram into him a mass of such disconnected scraps of information? It may be right enough that those of us who have been occupied for years in study of the Classics should carry in our minds a good many facts of that order; they have been fixed in our memory, for the most part, without conscious effort—at any rate, they certainly might have been—through habitual reading of Greek and Latin writings; and when, in



the course of our work, we have occasion to make use of one of these facts, it is convenient to have it ready to hand. But when memory fails us, as must sometimes happen to the most accomplished scholar, we can refer to the grammar or the dictionary; and why should the teacher seek to force such indigestible mental food down the throats of his reluctant pupils?

Roughly speaking, it may be said that a learner ought to know no more grammar or vocabulary than he has met with in his reading. He ought to learn the meaning of each word, of each grammatical form or construction, when he meets with an instance of it in an intelligible context, and not before; and if he has learnt by rote grammatical facts which he has never yet found occasion to utilize in his translations, there has been something amiss in his teaching.

But, on the other hand, I hope it will not be supposed that I am defending inaccuracy or slovenliness. That old-fashioned system of classical training under which some of us grew up, much as it needed reform in certain points, was not without its merits; and one of its merits, I think, was this, that the pupil was made to feel that a definite breach of one of the known rules of the language was an offence second in heinousness only to a lapse in morality. When this sort of blunder is firmly discouraged, the result should be to cultivate a habit of close attention and painstaking accuracy, which will be of value in any sort of work which the learner may afterwards find to do. So far as mistakes can be avoided by the application of knowledge which the pupil is understood to have already acquired, or which he can find for himself in his books of reference, no mistake is to be excused; but on the other hand, he should not be required to load his memory beforehand with a mass of incoherent and, to him, unmeaning facts, any one of which can be got from books when it happens to be wanted.

It is in the learning of the languages especially that classical study is apt to be perverted and discredited by mistaken methods. Rightly directed, the study of Latin or Greek, even if little more than knowledge of language should be gained, is far from useless. But the chief and highest use of the languages is reserved for those who push on further, and whose aim is not only to understand the words, but to know and reconstruct in their own minds the whole life of action, thought and feeling of the men of earlier times. The history of ancient Greece and Rome is a part of the general history of mankind; and its study is a part — and a specially significant part — of the process of tracing the development of the human world in which we live. No one can fully understand his own world, and the life he lives in it, until he has realised the relations between the present and the past, and has

retraced the process by which our modes of life and action, our political and social institutions, our thoughts and our beliefs, have been evolved from earlier forms. In so vast a field of study, each of us must be content to give his main attention to some limited part. But the subject itself is one and indivisible; and it is to the interest of all that, in the necessary division of labour, no part of it should be neglected. The distinction between "ancient" and "modern" history is merely arbitrary and conventional. We may say, if we think fit, that modern history begins with the introduction of Christianity. But the growth and spread of Christianity was a gradual process; Christian and Pagan societies lived for centuries intermingled; and when at last the world of Pagan civilization was absorbed by the growing Christian Church, the result was no sudden breach of continuity, but a compromise, under which much of the older culture survived. The world of Pagan Hellenism became, not solely "Hebraist," but Hellenist and Hebraist at once; in the civilization which the peoples of northern Europe inherited from Rome, both elements were combined; and to this day the life of the European races has retained through all variations the same character of mingled Hebraism and Hellenism. Those who study any period of modern history will find it necessary for its full understanding to work back to what preceded it. The history of the Christianised European races as a whole needs for its adequate explanation a study of the Roman Empire, out of which the modern nations grew; and the study of Roman life and thought in turn demands a knowledge of the Greeks, from whom the Roman culture was derived. So far back (that is, through some three thousand years) we can trace the continuous story of that family of the human race to which we ourselves belong; at least we can trace it in its main outlines; though what can be discovered, even in the best known periods, is after all no more than a minute fraction of the vast and infinitely varied life of the past. Beyond that point, the earlier stages of human evolution are lost in darkness, save for some partial glimpses; though the archæological discoveries of the last century have opened up a twilight region extending further back into the past, in Egypt and Babylonia, through a more than equal period; and the still more recent discoveries in Crete and elsewhere are even now adding a new and introductory chapter to the special history of Greece. Of that space of three thousand years which stands in clearer light, more than a third is included within the range of the studies distinctively known as classical; and our knowledge of some two-thirds of the whole rests chiefly on the evidence of documents transmitted in the Greek and Roman tongues. A student may find scope enough for his energies in any portion of the field; but that it is desirable that some of us at least

should occupy ourselves with the earlier periods, and that as many as possible should acquaint themselves at least with something of the results of these researches, can hardly be denied by any one whose notion of science is not so narrowed as to exclude man as a subject of knowledge. A biologist, I suppose, would hardly dismiss palæontology as nothing more than an "elegant amusement"; and it might be thought that even the earlier stages in the ascertainable history of man are, at least and lowest, as well worth investigation as the far more ancient history of the reptile or the mollusc. It may be noted that Dr. Ray Lankester, in that very lecture to which I have already referred, makes an excursion into a past so remote that, in comparison with it, the subjects of classical study are things of to-day and yesterday, and speaks of a time when "the creature called Man emerged with an educable brain of some five or six times the bulk (in proportion to his size and weight) of that of any other surviving Simian." If knowledge of such things as this is not without its value, why should we stop short at the point where the story of man himself begins? It might rather seem that there are even stronger reasons for enquiring into the course of the education and successive achievements of the human spirit of which that bulky Simian brain has been the instrument. And in this enquiry nothing that can in any way serve to illustrate the life of men of a past age is without its value; buildings, sculptures, weapons and tools, even broken potsherds have their significance to those who know how to make use of them. But the evidence of written words, where it exists, stands first in importance. And under this head must be included not only the writings of professed historians, not only great works of literature; but every piece of writing that has survived from a distant age, even to the scraps sifted from an Egyptian rubbish-heap, may serve as a historical document, throwing light incidentally perhaps on the events of political history in the narrower sense, but certainly and inevitably yielding some knowledge of the life and thought of the writer and those among whom he lived, and thus contributing something to that reconstruction of the total life of the past at which the historian aims. The study of antiquity, regarded from this point of view, is a strictly scientific study, and one in which severely scientific method is demanded; and the investigation of many of the problems which it presents affords abundant exercise for judgment in the testing, combining and interpreting of evidence. The knowledge of ancient life which has already been attained is the collective result of the patient efforts of a host of scholars, working in many sub-departments; and many among them have spent their lives in labouring at tasks which, to a hasty observer, might seem utterly profitless and futile, but which find their

justification in the contribution of some element needed for a fuller comprehension of the whole. The advances made through these labours during the last hundred years are not unworthy of comparison with those of any other science. But much still remains to be done, both in the discovery of fresh evidence, and in the fuller and truer interpretation of the evidence already at our disposal.

On the other hand, the work of the investigator of the human past is distinguished from the researches of natural science by an essential difference in the nature of his subject-matter. For his subject is the life of men of like passions with himself; he is capable of making their thoughts and feelings his own by imaginative sympathy; and it is only so far as he has done this, that he can claim to have reached the highest level of scholarship. The business of a historian, no doubt, is to ascertain historical facts. But what is a historical fact? We learn, for instance, that the battle of Salamis was fought in the year 480 B.C. That is, as far as it goes, a correct statement of fact. But what does the statement mean? That day's fight was the joint action of many thousands of men, each of whom thought his own separate thoughts, thrilled with his own emotions, and took his part in the conflict at the prompting of his own distinct and individual motives. To explain that one fact *fully* would mean to trace out and realise in every detail not only the inner life of every combatant at every moment of the hours of fighting, not only the life-history of each one of them which led up to his action on that day, and the life of the communities which sent them forth to fight, but the whole previous history of the race, back to that momentous enlargement of the brains of their Simian ancestors. It seems absurd even to speak of an ideal so hopelessly unattainable; yet that is the ideal towards which it is the task of the historian to work, so far as the materials at his disposal make it possible for him to accomplish some infinitesimal fraction of the whole; and perhaps it is well for him that the paucity of his materials has set such limits to what is possible,—that he is not overwhelmed and driven to despair by the complexity of his subject. In the performance of any portion of this task, the student is brought into mental contact, and in some sense into fellowship, with those men of the past whose lives he studies; his relation to them is not wholly different from that in which he stands towards his living associates. True, he cannot speak to them; but they, through their words or actions, speak to him, and communicate to him something of what they thought and felt.

This holds good in greater or less degree of all studies which have man for their subject; but it is true in the highest degree with regard to the study of great works of literary art — that art which is most fully exemplified by poetry.

The term *literary art* is apt to give rise to misconceptions; it suggests to some people a kind of writing in which whatever there may be of serious meaning is tricked out with superfluous verbal ornaments, or in which the attention which should be fixed upon the matter is diverted to the style. And even those who desire to speak of art as something worthy of respect often show an inadequate sense of its significance. They describe the work of a great writer as *beautiful*, and they admit that the contemplation of its beauty may be a source of *pleasure*. It is in this tone that Dr. Ray Lankester speaks of "the great *joys* of art, the *delights* and *entertainment* to be derived from the romance . . . of human character." Now, it is no doubt true in the main of the products of the highest art that they are in some sense or other beautiful, and that they are capable of yielding pleasure. But the word *pleasure* is far too wide and vague to define the distinctive effect produced by works of art as such; the betting-ring and the drinking-saloon, I suppose, also yield pleasure to those whose tastes lie in those directions. And *beauty*, though it may be a prevailing characteristic of the greatest works of art, is not necessarily present in all. A picture of an ugly man, or even a deliberate caricature, may be good art in its way; and the same may be said of analogous forms of literature—much of the genial fooling of Aristophanes, for instance, or the Falstaff-scenes in Shakespeare. It is undeniable that such things may be good art; yet it would be an abuse of language to speak of them as *beautiful*.

Art may be better described as a process by which many are led to feel something that one man has first felt. It is a form of human intercourse; and its effect is to unite men in a common feeling—to unite directly the artist and those who are receptive to his influence, and indirectly, to unite among themselves all whom that influence has reached. And the literary artist is he who produces this emotional effect through the medium of written words. It is thus that Shelley speaks of the poet,

"Singing hymns unbidden  
Till the world is wrought  
To sympathy with hopes and fears it heeded not."

And it is by this communication of emotion, this speaking from the heart and to the heart, that works of literary art are differentiated from writings which may be described as scientific, writings, that is, which are addressed to the intellect alone, and convey statements of fact or general truths, uncoloured by the feeling of the writer. In one sense any work of art may be called good which does in fact produce the effect at which the artist aimed, which succeeds in communicating to those who are

qualified to receive it something of that emotion, be it what it may, which he has felt and sought to express. But in another sense the comparative worth of works of art may be estimated according to the quality of the emotion communicated. And this may vary through the whole range of human feeling, from tears to laughter, from awe to flippancy, from love to hate, from the noble to the base. That which, by common consent, is esteemed the highest art of all ages, works in the region of the more serious and significant emotions, and those which are concerned with moral issues. But we cannot live constantly at those high levels; and there is much good art which expresses lighter moods, and has no more direct bearing on the serious concerns of life than cheerful and lively conversation. This sort of art, too, is a boon that we could ill afford to lose; and our lives are the sunnier for the play of delicate and graceful fancies, the flashes of wit and gleams of humour, to which art of this type contributes. Moreover, art at this level still retains its character as a form of human intercourse, and serves to unite men in common feeling; and he who has brought people even to smile with him and with each other has done something towards strengthening their sense of fellowship.

There is an art—the art of music—which produces its effect through sounds alone, and by means of them conveys emotional moods pure and simple. But words, the medium of the literary artist, are sounds significant of definite thoughts; and his work is the expression of some thought, combined with the communication of the feeling which that thought has called forth in him. And since it is human life, the life and actions of ourselves and other men, that chiefly interests us, and calls forth our warmest and strongest feelings, the work of the artist in words consists chiefly of pictures of human life, or reflections on human life, steeped in emotion. The poet is the writer whose appeal to the heart is most direct and most intense; and his use of metre is a borrowing of aid from another art to heighten the effect of his appeal; for rhythmical speech is speech and music together.

The Greeks spoke of the poet as a man who is *inspired*, and we still sometimes so speak of him. He is swept along by a rush of feeling, the source of which may be a mystery even to himself. To that feeling he gives utterance in harmonious words; and something of the same feeling passes into those who hear or read his words. "If I do not move my audience to tears," says the ingenuous reciter of Homeric poetry in Plato's dialogue, "it will be no laughing matter for me when pay-day comes." In the drier atmosphere of the college lecture-room the flow of tears may be less copious; but for all that, the modern lecturer on Homer is, in his different way, discharging a function similar

to that of the rhapsodist; he serves as a link in the magnetic chain by which the emotion of the ancient poet is passed on to a fresh generation of readers.

Regarded in this aspect, the study of ancient literature is a sort of intercourse with men of a past age, who "being dead, yet speak"; and the classical scholar is one who aims at opening and maintaining communication with them, for himself and others. But the literary art embodied in ancient writings, and consequently their value for us from this point of view, varies through all degrees. As material for history, indeed, all writings that have come down to us, whether artistic or scientific, have their use. But the scientific element in them is *intrinsically* valuable to us only so far as it yields knowledge not to be obtained elsewhere; for in science it is the truth conveyed that signifies, and not the voice of the speaker. And in natural science especially, there is little now to be learnt from the writings of the ancients. Not that their work in this department was wanting in merit; for here, too, it was the Greeks that led the way, and pointed out the path to their successors. The impulse of intellectual curiosity, the pursuit of truth for its own sake, was one of the chief characteristics of the Greek mind; and all our modern advances in this region are the outcome of work done in the Greek spirit. There was a time when the world had fallen back from the degree of scientific knowledge to which the ancients had attained. Of the knowledge of this kind which existed in the middle ages, a great part was derived, mostly at second or third hand, from Aristotle or Galen; and modern science received its first impulse from a more thorough and intelligent study of the ancients. But we have now advanced far beyond that stage; the modern pupils of the ancient Greeks have turned their lessons to good purpose, and working on in the spirit of their predecessors, have widened the bounds of science beyond the boldest anticipations of ancient thinkers; and the last vestiges of our dependence on the ancient writers for this sort of knowledge are now passing away. In geometry, a text-book written by an Alexandrian Greek two thousand years ago has served for the instruction of the schoolboy down to our own day, and is only just going out of use. But in general, ancient treatises on scientific subjects, so far as they are that and nothing more, are now of historical interest only. The modern physicist does not go to Aristotle for the principles of his science; and the medical student has no need to take down the voluminous works of Galen from their shelf.

But if the natural science of the Greeks is superseded, it is otherwise with their philosophy. The fundamental problems which underlie all special sciences alike; the question of the meaning of knowledge and

truth and reality; all that is included under the term *metaphysics*, that study which has been defined as "the finding of bad reasons for what we believe upon instinct," but which, none the less, some among us are impelled by an irresistible instinct to pursue—in all this, we have reached no final conclusions; each age and generation finds it necessary to restate these questions for itself, and to attempt their solution afresh. Those who attempt it still find helpful suggestions in the attempts of earlier thinkers; and among those earlier thinkers Plato and Aristotle still hold a leading place. And this is the case especially with that part of philosophy which deals with the principles of human action, and seeks to define the aim of human effort. In moral and political theory it would still be difficult to find more stimulating text-books than Plato's *Republic* and Aristotle's *Ethics*.

But it is for the most part just so far as ancient writings include the element of literary art, that is, so far as they bring us into living personal touch with those who wrote, that they retain their intrinsic value unimpaired. Great masterpieces are at all times exceptional; and even during the golden ages of Greek and Roman literature—the classical periods *par excellence*—there was doubtless much feeble and worthless writing. Aristophanes jeers at the "pretty fellows" of his day,

"That are fit to out-talk Euripides ten times over,  
All writing tragedies by tens of thousands";

and Horace speaks of the flood of mediocre verse poured forth in Roman society—poetry of a kind which "Gods and men and booksellers" rejected. But most of the literary output of this quality has perished. Among the writings that have come down to us there is better and worse; but a large proportion is of the best. And in literature the best is never out of date. In reading Homer and the Attic Tragedians, Virgil and Horace, we still hear the living voice of the poet, and are touched by his personal magnetism; and as long as human nature remains essentially the same, the interest of those men's utterances can never pass away. The feelings thus conveyed to us are things incommensurable with the scientific truths of physics and chemistry; but it would be a strange estimate of values that would dismiss them as superfluous.

But some people, who would not deny the value of literature as such, might say that we can get as much of it as any reasonable man can want, without putting ourselves to the trouble of learning extinct languages. Homer and Sophocles, Virgil and Horace, were no doubt great poets; but if we want poetic inspiration, can we not find plenty of it in Shakespeare and Milton, Tennyson and Browning, Goethe and Victor



Hugo? And why need we concern ourselves about Plato, when we have access to Kant and Hegel, or still better, perhaps, to the most recent and up-to-date compendium of moral philosophy or metaphysics? Now, if we were compelled to choose between the ancient and the modern, much might be said for preferring the modern. But the true answer is that we need both; we want the best of every age. Every great writer is a unique personality, and has something to communicate to us that no one else can give. Moreover, every society and period of culture has its own distinct message for us; and the literature of the golden ages of Greece and Rome stands out above that of other periods, not only in virtue of its intrinsic excellence, but also through the fact that its influence has shaped the thought and coloured the feeling of all later generations. Rome lived by what she had imbibed of the Greek spirit; and our world is still animated by thoughts and feelings first expressed by some Greek or Roman writer. Not only in the writings of modern authors, but in all we say and do, the Hellenic influence is still a living power. We may submit ourselves to the working of this influence unconsciously; but we should lose much if we were no longer able to follow it back, and to renew it at its source. And as it is impossible that all should do this for themselves, there is the more need in the general interest that some among us should assume the function of keeping touch between the present and the past.

It is as the means of getting access to the contents of the ancient writings for the purposes of which I have spoken, that the learning of the Latin and Greek languages finds its highest use. But it is sometimes argued that we could attain the same object by the use of translations, and so spare ourselves the pains of learning the languages. How far can an English translation of a Latin or Greek book adequately serve in place of the original? A speaker at a recent meeting of the Classical Association answered that question by comparing translations to "tinned salmon." But it is a question to be seriously considered. Translations are more inadequate or less, according to the character of the subject-matter, and the tone and style of the original. So far as the matter is purely scientific, a translation may serve the purpose satisfactorily—a schoolboy would gain no greater knowledge of geometry by reading his Euclid in the original Greek. And the bare outline of historical events can be extracted from a translation of Thucydides or Tacitus as well, or nearly as well, as from the original. But so far as literary art enters into the matter, that is, so far as it is the communication of emotion from writer to reader that is concerned, much is necessarily lost in the process of replacing one set of verbal symbols by another. "The first step in scholarship," it has been said, "is to learn

to translate; the next, to see that translation is impossible." In regard to the emotional effect of the speaker's utterance, "the style is the man"; and style is untranslatable. For the words of one language are never exactly equivalent to those of another; each phrase covers a group of ideas, and carries with it a complex of associations, different in range from those of the nearest phrase in another tongue. Hence, in translation, the delicate shades and touches which give character to the utterances of a master of language inevitably disappear; the translator must sacrifice much of the significance of the original, and can reproduce the picture only in coarser outline. He is forced to trim and compromise; he must either be content with something relatively insipid and commonplace or else seek to produce corresponding effects, and attain to equal force and vigour, by introducing something of his own. "A pretty poem, Mr. Pope," said Bentley to the translator of the Iliad; "only, you must not call it Homer." A similar criticism applies in greater or less degree to every translation of a work of literary art; but most of all to translations of poetry. If the translator aims at reproducing as faithfully as possible the meaning of the words, he must turn verse into prose, thus sacrificing that part of the total effect which the poet gained by the use of metrical rhythm; if, on the other hand, he seeks to produce corresponding sound-effects in his own language (and such correspondence must at the best be far from complete) he can only do so at the cost of much divergence in meaning.

Still, if much is lost in the process, much may still remain; and translations are not without their use. In proof of this it is enough to mention one striking instance. As a matter of historical fact, it is undeniable that an English translation of those Greek and Hebrew writings which are collectively called the Bible has been for three centuries the one great Classic of the English-speaking races, the one book intimately known to gentle and simple alike, the one piece of literature that has worked itself into the very structure of our national life. And this is the more significant, because the influence of the English Bible depends not merely on statements of fact presented to the intellect, but first and chiefly on its appeal to the emotions. It is not as a collection of scientific treatises, but as literary art in the highest sense, that this book has found its way to the heart of the people.

In view of this example, it cannot be disputed that much may be got from translations of the Greek and Latin Classics. I am inclined to think, indeed, that translations might well be read more widely than they are. Those who have lacked opportunity to learn the ancient languages might, from a suitable selection of good translations, get a knowledge of ancient literature, incomplete indeed, but real and sound as

far as it goes. Anyone who wishes to know something of the history of the classical age might spend his time to better purpose, and find more human interest in the study, if, in place of toiling through some modern text-book of ancient history, he were to read in English parts of Herodotus and Thucydides, the Letters of Cicero, or Plutarch's *Lives*. Those who are interested in moral and social problems, or in metaphysical speculations, may find abundant food for thought in Jowett's translation of Plato; and even the poets, as rendered by a translator who is himself gifted with a touch of poetic inspiration, may convey something well worth having. A genuine influence from the spirit of Euripides, for instance, may reach the English reader through Mr. Gilbert Murray's versions. But of all the ancient poets, Homer, perhaps — or that group of anonymous bards which the world has agreed to call by the name of Homer — most easily penetrates the obscuring medium of an alien language. Pope's *Iliad*, widely though it differs from the original in style and tone, still holds its place in literature; and Keats has recorded, in words not easily forgotten, the moment when Chapman's translation of Homer first opened to him a new world of poetic emotion:

“Then felt I like some watcher of the skies  
 When a new planet swims into his ken;  
 Or like stout Cortez when with eagle eyes  
 He stared at the Pacific — and all his men  
 Looked at each other with a wild surmise —  
 Silent, upon a peak in Darien.”

For those, then, who cannot read the classics in the original languages, the next best thing is to read something of them in good translations. And those who are still struggling with the initial difficulties of a strange language may, by judicious use of translations, get from the first some insight into the significance and literary quality of the books which they are studying. The beginner, engaged in puzzling out the meaning of his text sentence by sentence, loses sight of the whole in his minute attention to the parts. But he may read in English in an hour what it would take him many days to work through in Greek or Latin; and this rapid reading would enable him from the first to catch something of the author's meaning, and would add greatly to the interest of his detailed study of short pieces. Still, the reading of English versions of the Classics is at most a second-best course. Those who seek to penetrate more deeply into the spirit of past ages will not be content till they can read for themselves the very words of the ancient writers.

And if our knowledge of a large part of that past out of which the present world has grown is not to be blotted out, it is clearly needful

that some among us should take these studies as their special task. A university then, if it makes any attempt to cover the whole field of knowledge, must necessarily include a group of members engaged in acquiring for themselves, preserving, and transmitting to others, all knowledge of Greek and Roman life and thought which has been gained by the labours of earlier scholars, in interpreting the past afresh in relation to the ever-changing present, in bringing to bear upon the present the thoughts suggested by their knowledge of the past, and, as far as may be possible, in extending the bounds of that knowledge by fresh researches. Among those who are thus occupied, there will be all degrees of proficiency. Some of them, perhaps, will become scholars in the highest sense, and make the study of classical antiquity the main work of their lives. That all or most should do so, is neither possible nor desirable. But, provided that their work, as far as it goes, has been sound and judiciously directed, even those who desist from systematic study of the subject at an earlier stage will have acquired something which will stand them in good stead in later life, something that will not be lost even if their memory of genders and declensions should become somewhat hazy. They will have gained in mastery of language and clearness of thought; they will be the better qualified to understand the literature of their own and other tongues; they will have got some notion of earlier stages in the development of human life, and will be so much the better prepared to understand the conditions of their own lives; they will have made some progress towards "knowing the thoughts of many men," and among them, some thoughts of the kind most worth knowing; they will have gained some acquaintance with unfamiliar ways of thought and feeling, with opinions and beliefs other than those current in their own limited circle, and with social institutions differing from those under which they have grown up. And so far as they have done this, their mental horizon will be widened; they will be the more capable of escaping from the tyranny of dead traditions, stereotyped opinions, and prejudices of class and race; the better fitted to understand and allow for different points of view, to appreciate the position of others with sympathetic comprehension, and at the same time to look at things for themselves with open eyes, to test and question all authorities, and to form their own judgments by the light of their own reason.

I began by asking, "What is the use of learning Latin and Greek?" I have not answered that question; I could not even attempt to answer it fully without making an impossible demand upon your patience; but I have tried to suggest some of the considerations that must be taken into account before an adequate answer can be given.

W. SCOTT.

## BIOLOGICAL SENSATIONALISM.

---

The philosopher Plato, says a credible though not very well-authenticated tradition, was so convinced of the necessity of a training in the mathematics as the foundation for habits of accurate thinking, that he wrote over the door of that Academy, of which all our late-born institutions for the pursuit of knowledge, McGill among the number, are distant but lineal descendants, the words

*μηδείς ἀγεωμέτρητος εἰσίτω μου τὴν στέγην*

“let none unversed in geometry come under this roof.” The tale, if not true, is at any rate *ben trovato*, for all readers of the *Republic* are aware with what earnestness the Moses of scientific thought championed the claims of “geometry and the kindred arts” to hold the first place in the education of the philosopher-statesman. And for the benefit of those among us who regard the mathematical sciences as arid and soulless, it may be added that the Platonic enthusiasm for these disciplines has even its religious aspect. For the end of life, as we are repeatedly told in the dialogues is “likeness unto God,” and it is a well-attested saying of the philosopher, which might in fact have served as text to the cosmological discourse he puts into the mouth of Timaeus, that “God ever geometrises,” *ἀεὶ ὁ θεὸς γεωμετρῆι*. In modern days indeed, the science thus glorified by Plato seems to have suffered a grievous fall from her high position in the esteem of educational theorists. Mathematics, when not regarded in the Philistine fashion ascribed by Xenophon to Socrates as a mere practical convenience, useful in buying and selling, in navigation and land-surveying, is commonly at best allowed to possess a doubtful value in training and developing certain special and secondary intellectual aptitudes. Our enthusiasm for Science as a potent force in the general education of mind and character is in the main reserved for those inductive studies which deal directly with what can be weighed in the balance or seen under the microscopic lens of Physics and Biology. Of the knowledge of the laws of material bodies in general and of the workings of our own organism in parti-

cular, our liberal educationalists hold, a student can hardly have too much. Of Mathematics it is good that he should have sufficient to work out the calculations which will meet him in his pursuit of these more "concrete" branches of knowledge; the rest of the subject is mere "leather and prunello," superfluous mental baggage which the traveller through life is only too likely to find *impedimenta* in the strictest sense of the word.

Now, it would be idle to deny that there are some good results to be won by this exclusive attachment to experimental science which could hardly be obtained to an equal degree by any other educational method. From his experience in laboratory work a student may derive a quickness and fineness of observation, a delicacy of manipulation, a precision in the actual measurement of minute quantities which it would be difficult to obtain from other sources. At least the only rival training for eye and hand of which I can think would be a combination of scientific Palæography with a thorough course in some branch of Drawing, and there are obvious and unsurmountable objections to the serious adoption of such an alternative to natural science as a vehicle of education in all but a few exceptional cases. Yet we may reasonably doubt whether the dethronement of Mathematics in favour of the natural sciences is not attended by certain intellectual defects which are already beginning to make themselves apparent to a thoughtful observer. Is the new training, we may fairly ask, the equal of its predecessor in producing exactitude not only of the eye and hand, but of thought? Does it, to the same extent, teach us to know definitely and precisely what we mean by the terms we use and the statements in which we employ them, and to distinguish correctly between conclusions which do, and conclusions which do not, follow from the reasons assigned for them? Is it, in fact, the equal of a sound mathematical training in making its votaries competent, in the recent memorable words of Mr. John Morley, to decide when an assertion is proved and when it is not?

Doubts such as these seem to be intensified rather than removed when we listen to many of the utterances of distinguished cultivators of the physical sciences who have stepped outside the circle of their own special studies for the purpose of laying down broad philosophical generalizations about the nature of things and of truth. Plato, to go back to the illustrious and venerable name with which I began this paper, has told us that hardly any of the eminent geometers of his own day showed serious philosophical capacity, and has made this very fact an argument in favour of a more thorough and rigorous pursuit of mathematical logic. A similar reflection occurs to me when I observe the lax and ambiguous nature of the premisses and the fallacious character

of the reasoning employed by some of our own distinguished "men of science" in their philosophical excursions. And I would not have it thought that in making this observation I am guilty of presumption or want of respect. Nothing is further from my mind than to call in question any fact of science upon which the specialists of our time are agreed, or to attempt, where there is disagreement among them, to intervene in the dispute with an impertinent philosophical *Machtspruch*. But, after all, the controversies between the philosopher and the scientific specialist of to-day, are rarely of this kind. The facts are usually not in dispute; the question is simply whether, taking the facts as given by the specialist, they warrant the general conclusion he draws from them. Now, this is a question not of fact but of logic, or, as my master Plato would perhaps say, the instrument by which it has to be decided is not the balance or thermometer or spectroscope, but inference and reasoning. If any man has a claim to be heard in such a matter, it should surely be the logician; at least, if he shows that he has nothing to say, it is clear proof that he is an incompetent representative of his science, and would do well to begin his studies again.

And now to come to the application of these generalities. My esteemed colleague, the Professor of Biology, has published in the last number of the MCGILL UNIVERSITY MAGAZINE, an interesting article entitled "Some Philosophical Questions suggested by a Study of Biology." By the very title of his paper Professor MacBride seems to appeal to the verdict of others than biologists upon his argument, and I am consequently sure that he will not regard it as presumption on my part to point out some features of his reasoning which strike me as logically unsatisfactory. If I confine myself in the following pages to an examination of what I am bound to call his fallacies, it will, I hope, be understood that I am far from suggesting that the results of his discussion are without philosophical value. With the purpose of his polemic against materialism I may claim, indeed to be in complete sympathy, and I am none the less grateful to my colleague for his gallant charge into the materialist ranks at the head of his skirmishing bands of Paramœcia, that I cannot regard the effect of the raid as altogether the absolute rout he would have us believe it. It is precisely because the forms of false reasoning I think I find in his discourse are so apt to damage what I, like him, regard as the good cause of a spiritualist philosophy that I am anxious to do what I can to discourage the future use of such treacherous weapons.

The points with which I propose to deal, as simply and directly as I can, are in the main three, and they are all matters upon which a deal of mighty loose thinking is widely current among intelligent

persons, though none of them really presents any serious difficulty to a mind a little versed in precision of thought. First, I should like to say a few words on the so-called "relativity of knowledge," a doctrine which appears to be affirmed by Professor MacBride formally in his concluding sentence (p. 207), and by implication in a previous passage on p. 205. Next, I will deal with the passage (p. 205) in which the doctrine of "relativity" is used, after the common Agnostic fashion, to depreciate the value of arithmetical truths. In this connection I hope to show my readers that Professor MacBride is mistaken both in his notions of the character of arithmetical truths in general, and in his estimate of the meaning and value of the special proposition which he selects, apparently from a former essay of my own, as his illustration. I shall finally examine his main "idealistic" thesis, that "all we can ever know are our own sensations" (quoted from Burge, p. 200). I shall ask whether this statement can possibly be true, and whether, supposing it to be true, Biology can offer any relevant arguments for its truth. And I shall give reasons for answering both these questions with a decided negative. The proposition we shall find, is certainly false, is incapable of being relevantly attacked or defended by any considerations derived from the experimental sciences. The whole problem of the logical analysis of perception belongs, as we shall see, to the theory of knowledge, and is thus logically prior to all inquiries into the special facts of nature; indeed, any attempt to state a natural fact already tacitly implies a general theory as to the nature of knowledge. The only possible basis for an idealistic philosophy we shall find, where Kant long ago found it, not in empirical facts, but in the logical analysis of the formal structure of knowledge itself.

I. *The Relativity of Knowledge.*—The declaration that "all our knowledge is merely relative" may be, and has been made, in a variety of senses, in all of which it can be shown to be untrue, though less grossly at variance with reason in some of those senses than in others. Hence it is important to know in which of the possible senses Professor MacBride uses the phrase. His own verbal declaration (p. 207) is couched in language which fairly bristles with ambiguities of which he himself appears to be unaware. His words are as follows: "This then is the attitude in which I myself pursue the study of Biology, in the full consciousness that all our reasoning is at most relatively true, and does not go to the root of the matter." Our immediate problem is to discover in what sense and with what degree of universality the proposition just quoted is meant to be taken. A first ambiguity at once presents itself to the logician accustomed as he is to expect accurate and precise enunciation, about the sense of the words "our reasoning." Does "our



reasoning" mean the reasoning of biologists in particular, or that of human beings in general? Is it only of biological truth or of truth universally that we are told it is only relatively true?

This point is itself not without importance, since the words, if taken in the former sense, would be consistent with the view that absolute truth exists and is disclosed to us by some sciences, though not by Biology, and the assertion of "relativity" would thus lose most of its significance for others than biologists. However, my colleague's determined attack upon the truths of arithmetic (p. 205), his assertion that all truths "which we can affirm to be such independently of the judgment of the individual" are mere "identities," and his designation of himself as a "Pragmatist" leave little doubt that the wider interpretation is intended, and that he must be taken as declaring that all human reasoning whatsoever "is at most relatively true, and does not go to the root of the matter."

But we have not yet done with the ambiguities of this confession of faith. If the words are to be taken as meaning what they say, they assert not merely that all *truth* is merely "relative," but that all our methods of reasoning and inference are so too. In other words, Professor MacBride pronounces our intellectual faculties themselves to be inherently deceptive and that to an unknown degree.<sup>1</sup> And thus we should be forced to the conclusion of the ancient "sceptics," that any human judgment or inference is as likely to be wrong as right, a doctrine luminously deduced by Sextus Empiricus from the principle of "relativity" in his learned work on the "Elements of Pyrrhonism."

But there are several reasons which lead me to suppose that Professor MacBride does not really mean all that he says. To begin with, he speaks oddly of the "truth" of our reasonings, and this of itself seems to show that what he really has in mind is not our methods of inference, but the conclusions which we reach by them. Then again, throughout his paper, though he frequently seeks to show that our notions, for example, of substance, and force, are crude and confused, he has nowhere made any similar attempt to discredit our methods of scientific inference. And finally he has attempted himself to give reasons why we should believe his doctrines, a procedure which would obviously be mere waste of words if he really held that reasoning is itself inherently delusive. I shall therefore assume that Professor MacBride's bark,

---

<sup>1</sup> To an unknown degree, "because, if we knew that our reasoning processes were liable to a definite and constant error of a certain kind, we could, of course, introduce a correction for it, as we do in various sciences for constant errors of perception, and thus neutralize its effects. The "relativity" doctrine would then lose all its practical significance, and would, moreover, be theoretically self-contradictory, since the supposed method of correction would *not* be deceptive—*contra hypothesis*.

like that of some other philosophers, is worse than his bite, and that he really means to say no more than that the conclusions of the sciences generally are at best provisional.

Now, such a doctrine as this is not, like some of the more sweeping theories of relativity, palpably absurd. It labours merely under the minor disability of being notoriously false. For there are some sciences of which we know that the results are not in any sense provisional. A truth which is provisional, it must be borne in mind, is not really a truth at all, but a partial approximation to truth. By calling it provisional we mean that closer approximations to the genuine truth may be looked for as our knowledge grows. Thus, though it may be the case with some branches of scientific study that all the results hitherto attained are provisional, this very admission implies that we can at least conceive of results which are not provisional but final, not mere approximations but precise and exact truths. But for our ideal of absolute truth, there would be no meaning in the assertion that one provisional result is relatively truer than another. Approximations are only possible where there is a limit to be approximated to. And further, in all the branches of pure mathematics we have bodies of truth which actually embody adequately the conception of absolute and final truth. The science of arithmetic presents us with the simplest and most obvious of many examples. In what sense, for instance, could it be maintained that there is anything provisional or relative about the statement that three and four are seven, or that two is the only even prime number? Will anyone seriously maintain that we are here dealing with mere approximations, and that further research may yet teach us that the real value of  $3 + 4$  is something more like 7.5, or that there are a few even primes other than two? The absurdity of such a position is so manifest that the relativists who have faced the question at all—and many of them have been content simply to ignore it—have usually tried with Professor MacBride to escape by maintaining that arithmetical propositions are mere unmeaning tautologies, and therefore are not really truths at all, thus by implication admitting that if there are such things as arithmetical truths, they cannot be “relative.”

That this theory of the nature of arithmetic is false will shortly be demonstrated in the second division of this article. Meanwhile, I will ask the reader to prepare himself to admit the demonstration by reflection on two simple points. If arithmetic is a string of meaningless tautologies how comes it that it has to be learned with such pains, and that it is so easy to offend against its principles? And again, am I really prepared to declare that by “two” I mean “the only even prime

number," as I must be, if I am to be consistent in the view that all arithmetic is tautology.<sup>1</sup> To these points I shall return immediately in connection with Professor MacBride's rather sweeping attack upon the character of arithmetical verities. For the present it is enough to note that if there is a simple proposition of arithmetic which is at once certainly proved and more than a mere tautology, that one proposition is of itself enough to destroy irrevocably the whole sceptical doctrine that all our knowledge is merely "relative or "provisional." For a sceptic in philosophy, like Professor MacBride, there are only three ways of dealing with the problem thus raised by arithmetic if he wishes to be consistent with himself. Either he must deny the very existence of arithmetical problems, or admitting their existence, he must maintain that they are all false, or at any rate doubtful, or finally, he must, if he declines both these alternatives, hold that all the propositions of arithmetic are at any rate mere tautologies, barren identities which convey no information whatever, and thus escape being false by being simply unmeaning. Now, it is scarcely possible for a philosopher who has heard of the multiplication table to adopt the heroic course of asserting that there are no such things as propositions of arithmetic, and history does not even seem to have presented us with any instance of the next most heroic position, viz., that all the statements of arithmetic are false. Anti-mathematical philosophers in general have for obvious reasons been content to adopt the theory, which is that of Professor MacBride, that such propositions are merely identical statements of the form "A is A," and "X is X," and, therefore, speaking with rigid accuracy, unmeaning. The particular proposition in connection with which Professor MacBride affirms his acquiescence in this doctrine is the familiar statement that "two and two are four," of which he tells us confidently at p. 205 of his essay that it is one "the two sides of which are identical," adding that "all eternal truths which we can affirm to be such independently of the judgment of the individual will be found to be similar tautologies."

In the next paragraph I shall discuss the true character of the simple example selected by Professor MacBride to serve his purpose, and shall urge that he is quite mistaken as to its meaning and logical nature. Before I do so, however, I must call the attention of my readers to a few general considerations.

In the first place I would ask why, if all the statements of the arithmetician are of the same obvious kind as the profound reflection that "a plant is—a plant," "Paramœcium is—Paramœcium," arithmetic

---

<sup>1</sup> When you teach a child what "two" is, do you begin by telling him what "prime numbers" are, and what "even" means, or do you simply tell him that two is one and one? I suspect most of us follow the latter plan.

remains a subject which has to be learned, and that, as many of us can vividly recollect, with a considerable amount of difficulty and heart-burning? To take a concrete instance; when I say "seven times nine are sixty-three" what I mean, according to Professor MacBride's view, must be merely that the syllables "seven times nine," and the syllables "sixty-three" stand for, or refer to the same thing. Arithmetic would thus come to consist of an infinitely extended list of synonyms, and the difficulty to be overcome in mastering it would be the mechanical one of impressing so elaborate a list on the memory. What the use of employing so many synonymous expressions where one would have answered just as well, may be, does not appear, and one is seriously tempted to suppose that, on this theory of the matter, the multiplication table must be a questionable intellectual luxury. To myself it appears rather that the two sides of our proposition are far from being identical. Until enlightened by "Huxleyan Agnosticism," I should have interpreted it to mean that "you reach the same result by taking seven groups of nine units each as you would if you took six groups of ten units, and three units over." But thus understood the equation  $7 \times 9 = 63$  is no longer an empty identity, but a valuable and significant addition to our stock of numerical knowledge.

The same consideration may be reached by a slightly different route, as follows: If arithmetical propositions are really mere tautologies, this must hold good of them all, of the least as well as of the most familiar. None of them can contain any real contribution to our knowledge. Now, consider attentively the following series of statements: (1)  $2 + 2 = 4$ , (2)  $1869 \times 2745 = 5,130,405$ , (3) if  $m$  be any positive integer, and  $(2^m - 1)$  is a prime number, then  $m$  is a prime number, (4) Every positive integer can be represented as the sum of four squares, of which one at least is not zero. Which of us will care to maintain that each of these assertions is alike a mere tautology, and that none of them, not even the last two, form any real addition to the knowledge we already possess when we know the definition of the symbols employed? Who, for instance, will say that the fourth of them adds nothing to what he already knew as soon as he understood the meaning of the terms "positive integer," "sum of," "four," "square number," "one," "zero"? And it is easy enough to show, as I shall now proceed to do, that if the last of the four is a real addition to our knowledge the same must be true even of the first, in spite of its simplicity and familiarity. The fact is that in arithmetic, as in other sciences, the only propositions which are mere identities adding nothing to our knowledge, are the arbitrarily adopted "nominal definitions" of the symbols out of which our demonstrations are built up. These are,

indeed, genuine instances of identical, or in Locke's phrase, "trifling" propositions, precisely because they are merely arbitrary declarations of the sense in which we are pleased to employ the signs in question. But when once a sign or group of signs has received such an arbitrary definition, any further assertion as to the equivalence of two such groups does claim to add something to our knowledge, and for that very reason must not be assumed *ad arbitrium*, but requires to be duly proved. Now, applying this to the special case of numbers, we see at once that in any system of arithmetic each numerical sign must have one and only one such initial arbitrary definition. There may, indeed, originally be some latitude of choice as to which of several possible definitions shall be selected,<sup>1</sup> but the definition once adopted has then to be rigidly adhered to, and any further statement about the number in question becomes a real extension of knowledge.

To come now to the case of the equation  $2 + 2 = 4$ . Professor MacBride's view that this equation is a mere identity is only defensible on the assumption that  $2 + 2 = 4$  is a definition of the symbol 4. In this case the equation adds nothing to our knowledge because it amounts then to the arbitrary declaration that we propose henceforth to employ the sign 4, which we might of course have taken for any object of discourse whatsoever, to signify the sum of two and two, and Professor MacBride's description of the statement as a mere identity will be correct. But, if this is the case,  $3 + 1 = 4$  will now become a significant "eternal truth," expressing the new fact that the sum of 3 and 1 is equivalent to the sum ( $2 + 2$ ) which has been previously adopted as the signification of the arbitrary symbol 4. Of the two equations  $2 + 2 = 4$ ,  $3 + 1 = 4$ , only one can be a barren definition of a symbol, the other must be a significant proposition, valid without restriction for all intelligences, and therefore quite properly to be described as an "eternal" verity.<sup>2</sup>

It is a minor point, so far as the refutation of relativism is concerned, that Professor MacBride has selected what is demonstrably the wrong definition of the number 4. It might at first appear a matter of indifference whether we define 4 as  $3 + 1$  or as  $2 + 2$ , but in reality our choice of a definition makes all the difference between arithmetical science and hopeless confusion. In defining the successive integers we

<sup>1</sup> In the case of the integers, however, there happens to be no real choice, as we shall see immediately.

<sup>2</sup> May we not even say that, compared with Professor MacBride's unjustifiable contempt for the statement that  $2 + 2 = 4$ , there is an element of reason in the reverence of the Pythagoreans whose great oath was not by the Styx, but by "him who revealed to our kind the Four,"—τὸν ἀμείτερα γενεῆ παραδόντα τετρακτίν, παγὰν ἀνάω φύσιος βίζωμα τέχουσαν?

clearly need to follow some method which affords a general rule for the definition of any and every member of the interminable number series. If we proceed on a variety of different principles in defining the different integers, the result will be that instead of a single simple and coherent number scheme in which every term has its determinate place assigned as soon as its definition is known, we shall have to burden our memories with an infinity of separate formulæ, definitory of the separate integers, between which it will be impossible to establish any general laws of connection. Thus the very existence of arithmetic as a science depends upon a right selection of a method for the definition of numbers. Now, there is one and only method which satisfies this requirement, and it is the method we instinctively adopt when we learn to count ourselves or teach others to count by saying "one and one are two, two and one are three," and so on. In other words, the only permissible way of defining an integer is to define it as the sum of the preceding integer *plus* one. Hence, the true definition of 4 is not that  $4 = 2 + 2$ , but that  $4 = 3 + 1$ . That  $4 = 2 + 2$  is not a definition of 4 but a theorem about 4 which constitutes an appreciable addition to our knowledge of the number-system.

There is a further reason for thus defining the integers exclusively by identifying each with the sum of the preceding integer *plus* unity which is theoretically of even greater importance. It is of the first moment for theory to know whether the series of integers is endless or not, and supposing it endless, whether the same rules of arithmetical operation which we can verify for addition and multiplication of small numbers by actual counting of the units in the result hold good equally for all operations with finite integers however great. We all know as a matter of fact that both these suggestions are correct. The series of integers is endless, that is, you never come by successive additions of unity to a number which cannot be made by adding unity once more to give rise to a fresh number, different from and greater than each of its predecessors—and the rules of arithmetical operation are the same for all members of the series. But neither of these all important results can be proved to be true except by the so-called method of mathematical induction.<sup>1</sup> The principle of this method, which may thus be called one of the main foundations of all numerical reasoning, is that if we can show that a certain property belongs to the first term of a series, and also that if it belongs to any term it must also belong to the term next following, then the pro-

---

<sup>1</sup> On mathematical induction, its importance, and its meaning, see R. Grassmann, *Die Zahlentheorie*, § 23; R. Dedekind, *Was sind und was sollen die Zahlen?* §§ 59, 60, 80; G. Frege, *Begriffsschrift*, prop. 81, p. 63.

erty in question must belong to every term of the series. It is in virtue of this principle that we know that the rules of ordinary arithmetic will always be applicable to any numbers to which we may have occasion to apply them. Without it we could never be certain of our results when performing a fresh act of addition or multiplication, until we had actually checked them by the counting of the separate units. And, as appears from the very statement of the principle, the application of mathematical induction demands that the integers shall previously be arranged in a series in which each term is the next term or immediate successor to the preceding. Hence, the mistake of regarding  $2 + 2$ , instead of  $3 + 1$ , as the definition of 4 is one which would be fatal, if persisted in, to the very existence of a science of arithmetic.

We can now, I think, regard it as established that  $2 + 2 = 4$  is *not* a barren tautology, but an eternal and most suggestive truth. It will be instructive to consider a little more fully the exact nature of that truth, and the method by which it may be demonstrated. What we have to show is, symbolically that  $2 + 2 = 3 + 1$ , or, in other words, that the result of separately adding two sums, each composed of two units, and then combining them into a single total, is the same as that of directly adding one unit to a sum of three units. When we replace the symbols 2 and 3 by the groups of units with which they are by definition equivalent, and indicate the extent of each separate act of addition by means of brackets, the proposition to be proved takes the form  $(1 + 1) + (1 + 1) = (1 + 1 + 1) + 1$ .

We can now see that what our original statement involved was nothing less than a simple case of the very important principle known as the "associative" law of addition, namely, that the result of a number of successive additions depends solely upon the total number of units contained in the sums to be added together, and is independent of the way in which they are combined into subordinate groups.<sup>1</sup> This principle has become so familiar in practice that one might be tempted for a moment to regard it as something trivial and self-evident. That it is neither the one nor the other will be seen when we reflect that the "associative law," though valid for addition and multiplication,<sup>2</sup> does not hold good for subtraction or division. In fact  $(1 - 1) - (1 - 1) = 0$ , but  $(1 - 1 - 1) - 1 = -2$ , and similarly  $a \div (b \div c) = ac/b$ , but  $(a \div b) \div c = a/bc$ . The "associative" law is not thus a self-evident property of all arithmetical operations, and examination and demonstration are necessary to show of which operations it holds good.

<sup>1</sup> In other words, brackets may be inserted or omitted at pleasure without affecting the result.

<sup>2</sup>  $a + (b + c) = (a + b) + c$ , and  $a \times (b \times c) = (a \times b) \times c$ .

As an illustration, both of the precision of proof required in such matters and of the use of mathematical induction, I may be allowed to reproduce, without the whole of its particular notation, the symbolical proof of the law for the process of addition given by Prof. Peano in the last edition of the *Formulaire Mathématique*. Peano states the proposition to be proved thus  $(a + b) + c = a + (b + c)$ ,  $a$ ,  $b$ ,  $c$ , being by hypothesis natural numbers. He then proves (1) that the proposition is true when  $c = 0$ . This follows from the identity  $a + 0 = a$ , which is part of a previously adopted definition of the symbol  $+$ . (2) It is now shown that if  $(a + b) + c = a + (b + c)$ , it will also be true that  $(a + b) + (c + 1) = a + [b + (c + 1)]$ , by three successive appeals to the second half of the author's definition of  $+$ , which is that  $a + (b +) = (a + b) +$ , that is, that the addition of  $a$  with the number next in order to  $b$  gives the number next in order to  $(a + b)$ . (3) Thus, the law has been shown to be valid for the addition of  $(c + 1)$  to  $(a + b)$  if valid for the addition of  $c$ . But since it has been proved for the case of  $c = 0$ , by the principle of mathematical induction it will also be valid for  $c = 1$ , and again for  $c = 2$ , and so on. Thus it follows that it is universally valid for any value of  $a$  belonging to the series of integers.<sup>1</sup>

This concludes what I have to say upon the first two of the three extrabiological positions raised in my colleague's paper. I come now to the consideration of the main philosophical tenet that "the nature of the external world is to us a book, sealed with seven seals and that all we can ever know are our own sensations." As to this theory of the limits of knowledge a great deal might be said for which there is no space within the bounds of the present essay. But I must content myself with the merest indication of some of the lines along which the thesis invites examination. As for subsidiary points of interest suggested by it, their name is legion, for they are many, too many to be even enumerated here. (1) It is manifest that if the proposition is itself sound the inference drawn from it here must be false. Because the nature of the external world is to us "a book with seven seals" it appears to be inferred that materialism as a theory of that nature is false. But obviously, if the real nature of the external world is entirely unknown—and what less than this can be meant by calling it a "book with seven seals"?—then, for all I know, the materialist's guess at the character of that entirely unknown world is just as likely to be correct as any one else's. Clearly you are

<sup>1</sup> For an even more interesting general formulation and proof of the "associative law" for the whole range of logical, arithmetical and other operations to which it is applicable, see R. Grassmann, *Die Zahlenlehre*, §§ 30-34.



in no way to prove the materialist or anyone else in the wrong when you go about to show that no one can possibly know who is in the right. If materialism is to be disproved, it must be by showing its incompatibility with something we actually know about things, not by an appeal to our supposed blank ignorance of them. In fact we have to face this dilemma; either we know nothing at all about the real world, and in that case materialism is just as likely to be true as anything else, or we do know enough about the real world to be able to say that whoever is right the materialist is wrong, and in that case the world is not a "book with seven seals" at all, but a book some of the pages of which lie open before us and are seen to contain characters that are at least in part intelligible. (2) It is further evident from p. 203 that Professor MacBride does not seriously believe his own assertion as to the limits of human knowledge. For we find him explicitly avowing a belief, (a) in his own permanent personality or *ego*, (b) in the existence of other personalities standing in various relations to his own, (colleagues, opponents, etc.), (c) in an external environment which thwarts and limits the free development of his own personality.<sup>1</sup> Now, not one of these three factors is in any sense a sensation of mine or a series of such sensations, and all three must therefore be alike unknowable on the ultra-sensational theory of knowledge formulated by "the physiologist Bunge" and incautiously adopted by Professor MacBride. To both of these gentlemen we should be justified in retorting, "if my own personality is known to be a fact, you must admit it to be a sensation; pray then, is it a sensation of sight, or of hearing, or of smell, or of visceral discomfort, or to which of the other classes of known sensations do you propose to refer it?" And similarly with the remaining elements in the construction of reality, my fellows and their environment, the same question arises. It is unfortunate that some who adopt the ultra-sensational theory of knowledge should be unaware of, or should have forgotten, the great philosophical achievement of the foremost of sensationalist philosophers, David Hume. Setting out from the principle that all knowledge must be knowledge of my own sensations, and honestly facing the class of questions I have just indicated, Hume arrives by unanswerable logic at the memorable conclusions that I cannot so much as frame any intelligible conception of my own or another's personality, or of a real and permanent background of things "behind phenomena."

---

<sup>1</sup> Professor MacBride omits to recognize the possibility that the three factors may be reducible to two, (a) and (b). This would be the case if all environment should turn out to be ultimately social, that is, if the universe should consist exclusively, as one spiritualist view holds, of "minds" or "souls" having various relations of mutual assistance and hindrance to each other.

I have not even "ideas" of these things; they are but empty words arising from an incurable tendency to "feign" the possession of ideas which it is impossible that I should possess. This is consistent sensationalism, and it was the very monstrosity of its consistency which forced upon Hume's great successor, Kant, the necessity of denying the sensationalist premiss. But current modern sensationalism is an inconsistent and half-hearted affair. Bunge and the rest are merely repeating without real comprehension of their meaning the outworn and exploded formulæ of a metaphysic which is quite inadequate to express the knowledge which they really possess about the world and are glad to impart to us when once they have got on from the recital of a philosophical creed to their real work as biologists.

(3) The reader who has followed our previous discussion will be able to go a step further. Now that we see that there is such a thing as real arithmetical knowledge we can recognize in the truths of arithmetic another and a striking instance of genuine knowledge which is manifestly not "knowledge of my own sensations." When I know, for instance, that every integer can be expressed as the sum of four squares, or again, that if  $2^m - 1$  is a prime number,  $m$  is a prime (to take only two examples out of many), in what intelligible sense can I be said to be knowing something about "my own sensations"? Again, it is as certain as anything can be that the total number of sensations experienced by a human being during life is finite. All truths therefore about the properties of infinite collections (and there are quite a number of such truths which are already known,) must be concerned with an object other than my own sensations. Or to take a closely analogous example, when I know that the square root of 2 is incommensurable, with what sensations is my knowledge concerned? Reflection upon these and similar problems seems inevitably to lead to the conclusion that in truths of number we have a class of truths which have no inherent reference to sensation at all as a part of their meaning. This may explain why Plato found in the existence of mathematical truth the surest proof of the reality and deathlessness of the soul, and Leibniz placed capacity for recognizing universal truths side by side with consciousness of self as the distinguishing mark of the rational mind in contrast with the merely animal soul, as well as more generally why great mathematicians, when they philosophize at all, are almost invariably found among the uncompromising opponents of sensationalistic theories of knowledge.

(4) The doctrine that "all we can ever know is our own sensations" is not, of course, a novel one in English Philosophy. It was, as we all know, explicitly affirmed, so far as regards our acquaintance with the physical world, by Berkeley, who sought to make it the foundation

of his youthful polemic against materialism and atheism, embodied in the *Principles of Human Knowledge*, and the three *Dialogues between Hylas and Philonous*. Berkeley does not, however, go to the full length of a thoroughly consistent sensationalism. Though declaring that the senses inform us of nothing beyond the sensations themselves, he still holds that we can form a rational conception of one class of existences wholly unlike sensations, namely, the minds or "spirits" which perceive the sensations, or, by the exercise of volition, cause them to be perceived by others, and thus makes room in his system for the recognition both of human and divine personality. The complete sensationalist doctrine according to which we not merely perceive nothing but actually know of nothing and can imagine nothing but our own sensations, modern philosophy owes to Hume, who expressly drew from it the sceptical inference that everything we call knowledge is a mere congeries of prejudices begotten of customary association but totally devoid of logical justification. From Hume the sensationalist doctrine in its extreme form passed through the associationist school to John Stuart Mill and Herbert Spencer, and it was presumably from them that it was received by Professor MacBride's intellectual master, Huxley. By its nineteenth century adherents it was commonly called, as it appears to be by Professor MacBride, "idealism," but it should be noted that not the least famous of modern "idealists," Immanuel Kant, inserted in the second edition of his *Critique of Pure Reason* an express, though unfortunately highly difficult and obscure, refutation of "idealism" of this type. So far is it from being the case, as Professor MacBride seems to assume, that "idealism" of the Berkeley-Hume kind is the only intellectual alternative to materialism.

If we look a little more closely into the meaning of the doctrine which Berkeley and Hume and their followers ask us to affirm, we shall, I think, see at once that if it is true, it is at least a paradoxical truth, and, once admitted, must lead to the remodelling of the whole scheme of our current everyday thought and language. There is no distinction of which we make more constant and familiar use in common life than the distinction between events which occur within ourselves, changes of our own mental state, and events which occur in the world outside, changes in what the jargon of science calls the environment, and the language of every day the external world. Supposing, for instance, that as I write these lines a picture falls from the wall at my side to the floor, I find no difficulty in distinguishing between the altered position of the picture, which I regard as a change not in my state of mind, but in the relation of one physical object in the extra-mental real world

to other similar objects in that world, and the attendant surprise, annoyance and diversion of attention, which I confidently regard, on the other hand, as changes not in the relations of one physical thing to others, but in the state of my mind. Generally we have no hesitation in looking upon changes of position, direction and velocity of motion as changes in the external world, which stand in sharp contrast with those alterations of emotion and volition which we recognize as changes in the state of our own minds. But upon the doctrine advocated by Professor MacBride, the whole of this distinction must be given up as founded on nothing. "We know only" our own states of mind. Also we know that there do occur changes, for example, of position and velocity. From these premisses I must infer that position and velocity, seeing that I have knowledge of them, are states of my mind, and that all changes of them are changes in my own mental condition. The current distinction between a change in the behaviour of things around me and a change in my mental attitude towards them will have to be declared a piece of unmeaning verbiage. The altered position of the fallen picture, the increasing velocity of its descent as it approaches the floor, will be as purely changes in my own state of mind as the interruption of the flow of my thoughts or the momentary annoyance at the accident. There are, it is true, philosophers who have not shrunk from the admission of even this paradox. Mr. Spencer, for instance, talks breezily of making the "set of visual states" which he calls his umbrella "move across the sets of visual states" which he knows as the shingles and the sea.<sup>1</sup> But to persons, like myself, of less robust mental digestion, who can only conceive of motion as displacement in space, this performance, apparently so easy and familiar to Mr. Spencer, will, I suspect, seem a miracle comparable with the duplication of the mass of an emotion or of the atomic weight of a virtuous resolution.

It may be suggested that there is a way of escape from the difficulty which would indeed involve the surrender of what Huxley and Professor MacBride say, but perhaps not of what in their hearts they mean. Granting that the altered position of the picture is a change in the physical world, but the alteration in my emotions a change in the mental world, what, it may be said must we hold as to the audible crash with which the picture falls and the visual change from the variegated surface which I formally beheld to the uniform expanse of tinted wall which I now perceive in its place? May not these, at any rate, be changes not in the physical world but in my state of mind, and may not this be all that Hume and Huxley and their associates really meant

---

<sup>1</sup> *Principles of Psychology*, I, 472 (3rd edition).

to assert? Speaking more generally, may it not be held that while the mathematical properties of things are externally and objectively real, the qualities perceived by the senses, colours, sounds, smells and the rest, are merely states of the perceiving mind? We should thus be led to revert from the position of Berkeley and Hume to the distinction drawn by Locke and Descartes between the primary or mathematical qualities of bodies which are in the phraseology of Locke really in the things themselves and the secondary or sensible qualities which are, in the language of the same philosopher, mere effects upon ourselves of the primary and more real properties of things.<sup>1</sup>

A distinction of this kind is so commonly drawn both by men of science and ordinary persons that it fairly deserves a closer consideration. To begin with it is clear, as I have said, that we cannot consistently maintain it without denying the fundamental doctrine which lies at the bottom of the empiricist theory of knowledge common to my colleague with the predecessors whom he quotes. If all the properties of things made known to us by the senses are mere states of the perceiving mind but their mathematical properties really existent predicates of the things themselves, it must follow "as the night the day" that our knowledge of the mathematical properties is ultimately derived from some other source than the senses. Thus we are irresistibly brought back to the doctrine common to Plato, Descartes and Locke, that there is an element in human knowledge, and that element the source of all that is most certain, precise and universal in it, which is not based upon or concerned with the perceptions of sense at all. On this elementary inference I should, indeed, deem it superfluous to dwell, were it not that empiricism, all but extinct to-day among serious students of Philosophy, still makes its voice heard in popular English scientific literature in such blatant tones that what ought to appear a commonplace must, as I am well aware, strike upon many of my readers as a paradox. Fortunately there is every sign that the English philosophy of the coming twenty years is going to interest itself seriously in the thorough analysis of the concepts and methods of exact formal science, and we have therefore ground to hope that the crude empiricism of a generation or so ago will shortly cease to be proclaimed as a gospel even in the literary market-place.

---

<sup>1</sup> It should be observed that Locke's doctrine consist of two distinct assertions which do not appear to have any necessary relation to one another. He holds (1) that the sensible qualities of things are effects of their mathematical properties, (2) that they are effects of these properties *upon my mind*. Now, it would seem to be a perfectly reasonable attitude to admit (1) while denying (2). Why may I not, for example, hold that the colour of a thing is ultimately a consequence of its geometrical structure, but a consequence which exists in the thing itself and not merely in my "consciousness."

But consistency apart, we may fairly ask whether the doctrine that sensible qualities are states of mind is intelligible in itself or compatible with common-sense. For the sake of precision of reference we will consider a concrete instance. I look at the opposite wall and see there what I should in ordinary language describe as a patch of uniform blue colour. The question is whether there is any sense in calling this seen patch of blue colour a "state of the perceiving mind." And we see at once that there are at least grave difficulties which have to be met by the upholder of such a view. To begin with, the blue patch has a shape and an area. It is, let us suppose, approximately square with an area of some 16 sq. centimetres. Must we say then that a state of mind as such as is a thing which can have this or that geometrical configuration and a greater or less surface-area? And, if we are bold enough to say this, must we not go on to face the problem of determining the total surface-area and the approximate configuration of a human mind as a whole at a given moment? Or suppose again that a patch of colour is recognized as one face of a certain solid object, say a blue cube, shall we not be forced, on the theory that sensible objects are states of mind, to conclude that states of mind are possessed of volume, and to investigate the total cubical content of a given mind? And there are stranger consequences still of the doctrine which cannot be escaped. For you and I may both be looking at the same patch of blue and engaged in a discussion about it, for example, in deciding whether it shall be left as it is or painted over with some other shade. Now, our discussion derives all its point from the assumption that it is one and the same object which you, for example, wish to paint over and I to leave untouched. If we are intending to refer to two different things, there is no longer any question which we can rationally discuss. But it is as clear as anything can be that though the patch of blue about which we are arguing may, or rather, if our argument is to have any sense, must be one and the same, your state of mind and my state of mind, when we see it, must be two and not one. Your mental state and mine can no more be one and the same than your digestion and mine, or your sympathetic system and mine.

Precisely the same problem arises when we contest the permanence of the thing seen with the transience of the mental state in which it is seen. A moment ago, before you called my attention to the blue patch, I was not looking at it and had no sensation connected with it. Yet the patch itself did not come into existence when I became conscious of it, for you were already looking at the very same patch of blue. Five minutes hence, we may both have gone out and left the room empty; both your sensation and mine will then be over never to

return again. But we do not believe that the blue patch will have ceased to exist merely because we have ceased to look at it. You may perhaps be bold enough to say, why should we not accept even this conclusion, if it is absolutely requisite to make our ideas coherent? But the reply is obvious. All rational intercourse of man with man presupposes as its condition that there is a world of identical objects such that many men can in their thought mean or refer to one and the same thing. Without this proviso practical co-operation in industrial enterprise and speculative co-operation in dealing with the problems of knowledge alike become impossible. Similarly even solitary thought to be consecutive, requires that there shall be a world of objects of knowledge which persist, so that my thinking of to-day can truly refer to the same things which were contemplated by my thought of yesterday. Were this not so the exercise of reason could never lead to any advance in knowledge; the thought of to-day would be condemned for ever to repeat without progress the old processes and results of yesterday, or to dissipate itself in mere incoherence. To-day would never be able to take up the threads where yesterday had laid them down. And thus the single fact that there is undeniably some progressive science in the world affords a sufficient refutation of the sensationalist analysis of knowledge.

The secret, indeed, of the popular vogue of sensationalism among philosophical half-thinkers seems to lie in a very simple verbal confusion. The English and French verbal nouns employed in psychology and logic are in many cases affected by an ambiguity of meaning. Such words as *perception*, *sensation*, *knowledge* may mean in current language either the state of perceiving, apprehending by sense, knowing, or the thing or fact which is perceived, apprehended, known in the state in question, and many writers are culpably careless in confounding the two meanings. Thus, to revert to my original example, a *sensation of blue* may either mean the condition in which I see blue or the blue patch which I see. Or again, the *knowledge* that  $2 + 2 = 4$  may mean either my condition when I know this proposition or the arithmetical relation known. Now, my whole contention is that in all these cases it is the condition, and never the object known, which is properly called my *sensation*, *perception* or *consciousness*. Thus, it is not *blue*, but the *seeing of blue* which is a *subjective* sensation, not the equation  $2 + 2 = 4$ , but the *knowing* that  $2 + 2 = 4$  which is a *subjective* state of cognition. Out of the elementary confusion between these two different things, arises, so far as I can see, the whole doctrine that "what we know is always our own subjective states," together with the long list of absurd consequences to which that doctrine logically gives birth. The fallacy would probably vanish of itself with a reform in

our terminology. We have already begun to distinguish explicitly between *perception* as a process and the *percept* or thing perceived. We need in the interest of accuracy to effect a similar distinction between the sensation and its *sensum*, the cognition and its *cognitum*. When this distinction is once generally recognized, we shall, I will prophesy, hear much less of subjectivism as a theory of knowledge.<sup>1</sup>

I will go further than this. Not only is it not the fact that all our knowledge is knowledge of our own sensations, but the truth is that of the process of sensation as such we know little or nothing, and in common life it is the very last thing of which we think. To convince himself of this a man has but to perform a very simple experiment. Let him, for example, look carefully at a patch of uniform blue colour, and then set himself to summarize the knowledge he has acquired. He will find, unless he happens to be an observer with a special bent for psychology, that all, or nearly all, of what he has learned relates not to the process of sensation but to the object apprehended. He has, for example, noted something about the size, shape, and position of the patch of colour, and there, in ninety-nine cases out of a hundred, his observation will stop. But so far none of the knowledge acquired has to do with sensation as a mental process. An observer with a bias towards introspection will, perhaps, note also the approximate duration of the experience, the presence or absence from it of feelings of fatigue or relaxation of attention, or of æsthetic pleasure or displeasure. Now, here we are dealing with genuinely subjective material, features which belong not to the blue patch of colour itself but to the mental process by which it is apprehended. But the notorious difficulty of observing these subjective features of the experience with accuracy and of avoiding fluctuations in our judgment of them (difficulties so great that they have driven serious students to the exaggerated and erroneous view that introspection is in principle impossible), as contrasted with the ease and certainty with which, in simple cases, we can determine the character of the object apprehended in sensation, should be sufficient to show how baseless is the paradox which would restrict all our knowledge to precisely the most obscure and elusive of all classes of objects.

Further acquaintance with psychology only tends to confirm this conclusion. In that science we find that, in almost every case, all con-

---

<sup>1</sup> Of course we may make a state of mind itself into an object of knowledge, and do so every time we reflect upon the nature of our mental processes. But in these cases the state that knows is always distinct from the state that is known. Psychological reflection on the process of seeing blue is never the same thing as actually seeing blue, nor the knowledge that I am angry the same as the emotion of anger.



clusions as to the nature of mental processes are highly tentative inferences from data which consist exclusively of observed facts as to the objects of these processes and their physical accompaniments. The vast and dreary literature which has grown up about Fechner's psychophysical law is a case in point. The object of Fechner and his followers was, as is well known, to formulate a numerical law relating the intensity of a sensation, a function of it as a mental process in the percipient's mind, with its physical stimulus, a fact in the material world. But on examining all the data which the most careful experimentation has been able to elicit for us we find that what is correlated in our data is never a psychological property of the sensation on the one side and a property of the object on the other, but always two apparent properties of the object. For example, in a series of experiments upon the sensibility of the skin of the hand to dead pressure what we correlate are the actual weights of the appliances from which the pressure is obtained, as fixed, for example, by the balance, on the one side, and the subject's judgment as to the successive increase or decrease in their weights, on the other. Now, the apparent weight of a piece of metal is no more a property of a mental event than its actual weight as fixed by the balance. When I say, in answer to a question from the psychophysical experimenter, that the weight resting on the back of my hand seems to be greater now than a second ago, I may be mistaken or I may not; but in either case, what I mean to talk about is not my mental state, but the relative weight of two pieces of metal. And this instance is typical of the whole class of psychological investigations into sensation. We need not wonder then that the best psychologists seem agreed that sensation as a psychological condition is a process whose existence we have perhaps to assume, in order to effect the analysis and classification of more complex mental states, but of whose nature direct observation can teach us little or nothing, or that the very question whether simple sensations are more than fictions of the psychologist's imagination can only be decided by subtle and indirect argumentation.<sup>1</sup>

From these general considerations I go on, though with more hesitation, to offer to the reader a logical argument which, if sound, would appear to be a direct formal proof of the inherent absurdity of the fundamental doctrine of Berkeley and his followers. In the form in which I present it, this refutation is, so far as I know, new, and the reasoning ought therefore to be carefully examined for possible

---

<sup>1</sup> See on this last point the acute argument of Stumpf reproduced by Stout, *Manual of Psychology*, Bk. II, c. 1, p. 3.

assumptions of debatable premisses, especially as it has not yet been put to the test of formulation in the rigid symbolism of strict mathematical logic. I can promise, I think, in any case that, conclusive or not, it is deserving of close scrutiny.

The doctrine to be refuted then, is that "we can only perceive our own processes of sensation," or, more exactly, "the object apprehended in sensation is identical with the process apprehending it." (That is, when, for example, I *see blue*, the blue which I see is the very same thing as the process or state of seeing it.) What I propose to prove on the contrary is that in all cases the object apprehended (here the *blue* seen) must be regarded as distinct from the process of apprehension (here the *seeing of blue*). For the purpose of argument, I must assume, what I think will not be denied, that the whole complex denoted by sensation may be analyzed into three elements, a perceiving subject, a perceived quality, and a relation between them. (Thus, if *blue* is seen, there must be a percipient who sees it, the blue which he sees, and a relation between the two which constitutes the actual seeing.) If we denote the fact that two terms have a relation to one another by writing R as a symbol of relation between them, we may now express the fact that a percipient perceives a certain quality by  $xRy$ , where x stands for the percipient and y for his percept. What the Berkeleyan maintains, when he identifies the object perceived with the process of perceiving it, is therefore that in all cases of sense-perception we have  $xRR$ , the second term and the relation between the terms being, on his hypothesis, the same.

Now, I argue, that on the contrary, it is logically impossible that any relation R between two terms, x and y, should be identically the same as one of its terms. For, if this were so, and the relation R were the same, say, as y, the whole composed of the relations and its terms would be no longer  $xRy$  but  $xRR$ . And the second R, being by hypothesis, like the first, a relation between two terms would involve another term as the second of its terms (the sequent or *relatum* of the relation). And on the assumed hypothesis that R is a relation such as to have itself and nothing but itself as its second term, this new term would be a third R. This third R would in the same way have to have a fourth, and a fifth and so on indefinitely. Our original  $xRy$  would then become  $xRRRR\dots\dots$  *ad infinitum*. Further, the indefinite regress thus set up would be one of a type which is always logically objectionable, inasmuch as it would be implied in the very meaning of the proposition  $xRy$ . That is to say, it would be impossible even to say in intelligible words what you mean by the subject x having

the sensation  $y$ , since the explanation would involve the completion of an indefinite series.<sup>1</sup>

To apply this to the special case in point; if it were true that the perceived object is the same as the relation of percipient to percept, I could not see blue without previously seeing—in the most literal sense of the word—that I see blue, and again seeing that I see that I see blue, and so on indefinitely. And it would thus become as impossible to say what I mean by blue as it would be to say what I mean, for example, by four, if I could not define four until I had first defined an infinity of different numbers. But since we do know what we mean when we say blue, the Berkeleyan theory must be regarded as definitely refuted. This argument, I own, appears to me irrefragable if two assumptions are conceded, (1) that perception is a relation between percipient and percept, and (2) that we do know what we mean when we use the names of ordinary sense qualities.

(5) Finally, I wish to urge that even if the sensationalist subjectivism advocated by Professor MacBride were true, there is no ground for thinking it true in the reasons given by himself and his associates. I have taken up so much space already in the refutation of the doctrine itself, that I shall have to be exceedingly brief in dealing with this last point. Fortunately for me the case against subjectivism has already been urged in this Magazine with admirable skill and fullness by my friend and colleague in the Philosophical Department, Dr. Hickson, so that I have only to refer the reader who desires fuller statement to his essay in Vol. IV, No. 1. As far as the question of principle is concerned, the matter might be disposed of in a sentence. Professor MacBride and his friends, in fact, reason as follows. They produce a vast array of facts, with which I am not foolish enough to raise any quarrel, which go to show that the character of the sensible qualities perceived by an animal varies with its equipment with sense-organs. Thus, they observe that creatures with sense organs which are absent

<sup>1</sup> I may, perhaps, be told that a proposition of the form  $xRR$  is possible, for example, "identity is different from difference," or, more elaborately, "identity bears to the relation of difference the relation of difference." But in this proposition the relation and the sequent are after all not the same. The difference between the pair of relatives "identical with" and "different from" is only one instance of difference, and in order that the statement may have a meaning at all, there must be other instances of the same relation. We could frame no concept of difference if we knew of nothing from which anything could be different except difference itself. So with the relation of percipient to percept. In order that the statement, "a percipient has to his own relation to his percepts the relation of percipient to percept" may have meaning, and the vicious *regressus* be avoided, there must at least be other instances of this relation, that is, there must be some percepts which are not themselves processes of perception. But the point of the Berkeleyan theory lies precisely in denying that there are such percepts. Hence, on the Berkeleyan theory we are committed to the *regressus* and can never say intelligibly what we mean by perception.

in man appear to possess also perception of qualities which we cannot imagine, and again that variation in the structure of such organs as the eye or the ear must give rise to differences in the colours and sounds perceived. From this they infer that sounds, colours, and the other sensible qualities perceived by sentient creatures are not properties of their objective environment, but merely subjective affections of the percipients themselves. At least this appears to be the nature of the logic by which they reach their "idealistic" result.

But the conclusion really has no connection with the premisses. That animals with differently constituted sense organs receive different percepts from the same environment, might indeed, but for the logical difficulties already canvassed, be interpreted to mean that none of these percepts are more than subjective affections of the individual animal, but might also equally well be taken to mean that they are all objectively in the environment, but that each animal only perceives a selection out of the properties that are there, according to the structure of its special organs of selection. So the fact that the peacock's tail appears blue in one light but green in another need not be interpreted to mean that both colours are qualities not of the tail but of my consciousness. It might be taken to mean that the tail itself objectively has a colour which varies with its relations to the rest of the environment, just as it has also a shape of which the same is true. Both the "subjectivist" and the "empirical realist" account will equally well explain all the facts of biology which have been put forward as evidence for the former, and hence it must always be an *ignoratio elenchi* to urge them as reasons for preferring either account to the other.<sup>1</sup> In fact, our decision for either has to be given on grounds altogether independent of the physical sciences, just because any physical fact is capable of interpretation in either way. The final choice depends upon our opinion as to the soundness or badness of the subjectivist analysis of knowledge, and

---

<sup>1</sup> The favourite argument from the doctrine of the "specific energies" of the sensory centres is only a refined form of the same fallacious reasoning. The optical centres, for example, in the cortex respond indifferently to excitement of the retina by the physical light-process, whatever that may be, to mechanical pressure on the eye-ball, to a blow, and to several other kinds of stimulation by sensations of brightness and colour. The subjectivist infers from these facts that what is apprehended in each of these cases is merely the process of response itself. But it would be equally in accord with the facts to conclude that in every case the brightness or colour apprehended is an object distinct from the process of apprehension, and that the contrast between the variety of the stimuli and the uniformity of the response merely shows that one and the same perceived object may be causally related to many stimuli. One and the same percept may be connected with many forms of stimulus, just as one and the same man may have many relatives. But on the whole subject of specific energies I must refer the reader to Dr. Hickson's essay already mentioned.

is thus a question of logic, or, if you prefer the term, of the theory of knowledge.<sup>1</sup>

In conclusion, I could wish to make two general remarks. The first is that in rejecting "idealism" in Professor MacBride's sense of the word one need by no means reject a mature idealistic philosophy. It may well be that the things I perceive are not my own "states of consciousness" and yet that except as part of a connected system of perceiving and willing beings they would have no existence at all. It is possible for a thinker, as the example of Kant shows, to combine the belief of the empirical realist that the world revealed to me by my senses is no phantom tissue of individual subjective processes falsely imagined to be objectively real with the complementary belief of the critical "idealist" that except for knowing and judging intelligence "real" and "objective" would be unmeaning terms. The second is that whatever defects of execution Professor MacBride's philosophy may seem to me to reveal, I would desire to pay my tribute of recognition to the spirit of open-mindedness in which it has been undertaken. In a time when it is not unusual to hear men of the highest biological eminence pouring open scorn upon all attempts at philosophic construction, even while they themselves may be repeating as gospel the thrice-refuted dogmas of some antiquated metaphysician, it is always cheering to the student of philosophy to meet a biologist who is not afraid to bring his special training and knowledge to bear upon the supreme intellectual problem, the discovery of a coherent conception of our nature and our environment as a whole.

---

<sup>1</sup> The case of erroneous perception (as, for example, when the sun appears to sight as a flat disc), has often been treated as a decisive argument for subjectivism. But surely it is begging the question to assume that to misapprehend the nature of a physical object must always be the same thing as to perceive a state of your own mind.

A. E. TAYLOR.

## POLITICS AND UNIVERSITIES.

---

"You will find it characteristic of Canada," the late John Lesperance remarked to the writer years ago, "that to discuss either religion or politics in a mixed company is equally hazardous." With the genial cynicism which made his companionship so attractive to the youngsters of his profession, the veteran journalist was wont to point out, from the depths of his own experience, the snares that beset the feet of the unwary. According to this philosophy it was wise of you to eschew party politics, even in a small and select circle of acquaintances, unless you were quite sure of your audience, and knew that a round of applause, and not a collection of brickbats, would greet a really eloquent peroration. Twenty-five years ago, be it understood, men took their political opinions seriously. It was then a common belief, amongst a certain school of thinkers, that Hampden and Pym were but faint and feeble precursors of Mackenzie and Blake, and that the tyranny and misgovernment of the Stuarts were mild forebodings of the machinations of Sir John Macdonald. Or, if you had been born of different parentage, and had imbibed a vicious toleration towards Tory views, you possessed a rooted conviction that the welfare of the state was inseparably associated with the rule of that distinguished statesman. In duty bound you felt that men who favoured a change of Ministry lurked not far from the bounds of anarchy and confusion. To-day, as we all know, the minds of men are so intent upon discovering some vital point of difference between those whom, with unconscious humour, we still call Liberals and Conservatives that you may almost complete a political argument before the listener is fully aware which party you are condemning.

Some gift of imagination is required to re-create in the mind the conditions of that period and to realize that both inside and outside of college halls the path of wisdom, ease of mind and sometimes bodily comfort dictated an attitude of strict neutrality. Not that many preferred this ignoble conduct. At McGill a debating society sprang into existence. It was determined that all thoughts on present discontents should find audible expression. During the early autumn of 1880 the sophomores took action. They decided, on grounds not disclosed at the

time, and never fully understood since, that the class contained debating talent which could not afford to hide its light under a bushel. The undergraduate world began to realize that something was afoot. Subdued but emphatic murmurs had been heard to emanate from the English lecture room on Friday nights. Announcements began to appear on the notice board in the central hall couched in terms resembling these:

“ATTENTION!”

“The Debating Society of the Class of '83 will hold its weekly meeting to-night. Subject: Resolved that the Power of the Crown has increased, is increasing, and ought to be diminished.”

A rumour spread through the University that all the burning issues of the day were being fought out and settled in the new society, that governments at home and abroad were tottering and that the throne of the Guelphs was no longer broad-based upon the people's will. Feeling ran high, especially among the Freshmen. They sought in vain to discover upon the candid countenances of the Sophomores those evidences of mighty eloquence and weighty thought which were popularly believed to mark the debates. Soon the Freshmen were invited to join in a body. Many of them did, the result being that a flourishing society was formed. It survived the sneers and satire of the junior and senior years and became the chief literary organization of the students in the Faculty of Arts. The present society, I presume, is its lineal descendant.

For a long time the debates were of an acutely controversial character. Reckless of consequences we plunged into party politics with a vigour of invective that distanced even the newspapers and must have been the envy of the House of Commons. We resolved that the absurd proposal to build the Canadian Pacific Railway was merely a device to maintain a Ministry in office, and that the line could never be finished. We regarded the Senate with aversion. We decided that refusal to grant Home Rule to Ireland would send the British Empire to what Mr. Mantalini called the deminition bow-wows. Forcibly if necessary, peacefully if convenient, a republican form of government must be set up. At this stage a civil message from the Vice-Dean arrived requesting the society to appoint a committee of three to wait upon him at an early day. The message was received after the style of the Duke of Burgundy hearing a summons from his nominal suzerain, the King of France. The dauntless three sallied forth. The Vice-Dean met his solemn-visaged visitors with grave courtesy. “Gentlemen,” he said, with a Trinity College twinkle in the corner of his eye, “the highly interesting

debates in your society have attracted the attention of the University authorities. They appreciate the diligence you have shown in solving problems which older men have given up in despair. They have deputed me to ask you how far you suppose liberty of speech ought to extend. As you know, the British House of Commons, the freest assemblage in the world, impose restrictions upon debate. Now, your society has just declared for a revolution. Far be it from me to assert that you mean what you say. You do not look at all dangerous"—At this juncture the Vice-Dean and his auditors began to laugh. It was decided that freedom of debate in the future would stop at the overturning of the constitution without due notice and that when a revolution in church and state became necessary, the Faculty would be specifically requested to say if it desired to join in the movement by granting the use of its class-rooms. In this way all serious trouble was averted and the House of Guelf continues, as we go to press, to reign peacefully throughout the British Empire.

It is more than doubtful if active participation in party politics would benefit any Canadian university. This is the real objection to university representation in Parliament, not in itself a bad thing. McGill, happily, has no connection with the state, thanks to the munificence of its benefactors. One of the most vivid pages in the history of Upper Canada is the story of Bishop Strachan's gallant fight for the possession of King's College. He failed, and state endowment of the University of Toronto naturally led to state control, but the tendency now is to reduce to a minimum the direct intervention of Government in all matters of internal policy, and a proposal to change the administrative system with this object in view is being investigated. In the American Union the state universities are not under the thumbs of the politicians. The legislatures vote the funds, but trustees expend them. The rule is that universities divorced from politics attract more freely than state institutions the generosity of rich men. The state can afford to give, but should not seek to meddle unduly with the universities of the land. It is inevitable that legislatures elected by manhood franchise should, for a time at least, be unfit to direct the affairs of universities where the love of learning pursued for its own sake, and teachers chosen for their merits and not their political influence must continue to be the basis and inspiration of true culture. No doubt we may safely change all this in the Utopian age, but that happy day is still afar off.

A. H. U. COLQUHOUN.



# THE UNCONQUERED DEAD.

---

“. . . . . defeated, with great loss.”

Not we the conquered! Not to us the blame  
Of them that flee, of them that basely yield;  
Nor ours the shout of victory, the fame  
Of them that vanquish in a stricken field.

That day of battle in the dusty heat  
We lay and heard the bullets swish and sing  
Like scythes amid the over-ripened wheat,  
And we the harvest of their garnering.

Some yielded. No, not we! not we, we swear  
By these our wounds; this trench upon the hill  
Where all the shell-strewn earth is seamed and bare,  
Was ours to keep; and lo! we have it still.

We might have yielded, even we, but death  
Came for our helper; like a sudden flood  
The crashing darkness fell; our painful breath  
We drew with gasps amid the choking blood.

The roar fell faint and farther off and soon  
Sank to a foolish humming in our ears  
Like crickets in the long, hot afternoon  
Among the wheatfields of the olden years.

Before our eyes a boundless wall of red  
Shot through by sudden streaks of jagged pain!  
Then a slow-gathering darkness overhead  
And rest came on us like a quiet rain.

Not we the conquered! Not to us the shame,  
Who hold our earthen ramparts, nor shall cease  
To hold them ever; victors we, who came  
In that fierce moment to our honoured peace.

JOHN McCRAE.

## SCHOPENHAUER.

---

### *His Personality and his Message to the Modern World.*

In the case of no man are the words of Fichte more of a truism than they are in the case of Schopenhauer—"the kind of Philosophy a man chooses depends upon the kind of man he is." Schopenhauer's life falls naturally into three periods. He was born in Danzig in 1788, in the same year as Byron, one year before Heine, one year before the French Revolution. The first period of his life might, for convenience sake, be said to end with the battle of Waterloo. He was a boy of twelve when Napoleon was at the height of his career; he entered the University of Göttingen in 1809, when the English were trying to keep the French in check in Spain; he left the University at Berlin to get peace to bring out his doctor-dissertation in the year of the Battle of Leipzig. When the eyes of Europe were on the plains of Waterloo, he was in Dresden, working away under the inspiration of Art at his capital achievement, *The World of Will and Idea*. The second period of his life begins with his rushing off to Italy to watch in quiet what the world would say about his book, and includes what we might call the 'ten years' conflict' of his life, in which he fought haughtily with the world for a professor's chair (this in vain), and the threatened remains of his father's fortune, and ends with the year 1830. By the days of the July Revolution he was safely housed as a lonely philosopher or sage in rooms in Frankfort where he lived to the age of seventy-two, after working to the very last moment.

Taking then our first period, Schopenhauer's father, Henry Schopenhauer, was a merchant and banker in the free Polish city of Danzig. He was of Dutch extraction, a man of great energy of character and of broad cosmopolitan sympathies, with his mind formed on the principles of the school of Voltaire. He called his boy—our philosopher—Arthur, because that name retained its outward form in the great European languages, and destined him for the mercantile profession, believing that the spirit of commercial enterprise would tend to develop in his son a broad and independent outlook upon life, and also render it possible

for him to gratify his own tastes and preferences in later life. Arthur's mother — also of Dutch extraction — was a woman of a brilliant and a polished mind, graceful and charming, fond of literary and artistic pursuits, and afterwards of repute as an authoress. She thus describes her marriage with Henry Schopenhauer, the distinguished merchant, a man of rectitude, candour, and uncompromising love of truth, of about double her age: "Before I had completed my nineteenth year, a brilliant future was opened out to me by this marriage, more brilliant than I was justified in anticipating. I thought I had done with life, a delusion to which one so easily gives way in early youth upon the first painful experience. I knew I had cause to be proud of belonging to this man, and I was proud. At the same time, I as little feigned ardent love for him, as he demanded it from me." The words are notable as throwing a light on the mother's disposition, and the home of Schopenhauer. Schopenhauer had a theory to the effect that a man generally inherits the will of his father and the intellect of his mother. Although this is, of course, one of his typically imperfect generalizations, it is certainly true that "will" and "intellect" were not in harmony in his own early home, or in his own life. His philosophy, too, is a series of chapters on the place in Nature, in Man, in Philosophy, of the will and the intellect, and here, again, he found them to be in the main inharmonious, although the "Idea" as he puts it, that is, Arts and Religion, finally overcomes the will to live.

The home was a pleasing villa, and later a property some way out of Danzig, and was cultivated and bright, but had little love or home-feeling in it. Only once did its head ride out to it more than once in the week, and that was to announce the fall of the Bastille. Henry Schopenhauer was fond of travel and travelled much with his wife and son, wishing to foster in the latter a broad outlook on life. Arthur, when a boy of nine, was sent for two years to France (Havre), and to the joy of his father's heart almost forgot German. When he was five, his father broke up within twenty-four hours all his connections with Danzig, rather than stay one moment in the town after its occupation by the hated power of Prussia. Arthur, on returning from France, went to a commercial academy at Hamburg; he hated the spirit of his studies there, being inspired with the literary and artistic ideals cherished in his home by his mother through whom even then he had learned to know people like Baroness Staël, Klopstock, Reimarus and Mme. Chevalier. His father, recognizing the boy's tastes, talked of buying a canonry for him, but had to give up the idea owing to practical difficulties in the way. He hit upon the expedient of offering Arthur the choice of being immediately sent to a classical school with

a view to a profession, or of some years of immediate travel and then entry upon business. Naturally the boy decided for the travel, and in 1808 the family set off for a tour in England, France, Italy, Switzerland and South Germany. Arthur was once left for some three months in the boarding house of a clergyman outside of London, where he had the companionship of some English boys, among them two nephews of Nelson.

In all his travels the boy was gloomy and discontented. He had caught the spirit of the ideals of Romanticism, and he wondered that people could put up with life as they found it. He soliloquized over things like one beyond his years. In Westminster Abbey he spoke of the "mighty dead" who had "escaped" life, and were now seen in the "naked truth and majesty of their spiritual endowments." He kicked against the regulations of the English boarding school, hating much the extent to which external ecclesiastical interests seemed to enter into English life, plaguing his mother with letters about it all, and getting out of her only the cold advice to stifle his grumbling and devote some attention to regular study. In France he was intensely pained at the history of some peasants he saw in huts hardly fit for animals, and in Lyons he scoffed at the compromising spirit of people walking gaily over the very square where their ancestors had been riddled with revolution bullets. Mont Blanc "elevated" and "saddened" him; he could not tear himself away from it; he said afterwards that he could never think of it without sadness. He afterwards came to feel the same about Venice.

The first important event of his life happened in 1805. In the April of that year his father's body was found projected on to a canal from the window of a granary, whether by his own act or not, it is not certainly known; he may have fallen, for it was his habit daily to inspect the premises from top to bottom; on the other hand, he had lately become gloomy and dead to the world. Loyal to his memory, Arthur stuck with a stout sadness to the hated desk, but with awful inward groaning. The mother had the business immediately wound up, and set off for Weimar for the literary round table there of the Goethe set, where the charm of her person and her ability soon made itself felt, and her house became a *rendez-vous* for, first and foremost, Goethe and men like Schlegel, Grimm, Fernow, Wieland, Meyer and others. The son, of course, saw all these people when he came to Weimar, for, annoyed by her boy's discontent and his groanings, Johanna Schopenhauer had taken the advice of Fernow and other scholars about the possibility of his beginning (late as it was in his life) *classical* studies,

and on meeting with encouragement wrote to him that he could leave Hamburg. Poor Arthur received the good news with tears of joy, and at once gave in his resignation to his principal. He soon astonished his teachers by his progress in the classics, and he was second to none of his older contemporaries (men like Passow and Wolf and Winckelmann) in his enthusiasm for the classics in general and for the Greek world in particular. At Gotha he was the admiration of a knot of boys through the brilliant sallies of his mind and his lampoons about the masters, one of which was eventually the cause of his having to leave his school. He once wrote in a Homer he possessed, a copy of the Lord's Prayer addressed to the bard. To the end of his life Schopenhauer read the classics, and had always a contempt for "the fellows who had nothing of the humanities, nothing but their syringe-ology and their instruments." To the classics and French he subsequently added a mastery over Spanish and Italian.

He did not live with his mother at Weimar. It was necessary for her happiness, she told him, that she should know of his happiness but not to witness it; it would be difficult, nay, absolutely impossible, for her to live with him so long as he continued what he was. "It is not your temperament," she put it, "your inner life that is objectionable to me, but your outward person, your views, your oracular judgments about people, your despondency, your dark looks; all this oppresses me and turns my serene mood of life, without in the least helping yourself. Your passionate disputations, your lamentations over the misery and stupidity of men give me evil dreams and bad nights. I would sacrifice anything rather than live with you." What annoyed Schopenhauer in his mother was that, despite her ideal perceptions and aspirations, she could yet be "serene," as she put it, could be content with the world as it was; he was filled, too, perhaps with envy and perhaps with distrust of the life she was leading so soon after his father's death. For his own respect for his father was beginning to grow; he saw that the training his father had given him was all necessary to his development; that he owed to his father his travels and his languages and his freedom of thought, instead of the paradigm education that most boys receive. He began to talk of the grand style his father had kept up in their travels, of how merchants were after all the only honest knaves among men because they had the courage to say openly that money-making was their object. It began to gall him as it afterwards always did, to be asked: "Are you the son of the famous Madame Schopenhauer?" Some lines that he wrote to his father's memory mark the close of his boyhood, and the passionate strength and the peculiar character of his mind. "Noble, beneficent spirit! to whom I owe all that

I am, your protecting care has sheltered and guided me not only through helpless childhood and thoughtless youth, but in manhood and up to the present day. When bringing a son such as I am into the world, you made it possible for him to exist and to develop his individuality in a world like this. Without your protection I should have perished a hundred times over. . . . You must have seen, O proud republican! that your son would not endure to crouch before ministers and councillors, Mæcenases, and their satellites, in company with mediocrity and servility, in order to beg ignobly for bitterly earned bread; that he could not bring himself to flatter puffed-up insignificance, or join the sycophantic throng of charlatans and bunglers (this refers to Hegel, Fichte and Schelling), but that as your son, he would think, with the Voltaire whom you honoured, 'Nous n'avons que deux jours à vivre: il ne vaut pas la peine de les passer à ramper devant les coquins méprisables.' Therefore, I dedicate my work to you, and call after you to your grave the thanks I owe to you and to none other. *Nam Cæsar nullus nobis hæc otia fecit.*"

Let us look now at some of the influences which Schopenhauer imbibed at the Weimar period. I spoke of his pagan baptism in the Classics. Goethe, perhaps, comes next. Not only did Goethe pick him up, but they became friends. "Goethe educated me anew," says Schopenhauer. Recognizing Schopenhauer's original mind, Goethe put off with him the formalism in which he liked to enshrine himself, and they were soon at work together over the theory of colours, Schopenhauer's treatise on that subject being practically a plea for Goethe's ideas.

Some girls in a drawing room at Jena were once making fun of a young doctor of philosophy, who was sitting in a window seat in a severe and absorbed mood. "Children," said the noble Goethe, coming up to them, "what is the cause of your mirth? Leave that youth in peace; in due time he will grow over all our heads." At Göttingen, in 1809, Schopenhauer found that Philosophy—"an Alpine road," as he called it—was his mission, and by the advice of Schulze, he read in philosophy nothing but two men, Plato and Kant, learning from the one mysticism and the Theory of Ideas, and from the other Criticism and the idea that the core of reality was revealed to the will and not to the intellect. Both at Göttingen and Berlin he devoted much attention to Science, especially physiology, boasting of his knowledge of this science and of its necessity; he frequently went to the "Charité" to study insanity cases. In his first burst of enthusiasm for science, occasioned by the lectures of Gall, the phrenologist, at Hamburg, he had said, "There is no soul and no psychology; brain and bodily processes explain all that we call mental." At Weimar, Meyer introduced him to the

study of Buddhism and oriental religions, and the subject at once absorbed his soul. "I confess," he said, "that next to the impressions made on my mind by the outer world and the writings of the marvellous Kant, I owe most of my development to the rays of light thrown into my soul by the divine Plato and the holy scripture of Buddhism." At Göttingen University he was one of the three mutual friends, "one of whom, as he puts it, so curious is destiny, became a diplomat" (this was Bunsen whom, when in money difficulties, Schopenhauer had often helped), "another, a millionaire" (this was one of the New York Astors), "and the third, a philosopher" (himself). In Moral Philosophy and moral psychology he found great delight in the French philosophers of the Voltaire school; he was always reading Cabanis, the materialist hylozoistic medical friend of the great Diderot; Helvetius, the cynical, satirical moralist of the selfish school he relished so keenly as to call him "the favourite reading of the Almighty"—other people, as Wallace remarks, would have said of Mephistopheles. His four favourite novels were, *Wilhelm Meister*, *Tristram Shandy*, *La Nouvelle Héloïse*, *Don Quixote*; his dramatists, Shakespeare and Calderon; in poetry he preferred Petrarch to Dante, finding Dante stilted and dogmatic. In addition to the classics, he acquired a command over five languages, and took time all his life for the reading of literature. In religion he inherited none of the ordinary beliefs either of Catholicism or of Protestantism; the first article of his belief was, "I believe in a Metaphysic," which he said was "the creed of every just and good man"; expanded, this belief meant, as he put it, "the assurance that there is a spirit-world where, separate from all the appearances of the outer world, we can, in detachment and absolute repose, survey them from an exalted seat, however much our bodily parts may be tossed in their storm." Always the friend more of the vital essence than the form and outward expression of the religion, man's misery in consequence of sin and selfishness and his need of redemption, he cared little about the external wording of his belief, using at one time the language of free-thought, and at another that of pietism, of Buddhistic and Christian resignation, pouring the phials of his contempt on the shallowness of the rationalistic Protestant theology, which would not let the truths of Christianity rest under the veil of holy mystery and devotion which the ages and the early church had drawn around them. Of course in his youth "the tongue" often "spoke" when the heart or the judgment was not bound; for instance, on hearing Schleiermacher say in a Berlin classroom that no one can be religious without being philosophical, and no one philosophical without being religious, he at once promptly scribbled in his notebook, as was his wont, "No one who is religious comes to

philosophy, he does not need it; and no one who is really philosophical is religious; the philosopher goes without leading strings, dangerous, but free. The words might be written of his life course, "without lead-strings — free and dangerous," to make a slight inversion. The obverse of this thought would give us a motto of his: *Noli me tangere* — don't touch me. "If I were a king," he said, "my first and supreme command would be, 'Let me alone.'" Throughout his long life Schopenhauer always impresses us as one, in the words of Wordsworth,

" . . . . . more like a man  
Flying from something that he dreads than one  
Who sought the thing he loved."

Another of his striking sayings was to the effect that he had always thought in his youth that he was destined to be the victim of some tragic experience — *Etwas wird kommen*, and then, in middle-life that something unpleasant must surely happen — *Etwas muss kommen*, and then later on still, "There it's come at last — *Da kommts*." His first feeling, for instance, when the heavy feet of some soldiers who wished to shoot from his windows were tramping noisily up his stairs in Frankfurt, was that the "sovereign mob" of Rousseau had at last resolved to make an end of him.

The relations between Schopenhauer and his mother were now strained to beyond the breaking point. She had written to him indeed at times, but unwillingly. In a letter which describes the thundering of the cannon at Jena and the occupation of Weimar, she had to break off with, "I could tell you things which would make your hair stand on end, but I refrain, for I know how you love to brood over human misery in any case." Once he had brought a poor student friend whom he was helping to live with him in his mother's house; to that she objected, and also to his taking exception to a von Müller, a trusted public servant of the Grand Duke's boarding with her. Schopenhauer proposed to have a price arranged for the board of his friend, but that was not enough; she thought it highly inconvenient for a grown up son to live in the same house with his mother; one, of course, had to go, and that was the son. "We are two," he told her. Not that he met with much sympathy from his mother in his literary work or his love episodes. As to the latter, she had been amused at his falling in love with a famous actress some ten years older than himself, a great favourite at the court of Weimar. The youth's attitude was, of course, only too typical; he told her he would willingly take her to his home, although she was a breaker of stones on the road



side. As to his literary activity, before leaving Weimar for Dresden, he gave her a copy of his first book on *The Four-fold Root of the Principle of Sufficient Reason*, a sort of classification of the principles of knowledge in the manner of Aristotle and Kant, and really a valuable piece of work in epistemology. The word "root" tickled her quick wit, and she said to him, "It smells a little like a chemist's shop, does it not?" The son's reply was, "Madam, people will read my books when yours are in the waste-paper basket." "At that time," rejoined the mother, "the complete edition of yours will be on the shelves waiting for a purchaser." After this they ceased to correspond for eighteen years, until shortly before her death. The following description of his mother, by a fairly competent observer, was sent later to Schopenhauer by a friend of his who had seen both the mother and the scientific observer very often: "Madame Schopenhauer — a rich widow; makes a profession of being learned; authoress; chatters much and well; with some intelligence, without feeling and without soul; complacent, eager to be approved of, and always pleased with herself. God save us from women whose soul has shot up into mere intellect." This, Schopenhauer found only "too good"; he could not, "God forgive him," keep from laughing."

No wonder he was becoming convinced of the illusory character of many of the quests and worries of mankind. "Take out of life its few moments of religion, of art, and of pure love, and what is left but a long series of trivial thoughts?" Again, "He to whom all men and all things have not at times appeared as mere phantoms or illusions has no capacity for philosophy." Again, "Inward discord is the very law of human nature as long as a man lives. He can only do one thing actually and thoroughly, and yet for everything else he has a potentiality." Evidently Schopenhauer could not act in accordance with Goethe's saying that, "He who wills to be great must learn to limit himself." He knew indeed much, but he had no motive to act it out; like Leopardi, he seemed to have seen through so much of life quite early that he had no zest for it. "Where can inward harmony be found? In no saint and in no sinner, or rather a perfect saint and a perfect sinner are alike impossible. Painless the battle of life cannot be; it may end without bloodshed, but in any case man must mourn, for he is at once the victor and the vanquished." The great secret of compromise he could not learn — toleration — to leave undrawn (for his philosophy recognized it as more than a veil), the veil that sentiment and convention and idealism have drawn over so much in life: "You need not paint the Devil so black," said Chamisso, the poet, to him once, "a respectable gray would do well enough." "Where," was Schopenhauer's

idea, "did Dante get the materials for his Hell except in the present world?" He was looking forward to a solitary fight with the world. Possessed of a sufficient, though not lavish competence, he was going to devote himself to the work of an original thinker. His *Wanderjahre* were about over; he had made his debut in his Doctor's thesis at Jena, and he was now going to give the world a great book on a system for which he wanted a few quiet years. The idea of a more universal career did not have any attraction for him, although he afterwards came to desire it, when he saw the power of professors of philosophy to make or mar reputations, to keep Truth within the realm of their patronage and their interests. Although he believed in Goethe, he censured Goethe's court-life and his outward show, thinking he lost in greatness by it. His morose views jarred to be sure, upon Goethe, that child of luck, as he was called. When Schopenhauer was leaving Weimar for the voyage of life, Goethe wrote in his album:

Willst du des Lebens freuen,  
So musst der Welt du Werth verleihen.

Opposite this Schopenhauer wrote the words of Chamfort, "Il vaut mieux laisser les hommes pour ce qu'ils sont, que les prendre pour ce qu'ils ne sont pas," adding to Goethe, "Rien de si riche qu'un grand soi-même — un grand soi-même!" A grand one's self — how well does the phrase describe the solitary Titan that Schopenhauer afterwards became. Wieland, the poet, then an old man, had also given Schopenhauer advice — not to devote himself to the life of a philosopher. The reply was, "Life's an awkward business; I must spend it in reflecting about it." "A good share of resignation," he said, "is a most necessary provision for the journey of life . . . ." "It is only after mature experience that we realize the inflexibility of human characters, which no entreaties, no reasoning, no examples, no benefits can change; how, on the contrary, every human being follows out his own way of thought and his own capabilities with the unerringness of a natural law, so that whatever you try to effect, he will remain unchanged."

Enough has perhaps been said — although an entire lecture could well be devoted to the subject — to give us an elementary working acquaintance with Schopenhauer's personality and with the facts that helped to determine his attitude towards life. We are now at the beginning of the second period of his life, which, with the remaining third, must be outlined in the most summary fashion.

His great book appeared in 1819, but apart from Goethe and a professor or two of philosophy, no one took any notice of it. A few

years after its appearance, Schopenhauer tried to "set up" in orthodox German fashion as a university lecturer, with an eye upon a possible call to a professorship. He quixotically chose Berlin University, but it was naturally impossible to make headway in an atmosphere overcharged with the influence of men like Hegel and the divine Schleiermacher. Hegel, of course, our young Titan regarded as an arch-impostor, and he had the audacity to tell the Rector of the University that he wanted to lecture at the very hour of one of Hegel's most frequented courses. A few seeking souls came to his first of divine philosophy, but he was far from intelligible, and his whole personality was very different from that of an acceptable academic teacher. He kept his name on the lecture-bulletin for some ten years, but in the end without any recognition whatsoever, after running off, in fact, for long intervals to Italy and Switzerland. Almost the only real happening of this ten years' conflict is, indeed, the well known episode of 1821 in his lodgings. In the hall outside his study and bedroom he had once found three strange women gossiping, and was assured by the landlady, on his complaint, that it would never happen again. Some months later he again found there three women whom, in the absence of his landlady, he requested to withdraw. Two of them did so without objection, but the third, a sempstress, refused to comply. After returning to his room in anger, he later emerged with a walking stick, and, finding the woman persisting in her refusal, he hauled her out — generally expediting her movements, pushing and abusing her when she turned to pick up her things. Happening to fall down at the head of the stair, she alarmed the whole flat. On the following day she lodged her complaint before the court — that Dr. Schopenhauer had "torn her cap, and kicked and beaten her." The case was at first settled in his favour, but after an appeal, in reference to which he told the court in his usual *Jupiter tonans* fashion to hurry up with the case as he wanted to get off for a holiday, his property was seized in his absence, and he had finally to pay nearly all the costs, a fine, and an annuity — the lady living to be a burden upon him for twenty years. In his thought upon women he had doubtless always in his mind this expensive creature as well as his own mother, and then shall we say his own ignorance — the ignorance of a mere man of the world and reader of the biographies of saints and of the *chronique scandaleuse* about the sinners. He wrote some clever epigrammatic Latin words upon her death certificate — not exactly in the spirit of the lyrical irony of Heine's "Du bist wie eine Blume" to the ugly Paris applemoan, but in one of a grim stoical sense of relief.

In the summer of 1831 he fled from Berlin out of mortal fear of the cholera that had appeared there — one of its first victims being his

arch-angel of darkness, the great Hegel. He had no real heart and no reason for any return. The times were out of joint for him, and his voice was that of one in the wilderness. After an attempt at Mannheim, he hit upon Frankfort as the place for the remainder of his earthly sojourn, where he lived to be pointed out by the waiters and everyone else as the lion of the town. He rarely left the place even in summer, having the utmost contempt for what he regarded as the modern mania of a yearly migration. He wrote down in his papers thirty-five distinct reasons for preferring the place to Mannheim, among them the following—"fewer bad dentists and doctors," a "better table," "more consideration," "less crowding in hotels and theatres," "less noticed," the "advantages of a larger city," "more Englishmen," a "better book-seller," "less danger from thieves." His typical day was as follows: Up out of bed between seven and eight, after a nine hours' sleep; the matutinal tub, which he had learned in England as a boy, with a careful additional washing of the eyes in cold water; the continental breakfast in his study, his landlady having received strict orders to place it there unobserved, and to keep generally well out of sight all the forenoon lest the morning freshness of his intellect should be wasted over the perception of a human being; work for three or four hours in the forenoon, with scorn and contempt for all night-workers and extreme early risers—five o'clock people like the otherwise monumental Kant; a visitor, occasionally after eleven; half an hour on the flute until a sign or two from the emerged landlady, who was cautioned now to mark even the minutes as they passed; dressing, in the old style—the dress coat—at twelve-thirty; the function of dinner at one o'clock in the "Englischer Hof," when he ate largely and lavishly, telling people across the room that as a great brain-worker he required three times what they did. He would then, if he felt like it, walk over to any English visitors and harangue them in the grand style, for he regarded the English as, despite their bigotry and hypocrisy, the superior people of Europe. He once, in the hearing of some officers who were dining near him, told the waiter he had put a crown on the table, to go into the poor-box whenever those fellows should talk of anything but dogs and horses and women. At four he would pound out into the street for a constitutional like a splenetic Englishman, thumping the ground with his stick and calling out to his dog—one was called Atma, the world-soul of the Brahmans—and tearing along at a terrific pace to get the rapid daily shaking of the system he considered imperative for health, occasionally telling people who did not get out of his road what he thought of them and of the average mortal. "Why don't the fools go to the right? Englishmen always go to the right." Another of his dogs, called Butz, had his most

profound admiration, being remembered in his will; he would gaze at it for hours, often putting it up in the window of his club or study to see and hear a military band pass, and then the Frankfort children would go home and say they had seen young Schopenhauer at the window. At another time he urged everybody in Frankfort to go and see a wonderful ape that was on exhibition there. He was spell-bound by its eyes — they seemed to him, he said, like those of the prophet gazing out of the wilderness. After a two hours' tramp in the suburbs and the country he returned to the reading room or to the club to pore over the newspapers, devoting careful and minute attention to the *Times* and papers like *Galighani's Messenger*, and the agony columns — the sources of many of his illustrations of facts psychological, moral, religious and pathological. The evening he would devote to the theatre or the opera. Not to go to the theatre, he held, was like trying to dress without a glass, and Music, he regarded, as is well known, as the greatest of all arts.

He would generally leave a concert after a piece from Beethoven, anything else being simply impossible to him after the depths and heights of that monarch. Between eight and nine a cold supper, a half bottle of light wine, a long pipe and some light reading, and then the long sleep — his lodging being always chosen with a view to profound quiet. He measured a man's intellect by the extent of his hatred of noise, being fond of a story of Goethe's sending out people to buy a house at which the noise of workmen proved a disturbance to him. "When I go into a town and hear cocks crowing in the morning, and whips cracking, and carts rumbling, I know what to think of the intellectual capacity of the inhabitants." Although profoundly convinced of the abject social misery of millions of the world's enslaved workers, he cared little about the aspirations of democracy or the incipient socialism of France and Germany, or the imaginary dreams of the future of science and technical education. He despised, equally, scientific philosophers like Lotze, and pronounced materialists like Buchner and Moleschott — the wretched fellows with their "syringe-ology and their instruments — no culture and no humanity." To talk in one breath of a man like Helmholtz and himself, he once told a friend, was, to him, like putting a monkey on Olympus. He never married — a blessing doubtless for all possible or impossible parties. Matrimony spelt to him, he said "war and want." Towards the end of his life he was really interested in a young woman who once was painting his portrait. He watched her movements with great attention, thinking her extraordinarily free from the defects of her sex. His day, of course, was over — it had always been in fact as that of one born out of due time. His appeal was to posterity — a thing the average time-server generally treats like a waste-

paper basket. His end was sudden, and was peaceful. He had breakfasted as usual, one day in September after a heart-attack two days previously, upon which occasion he had talked cheerfully to his biographer, Dr. Gwinner, in the softened accents of his strong voice about things in general and about the joy he felt that the unprejudiced minds of people outside universities were at last finding "religious peace and comfort" in his writings. When his doctor entered the room, he found his patient lying back dead in the corner of the sofa, with a calm, painless countenance. "Bury me where you like," he had said, "posterity will find me."

It would not be difficult to trace the suggested growth of Schopenhauer's influence over modern society and over leading modern men. "There is something," said the London *Athenæum*, in an article upon my own volume upon Schopenhauer's System, "in the boisterous common sense of certain of Schopenhauer's views which recommends him to the practical English mind, and therefore it is not strange that it was England which provided the earliest stimulus to the growth of his reputation in his own country." As early as 1853, John Oxenford's article in the *Westminster Review* first drew the attention of English readers to the sage of Frankfort, who was "railing equally at Hegelian transcendentalism and Anglican bigotry." The article "had the incidental effect of revealing to the Germans that they had a man of genius among them whom they were unduly neglecting." In 1854 Wagner sent to Schopenhauer a private copy of the text of the *Nibelungen Ring*, and seemed about that time to be doing all he could to inflame his friends and fellow-artists with a zeal for the writings of "this supreme philosopher and master of modern thought." It was doubtless at his instigation that an ardent group of young musical enthusiasts and revolutionary idealists wrote to Schopenhauer, urging him to come to Zurich, their headquarters, and rule over them as their prophet, priest and philosopher. They even tried to get a chair established for him at the Zurich University as an "idealistic counterpoise to the materialism" that they found to be rampant there as elsewhere. Of course, if we would study the real extent to which Wagner accepted Schopenhauer's theory of the will to live as the background of his own theory of life and his theory of art, we must turn to Wagner's book on *Beethoven* and to his other writings, as well as to the magazine literature upon this important subject.

In 1856 the Philosophical Faculty of the University of Leipsic, recognizing doubtless the interest in Schopenhauer's philosophy that was beginning to assert itself there in university and also in general circles, offered a prize for the best account and criticism of the system, which was won by a Dr. Rudolph Seydel, and afterwards published in

book form. It was at Leipsic, too, that the enigmatic Nietzsche first heard of Schopenhauer — who immediately became the chief intellectual influence of his life. He happened to buy *The World as Will and Idea* in a second-hand bookstore. "When I reached home I flung myself on the sofa with my treasure, and began to submit myself to the influence of that vigorous and sombre genius. Here every line cried renunciation, denial, resignation; here I saw a mirror in which I perceived the world, life and my own nature in terrible grandeur. Here there met me the full, unselfish sunlit gaze of art; here I saw sickness and healing, exile and a haven of refuge; hell and heaven." The devotion of Nietzsche to Schopenhauer is probably one of the causes that conspired to make so many of the young journalists and literary men and so many of the people of fashion in Berlin, in the "eighties" and the early "nineties," take to reading Schopenhauer, for one of the first writings that discovered to the world the Mephistophelic magic of Nietzsche's style (Schopenhauer was his model here as well as in the realm of thought) was his pamphlet *Schopenhauer as Educator*. At least it helped to cement Nietzsche's friendship for Wagner, and thus to hold together, in their impressionable years, two men who have profoundly affected, for better or for worse, the whole spiritual culture of Germany. Two other modern men of importance in whose writings there are so many resemblances to much of Schopenhauer's teaching that they may be said, in more senses than one, to have prepared the world for the study of this philosopher, are M. Zola and Count Tolstoï. Just as it is possible to transcribe from M. Zola sentence after sentence of fundamental reflection upon the mere power of the force or the desire to live that suggests Schopenhauer's descriptions of the *will to live*, so it is possible to find in what might be called the quietism or non-resistance philosophy of Tolstoï (he writes, I have read, with a picture of Schopenhauer in his study) a form of Schopenhauer's theory of the denial of the will to live. Together, they represent a literary exposition of the positive and the negative poles of Schopenhauer's thought. A more complete blending of these on the basis of heredity (a fact of which Schopenhauer makes more than most modern philosophers) and environment may be studied in many of the plays of Ibsen. It is generally possible to trace to their roots in some broad philosophy most of the leading tendencies of an age, so it might be argued that almost all that men of science and men of letters have made out of the two great ideas of the "struggle for life" and the will to "give up life" (for high and noble ends, or through weakness, or "resignation," or "altruism," or "degeneration," or what not) has in a manner prepared the world for that supreme attempt to reckon with the positive and the negative forces in human

life which may be found in the philosophy of Schopenhauer — or in the religious philosophy of Buddhism or Christianity.

Schopenhauer undoubtedly wrote much in disparagement of the philosophy of the official philosophers and official teachers of philosophy of his day, and of their determined intention (so he judged it) to ignore his teaching. He may be said to have triumphed in this regard. The Berlin Academy, towards the end of his life, offered him a membership in its body — an honour which he haughtily refused on the ground that it was offered too late in the day. Since his death the most prominent official representatives of philosophy have felt compelled to devote their attention to him, and as something more than a mere *magni nominis umbra*. Oxford was to Schopenhauer the very home of traditionalism and ecclesiastical bigotry; but an Oxford professor, the late W. Wallace, has put together a most readable and appreciative account of his life and literary activity. The most exhaustive and most celebrated German expounder of modern philosophy, Kuno Fischer, has devoted a whole volume to the consideration of Schopenhauer's system, and France has done, perhaps, the same thing as England through its foremost psychologist, M. Ribot, of the Collège de France. Such a judicious and progressive thinker as the late Professor Georg von Gizycki, of Berlin, wrote an excellent monograph upon *Kant and Schopenhauer*, in which he ranks these two philosophers as men of equal importance, and deliberately calls Schopenhauer the greatest philosopher of the nineteenth century. Professor Jodl, of Vienna, has spoken of Schopenhauer and Lotze as the last two system-makers of the German philosophy of this century. Professor Deussen, of Kiel, has written an important book upon the elements of metaphysics along the very lines of Schopenhauer's main ideas. In his recent important work upon the history of philosophy he speaks of Schopenhauer's system as one of the greatest spiritual phenomena of modern times. This reminds one of a saying of Wagner in a letter of 1868, about an oil painting of Schopenhauer that hung in the reception room of his house at Bayreuth: "One hope I have for the culture of the German spirit, that the time may come when Schopenhauer shall be made the law of our thinking and knowing," and of Mainländer's declaration that the doctrine of Schopenhauer "has begun a revolution in the world of mind which will bring about changes as great as those wrought by Christianity."

After these references to professional philosophers it may be added that the younger literary spirits of England and America and France soon proved their kinship to their German colleagues by deriving inspiration from Schopenhauer. Men like Mr. Belfort Bax, Mr. Edwin Wallace, Mr. E. Todhunter, Mr. W. A. Ellis, M. Brunetière, M. E. Rod, Mr.



Morton Payne, Mr. C. F. Thwing and many others have written interesting essays on Schopenhauer that reveal his influence over their thought. Schopenhauer is even a "live topic" for literary clubs and for comic papers. The recent furore over Nietzsche (simply a part of the reaction against "psychological" and foolish "philanthropy") will probably soon give place to renewed attempts to estimate the magnitude and the breadth of Schopenhauer, an immeasurably greater and infinitely more serious man, to whom Nietzsche long ago acknowledged his indebtedness and to whom, after all, he serves but as a kind of king's jester. In America Schopenhauer's general essays are read as eagerly as in England or in Germany, where thousands of copies of his works have been sold since the expiry, a few years ago, of the copyright. All over the world thousands of women, as well as men,—nay, women to an even greater extent than men,—are finding in Schopenhauer a philosopher, if not a *friend* (he speaks too frankly for this), who differs from most other philosophers at least in this one respect, that he always seems to be talking about real life, and the real world, and who writes so clearly that it is next to impossible to fail to catch his meaning. His general essays are as interesting as the "table-talk" of Napoleon or Luther or Goethe. *Ce n'est pas un philosophe comme les autres* is the universal confession, in the words of a writer in the *Revue Contemporaine*,—"c'est un philosophe qui a vu le monde."

Why this popularity of Schopenhauer? I could adduce many scientific and philosophical reasons into most of which I have gone at some length in my volume on his system. Some of these reasons are that Schopenhauer has supplemented or developed the great system of Kant along the lines whereon it has seemed to the whole philosophical world to be most defective, for example, the relation of the "pure" to the "practical" reason; that he has caused us to understand, in terms of the modern theory of evolution, the relation of the philosophy of idealism to the philosophy of materialism; that he sets forth the problem of philosophy as related to, and yet different from, that of science; that he helps us to understand the relation of philosophy and speculation to life; that he gives their fullest due to the ethical and religious aspects of philosophy; that he has incorporated into ethics and psychology modern facts about heredity and the relation of mind to body; and that he has realized the importance to the western world of the teaching of the great oriental philosophies of religion and morals. Along with Plato and Kant and Berkeley, Schopenhauer is one of the philosophers in whom the educated thought of India takes most interest. Then there is the general reason that like Shakespeare or Goethe, or, best of all, Dante, Schopenhauer writes of the whole drama or divine comedy of

man's life. In the hands of Nietzsche this is nothing more than what the Germans would call *eine köstliche Komödie*, but to Schopenhauer it is an episode between an infinite past and an infinite future; it is the expression of the essential greatness and the essential weakness of man's life in all the questionings of the Earth Spirit and of the leaders and guides of the race, and all its own attempts at a *valuation* of its experience. His *obiter dicta*, his "Parerga" and "Paralipomena," as he called his shorter pieces and fugitive paragraphs on life and on philosophy, constitute a perfect mine of suggestion about the ordinary pursuits and ideas and prejudices of men and the ordinary hopes of life,—subjects that one expects to find discussed more by the moralist proper, the satirist and the spiritual teacher, than by the professional philosopher, more by men like Rochefoucauld and Marcus Aurelius and à Kempis than by men like Kant or Plato or Schelling.

Schopenhauer's personality, again, as I have already partly indicated, comprised an unusual development at one and the same time of the three "faculties" of man (intellect, will and feeling). More important than all the considerations named, however, remains the fact that Schopenhauer had the good fortune to evolve from the depths of his own mind—in full contemplation at once of the work of the masters of philosophy and of the achievements of the natural sciences of the first half of this century and also of that remarkable *rapprochement* of the mind of the Orient and the mind of the Occident which is so important a phenomenon of this century—a philosophy of life and thought, that reduces to ultimate principles many of the leading tendencies of modern speculation, and modern science and modern practice. This philosophy is at last beginning to meet with the most explicit recognition and the most serious study even on the part of British and American students of philosophy who have been trained in Hegelian and Schellingian interpretations of Kant's teaching rather than in the estimates of his philosophy associated chiefly with the name of Schopenhauer, and, after him, with F. A. Lange, A. Riehl and a few others. Indeed, the days of mere discipleship to Hegel and of mere "Kant philology" had first to pass away in England and America (as they had already done in Germany), and the time to be ushered in when a reaction from the brilliant hopes first formed about the "future of science," and the future of "social democracy" had made only too apparent the need for a new metaphysic of *things seen* and of the world of history in general, before Schopenhauer's teaching could be sympathetically approached by the majority of our philosophers.

Schopenhauer's chief book, as is well known, is *The World as Will and Idea*, and the title is an exact description of its contents and its

essential teaching. In plain English, Schopenhauer teaches that the world consists of the will or force that constitutes the life and tendency of things, and of the phenomenal appearances that make up the world of the senses. (The word "idea," common enough in English philosophy since the time of Locke, is a translation of the German *Vorstellung*,—a word which, in so far as it means anything "presented" to the mind, for example, an idea of "sense," or an idea of "thought," or the vivid idea that is called an "impression," is very often rendered "presentation" by psychologists.) A justly celebrated contemporary metaphysician, Mr. F. H. Bradley, writes of the universe as *Appearance and Reality*. This title of his epoch-marking book indicates a manner of conceiving of the world of "thought and being" that has descended to present times in consequence of the Kantian philosophy and of discussion of that philosophy—the world consists of things that *appear* and of things that *are*. Now, Schopenhauer's improvement upon this way of stating the net result of modern philosophy consists in substituting the word "Will" for the word "Reality," and the word "Idea," conceived in the sense just indicated, for the word "appearance." But, by putting the word "Will" first (*The World as Will and Idea*) Schopenhauer expresses his conviction that the reality of the world consists in action (*our* action or the action of the World-Will—they are not to be separated if "God be in us"), whereas the "appearance" of the world, what we see around us (the notion is familiar to the student of religion) and what we reflect upon in our thoughts, is simply the different manifestations of that activity or will and their relations to our own actions. Now, a thousand things occur to the mind upon consideration of these words, especially to the mind of the person who has been slightly "spoiled by philosophy"; and I confess that one of the greatest obstacles to Schopenhauer's success as a philosopher is that his "Will" seems to mean everything in general or, at least, nothing in particular. Another obstacle is that he always seems to assume *Mind* (that to which the "idea" appears), and at the same time to speak as if Will had a priority to the Idea. Perhaps, however, we may in the end learn from him that there is really no necessity for restricting the term "will" to denote only human voluntary action, but that, on the contrary, the whole world may be regarded as "through and through" will; and then, secondly, that we may regard the world in this very way without doing violence to the accredited results of idealistic philosophy.

But that the English or American reader is not altogether unprepared for Schopenhauer's lesson may be seen from the extent to which Professor James's recent volume, *The Will to Believe*, has been read and favourably commented upon, and by the credence which has been given

to the arguments of this famous and brilliant psychologist. He may yet found an ontology, or theory of being, on his doctrine (for such it is), *that what we feel ourselves compelled to regard as true and real actually is true and real.* Professor James has given us in his writings no warrant for connecting or disconnecting his teaching with that of Schopenhauer. This *Will to Believe* is simply one of many instances that could be adduced to show that there is at work in metaphysical philosophy a general movement that is more and more preparing the world for the teaching of Schopenhauer. I do not for one moment mean to imply that Schopenhauer teaches that whatever we will or wish to be real is to be regarded as real. I remember but too well the ridicule that, in this very regard, he pours upon Fichte, Jacobi, Schleiermacher and others; although I will say that, to Schopenhauer, man is to be identified with God in so far as God is the will that energizes in us and in "external" (?) nature and in human history. Thus everything in contemporary social philosophy and everything in contemporary reform and contemporary politics that is tending to give the human race a consciousness of itself as a unified or unifiable will, as an intelligent force in the control and direction of the affairs of this world, is also making for the relative truth of Schopenhauer's doctrine of the world, as will.

We can see in the recent philosophizing upon psychology of another Harvard professor, Dr. Münsterberg, an almost explicit avowal of teaching that its author must know to be akin to that of his great countryman, Schopenhauer. Let me quote: "The ethical belief in immortality means that we, as subjects of will, are immortal; that is, that we are not reached by death. For the philosophical mind which sees the difference between *reality* and *psychological transformation* [italics mine], immortality is certain. Death is a biological *phenomenon* in the *world of objects in time*; how then can death reach a *reality which is not an object but an attitude*, and therefore *neither in time nor in space?*" This "attitude" . . . . not "in time nor in space" is what Schopenhauer means by will, or by our reality as will; and the truth of *our* being is to him the truth of the *world*, for, according to evolutionary science, the world sums itself up in man. Elsewhere, Professor Münsterberg is even more explicit in his teaching that things which are studied as objects in time and space can never be more than phenomena or presentations, while true reality can be found only within — in will. In other words, a doctrine of the real can never establish itself upon the external and phenomenal aspect of things, but only upon their inward and dynamic efficiency, upon their value in the light of will or

purpose — upon the idea of the “plane” or “level” or “grade” of the activity of will that they represent or set forth.

Even the redoubtable Professor Wundt of Leipsic, the father of all the experimental psychology of the past twenty-five years thinks in his *System of Philosophy*, of the “will of living creatures as creative of objective purposes in nature.” This is undoubtedly in the manner of Schopenhauer; so also, in some respects, is Wundt’s notion of a collective will of humanity teleologically shaping its slow destiny — an idea that is the entire stock-in-trade of the American sociologist, Dr. Lester Ward, of Washington, whose *Psychic Factors in Civilization* must be regarded as among the early important criticisms of the belated *laissez faire-ism* and Administrative Nihilism of Herbert Spencer. A well known socialist writer of the United States once said to me that this notion of the will of humanity is destined to play in the future the role of an Almighty God or of a Divine Providence — a thought that is constantly receiving an expression in the international politics of our day. The writer in question hoped to get from me some support from Schopenhauer for his favourite conception. I was, however, obliged to tell him that I was not over-sanguine about this idea of a collective “will of humanity,” unless it be thought of in connection with what Schopenhauer teaches about the *denial* of the will to live. (Here we see the negative pole of Schopenhauer’s thought, the affirmation of will being the positive). The will of Democracy has still to submit itself to endless discipline before it can be allowed to think of a complete assertion of itself. Despite Nietzsche and his doctrine of the “Over-Man” (*Übermensch*), and despite Zola, Nordan, Kipling and many others, it is the meek, the peaceful and the just, not the strong and the mighty, who are destined to inherit the earth. A thoughtful book<sup>1</sup> has recently developed this idea into a philosophy of history. “God hath chosen,” we read in the Bible, the “weak things of the world” to overcome the mighty things — yea, “the things that are not” to confound “the things that are.” Even along those lines of apparent reaction and self-repression and self-denial the philosophy of Schopenhauer has many lessons for us.

Ever since the time of Descartes and the inauguration of the era of free thought and independent inquiry it has been assumed that the problem of philosophy is simply to work out an explanation of the world for thought. Despite the work of Kant in showing that the intellect can never “transcend” the world and survey it “from without,” but must always confine itself to the task of unraveling the *connections* of

---

<sup>1</sup> *The Coming People*, by C. F. Dole.

things inside the world of our experience, despite the work of the pyrrhonists and the skeptics and the "probabilists" (Pascal and Butler, for example) of all the ages, and despite the "persuasion" of "common sense" that our highest certainly can never be theoretical and absolute but only practical<sup>2</sup> and relative, there are still thinkers for whom the task of philosophy is mainly an intellectual one. "What," they ask, "is the value of the world for our thought — not for our "practical nature," our hopes and our fears, not for the purposes of science and civilization, but simply for thought as such?" Now, it would not be difficult to show that a great deal can be said for this method of stating the problem of metaphysic or philosophy. Owing, however, to the influence of both Hegel and Darwin, there is now in many quarters a profound prejudice against limiting the conception of philosophy to the task of explaining a world that is looked upon as in the first instance "given" to us "from without." We have become so convinced of the unity of the world as including both ourselves and our thought (and God too, for that part of it) that we object to the very idea latent in the assumption that our thought is "outside" the world and has yet somehow to dip down into the world and explain it. How can we ever explain the world if we are outside the world? Schopenhauer has made us ask ourselves this question in a hundred different ways. For him the question of philosophy is not, "What is the value of the world for thought?" but "What, in broad terms, is the real — what is Reality?" He thus meets the wants of some of the philosophical students of our day who have come to the conclusion that reality must be more than a mere system of "intelligible thought-relations," or a thought-system that expresses itself in a dialectic. What, even presupposing all the apparatus of "first principles" that the philosophers from Parmenides to Hegel have put together, is the nature of *reality*?

Now it dawned upon Schopenhauer, after years of meditation upon the writings of Kant, and after some theoretical investigations of his own into the principles of human knowledge (published in his *Fourfold Root*, by universal consent the most remarkable "Doctor-Thesis" in philosophy ever published in Germany), and after some consideration of the

---

<sup>2</sup> As a recent book (*Foundations of Knowledge*, by Professor A. T. Ormond, of Princeton) puts it: "The very last word of experience is not knowledge but edification." One of the chief merits of this work is the fact that it does the fullest justice to the truth of what may be called Intellectualism, or the Intellectualist movement in philosophy since the time of Kant, and at the same time the fullest justice to the fact that the final demand of the consciousness of man is for ultimate reality. Another recent work that has this merit in an eminent degree is *The World and the Individual*, by Professor Royce, of Harvard. We can here see one of the most elaborate and careful attempts of modern metaphysic to conceive of the world as realized will or purpose or meaning.

philosophy of the will that Fichte was trying to extract out of Kant's ethical treatises, and of Schelling's philosophy of nature and of the nature-idealism of Eastern religions, that by the very principles of idealism, the irrefutable idealism of Berkeley and Kant, reality is never to be attained "outside" personality, outside man, in external nature, but within personality, within what man feels to be the reality of himself. "Simply a new Pythagoreanism," you say at once; "simply a modern version of the notion that 'Man is the Measure of all Things'; simply a version of the psychological truth discovered by Empedocles, that we know reality by the related sides of our own existence; simply a perception of what Goethe and other poets felt about *das Innere der Natur* being in ourselves and in the warm life that we feel." Not so fast, however! Nor was what Schopenhauer perceived merely some of the consequences of the "Hegelian" claim that self-consciousness is necessarily the highest category of philosophy, the key whereby to unlock all the secrets of the universe. His point of departure is rather the result (as he conceives it) of all modern philosophy — or the result of the philosophy of the two idealists of the time, Plato and Kant. The essence of all modern philosophy, he holds, is that the external world is presentation, that whatever is presented to us as an object of thought or perception is phenomenon, is phenomenal, is something that appears, that is and must be conceived as appearance, as *Vorstellung*, as idea. Anything that is presented to us, that appears before us, must surely, by the very nature of the case, be a presentable something, an *appearing* something; its reality is somehow conditioned by or dependent upon the fact of its being an appearance to "mind," to the mind that perceives or thinks it. But Reality can never be merely presented; it is that which eternally *is*. "My philosophy starts neither from the subject nor from the object, but from the *idea* as the first fact of consciousness." "And from that," we might add, "it grasps at once the truth that the supreme reality cannot be seen or conceived to be anything merely external, but must be found in that which is the truth of the 'within'—in the *will*." I know that a great deal of this may sound as if Schopenhauer were merely the expounder of a new philosophy of "identity," or of "substance," or "essence," or what not; but we must not be afraid of mere terms if we would approach our subject more closely. "In reality there is no such thing as mere spirit or mere matter," says Schopenhauer, "but rather a great deal of nonsense and idle fancy in the world." This is only too true: mere "spirit" and mere "matter" have very little meaning. Schopenhauer's *aperçu* (he always insisted that philosophy rests upon true insight and true observation) is simply that Reality can never be seen or "sensed" or even merely "thought" (for

“who hath seen God at any time?”) by us, but is rather something that is lived and willed by us—something that we are, and are ever becoming. If it is held that this very suggestion that “reality, of course, is not thought but only lived” is “not philosophy,” I reply that Schopenhauer does not stop here. He wants a philosophy of this very fact, a philosophy from which the very opposition between “philosophy” and “life” (an opposition that “common sense” is always bringing against philosophy, and that philosophy often countenances) shall disappear. He was fond of saying that his philosophy, that the world is “will,” was much more truly an ethic than was the system of Spinoza, “with whom [Spinoza called his pantheistic philosophy of substance *ethic*] the word savours of irony—a sort of *lucus a non lucendo*, in fact, since it is only through sophistry that he foists morality on to a system which has logically no room for it.”

The world then consists of the will that is in us “both to will and to do”—the will that expresses itself to us in psycho-physical, that is, vital, moral and æsthetic effort, and that also expresses itself in nature in the various forms of energy with which we are acquainted. A complete philosophy or metaphysic, Schopenhauer holds, is a philosophy that sets forth the world of being and thought in accordance with the idea of the different places or grades of life along which the world-will has apparently manifested itself. Energy, for example, is manifestly either physical or chemical, or “vital,” or “psycho-physical,” or “moral” and “spiritual”; and so we have the different groups of the sciences, the “physical,” the “natural” or “biological,” the “psychological” and the “moral” and “social” and the “religious.” The world, as a whole, in other words, consists of the “will” in its potency *and* of the different “appearances” or forms of appearance that the will makes upon consciousness—“consciousness” consisting of these very “ideas” or “appearances” of things and of the effort to think them altogether. The world is Will and Idea. If we say that this is but the old story of the world consisting of matter or physical energy on the one hand, and thought or consciousness on the other, there is no objection to the contention, only we might try to think of the consequences of calling matter “idea” (presentation—*Vorstellung*, a term that at once gets rid of the difficulties of “Materialism”) and of calling force, both physical and psychical, *will*. In regard to the first point we may think of a term that Herbert Spencer has applied to his doctrine of the real, to his philosophy that the so-called “physical” universe consists simply of the “redistribution of matter and its retained motion from a diffused to a determinate arrangement”—*transfigured realism*—to realize the thought that “matter” never exactly is what it seems to be, but that



it is "ideal" in the sense of being merely the arrangement or the rearrangement of certain fundamental forms of energy. And in regard to the second point, it might be well to reflect that neither physiologists nor psychologists now draw any lines of absolute distinction between "conscious" energy and energy that is said to be "neural" or "sub-conscious" or merely "vital."

But what, you ask, of "the denial of the will to live," what of the quietism, or annihilation-philosophy, or the nihilism or the pessimism for which Schopenhauer is even more notorious than for his affirmation philosophy. In reply I beg to make two remarks. First, the general public does not yet know the real Schopenhauer. Then, secondly, the best way to answer this question is to think of Kant and Plato and Buddhism and their influence over Schopenhauer.

From Kant Schopenhauer learned the results of modern philosophy of which I have spoken above. All the manifestations of the will are "phenomenal." They represent the appearance that the world-will presents to different beings according to their place or grade on the ladder or scale of existence. To a jelly-fish or to a simple organism the world may appear to be what psychologists call a "single sentiency," one continued sense-experience, while to a man the world presents the appearance of being a conflict between the will and the idea, between the tendency to act and the tendency to reflect, between mere impulse and true self-realization. The "Platonic Ideas" represent to Schopenhauer the types of the different grades (chemical and physical attraction, vital activity, *etc.*) of the manifestation of the will; they may be illustrated by the form or the structural essence of the different animal species, or by the different action (cohesion, polarity, electricity, nerve-action) of different forms of energy, or by the different arts from architecture up through tragedy to music. Architecture, for example, to Schopenhauer, is an attempt to "bring into distinctness some of those ideas which are the lowest grades of the objectivity of the will," such as gravity, cohesion, rigidity, hardness, those universal qualities of matter, those first, simplest, most inarticulate manifestations of the will — the bass-notes of nature; while music is a literal and exact expression of the inmost will that is the heart of universal nature.

The denial of the will to live is simply Schopenhauer's doctrine of "enlightenment" or of altruism. It is the opening of our eyes to the fact that even things in the outer world, not to mention the animals and human beings called persons, are manifestations of the same will that we find in ourselves. A man who sees in others the same will to live that he sees in himself will not will his own happiness at the expense of that of others; a man who recognizes in "external" nature and in

humanity simply certain phases or sides or grades of the will (there are physical and biological and moral forces at work in his own life) will not think of human life as dissociated from physical and animal life; he will rather think of his own moral and religious life as somehow bringing Nature to her fullest expression or even to perfection. The "whole creation groaneth and travaileth in pain until now"; it waits for the manifestation of the "sons of God" in the life of man. All true life—the life of the "moral agent" or that of the citizen, the father, the brother, the patriot, the Saviour of men—is simply, to begin with, a balance or equipoise between the will to affirm life in the selfish sense and the will to deny life for the sake of others, for the sake of the common life.

There is, to be sure, the deeper meaning in Schopenhauer's philosophy of affirmation and denial, a meaning that lets us clearly see how profoundly he was influenced by the Christian philosophy of original sin and by Eastern ideas of suffering in consequence of sin and selfishness. The bare mention of original sin or of suffering which (in consequence of sin) is bound up with the very will to live, will be, of course, enough to drive away many people from the study of Schopenhauer. Those spirits of our age who are trying to shut out from their sight the extermination or the degeneration or the death that is the rational reward of aggression and selfishness and sin, by the glorification à la Nietzsche of mere brute strength or of the more rampant naturalness of the natural man, are of course in no fit mood to read or think of a denial which seems to be a surrender of everything, even of life itself. As Professor Gizycki puts it, "It is not Schopenhauer's 'pessimism' that brings him friends; it brings him enemies." On the other hand, there are many people, particularly among those who have enjoyed (if this be the right word to use) a thorough acquaintance with the "world and its ways," who find in Schopenhauer or in Buddhism the equivalent of the doctrine of the "original sin" that is *wrongly supposed* to have been explained away by Liberal Protestantism and the teaching of science about the "ascent of man." Explain it, in short, as we may, the attempt of Schopenhauer to study suffering and even death itself in the light of a necessary but divine and eternal justice, and to see in the regenerate heart or the enlightened will the touch of pure goodness that makes the "whole world akin," is just serious enough and real enough to afford true spiritual food to those who have tried in vain to sustain themselves on the husks of the materialism and positivism and naturalism of the century. Schopenhauer, as has been said, at least teaches us *to have done with unreflecting optimism*, with unbridled selfishness and with mere naturalism. It was surely not altogether inap-

propriate that the Evangelical Service was read over his grave in September, 1860, for never did man believe more profoundly in the literal truth of the idea that we must "die to live"—*mors janua vitæ*.

I do not say that Schopenhauer's teaching about the salvation that awaits man through a denial of the merely selfish will and an affirmation of the eternal or "other-regarding" will is either clear enough or consistent enough or independent enough of Christian or Eastern elements to entitle it to be regarded as an independent solution of the question of sin and suffering, but I do say that it can be brought into harmony both with the esoteric doctrines of the deepest religions of the world and with some of the most liberal and suggestive ideas of modern times regarding our moral and social development. As regards the latter, humanity has, for example, but too long regarded the evil in the world, the evil in ourselves and in our environment, as not altogether of our making, as something that has been imposed upon us from without and for which we are not altogether responsible. Consequently schemes of salvation have been regarded as affairs both adventitious and "external," matters in which we can have a theoretical and speculative rather than a practical and immediate interest. Now, on the contrary, a great deal of the unhappiness and suffering of the world is of our own making, and its continuance or modification is a matter that is partly within and not altogether without the scope of human volition. Reality is largely what we make it to be so far as both evil and good are concerned. The world is slowly becoming awake to the consciousness of this fact, just as religious people are everywhere becoming awake to the fact that, instead of merely believing things about the lives and the sufferings of the founders of "religious systems," as things or schemes or facts external to ourselves, the supreme duty of the "faithful" is to tread the same path opened up by those who have proclaimed themselves to be the way and the truth and the life, or at least apostles and prophets of the same.

Doubtless there are those who will find and continue to find Schopenhauer's philosophy to be at heart "atheistic," who will hold that it speaks as if man were even the creator and the sustainer of the external world and also his own redeemer and his own saviour. This charge has been brought against the philosophy of Hegel and of many of Hegel's followers, and, for that part of it, against the philosophy of Berkeley—the only great philosopher who was at the same time a dignitary of the Protestant Episcopal Church. Indeed, many men who have done the world an immortal service by showing how man in his mind and spiritual life is really a co-worker with God—with the Eternal—have been rewarded by the epithet of atheist and unbeliever

for the simple reason that they went somewhat ahead of prevailing modes of thought and expression. The Christ himself rebuked certain of his followers for trying to stop some well-meaning men from casting out devils merely because their exorcism formula had not the conventional ring about it. He also warned the ardent and impetuous mother that her sons could not be princes or dignitaries in the Kingdom without sharing the cup of humiliation and the baptism of fire. It is, indeed, of the very essence of his teaching that the Kingdom of God is *with men*. What the world supremely needs at the present time is a philosophy or way of looking at things that shall not merely find in the mind of man a very reflection of the mind of the Eternal, but shall also disclose in man's will an energy which, when properly understood, becomes the will to bring evil to an end and to usher in an order or kingdom of righteousness. I have endeavoured in this article and elsewhere to suggest that help in this very direction may be found in Schopenhauer's philosophy, despite its lack of system and despite its many inconsistencies.

W. CALDWELL.

## ON THE BORDER.

---

Although it lies at a meeting place of nations, where varied elements freely mingle, Caldwell's Manor has preserved the distinctive character given to it by Puritan Loyalists. Diverging histories have not separated it as sharply from New England as differences of blood have divided it from French Foucault, or from Christie's Manor, whose old Dutch farmhouses with sloping roofs and deep stoops look across the blue stretches of Lake Champlain to the Adirondacks.

The very names of the people tell the history of the parish. Amasa and Asahel greet each other in the post-office; Uriah and Amos sit side by side in the council chamber; Hannah and Rachel linger to chat at the door of the Old White Church, in whose shadow lie Micajahs and Daniels, Jonathans and Isaiahs.

Here and there, an old house of reserved Colonial type stands withdrawn behind slender Lombardy poplars, the stately descendants of a walking-stick that came from Connecticut more than a century ago. In the background are the orchards whose black apples, garden-gates and great sweets are fruits of local fame, due to the decided flavours which are traceable to the trees that sprang from a basin of apple-seeds, sown upon the first clearing by a fine old woman from a New England Canaan. About the doors and in straying borders are clumps of phlox and monk's-hood, with sweet clove-pinks and cabbage-roses; while lilacs, burning-bushes and grape-arbours remain as hints of gardens that were noted for many miles around.

Up to the time of the American Revolution, the seigniory was a stretch of magnificent forest, unvisited even by the Iroquois, who swept down Lake Champlain. The long silences were broken only by the calls of wolf and deer, by the drum of the partridge, and by the whirr of wild pigeons' wings. But in 1783, men, driven from New England by persecution because of stubborn loyalty, came in their flight to the richly wooded ridges, sloping on either side to the Richelieu River and to Missisquoi Bay, and found them good. Without waiting for assignments of government lands, they bought farms here. Soon they were joined by friends, who came sailing down the waterways, or winding through the woods in long, low ox-carts, laden with supplies and simple household treasures, chief among which were massive family bibles and leather bound books of sermons and of prayers. The first comers were

not without means, and were quickly able to replace the log-huts of the earliest days by comfortable homes. Busy wheel and loom sounded in every house, and chest and closet were soon stocked with linens and with woollens. Even now, some of the blue and white quilts, a hundred and more years old, are treasured because they are of the old Colonial design, taught only to women who could read and write.

In the train of the better class, came worthless malcontents, whose descendants long gave an unenviable reputation to the "Burrough." Through it ran the old smuggling-road between New York and Montreal. Even to the respectable, "the lines" were very imaginary, and the evasion of customs-duties laudable. Sympathy with the smugglers was, therefore, effective if silent. No one was surprised at finding a heavily-laden waggon in the shelter of his shed, where it had been left the night before when pursuit waged hot. The only natural conduct, under the circumstances, was to draw it back to the woods and leave it near the smugglers' train, to vanish as silently as it had come.

Such acts of neighbourly kindness did not prevent feeling from running high, nor social lines from being sharply drawn. Stout old United Empire Loyalists with round oaths disclaimed all acquaintance with "rebel adventurers" who had followed them to the North-Land of mystery and promise. The oaths were strongest and the ignorance deepest when the despised ones sought grants from the British government for mythical services and doubtful losses in the War. But during years of misfortune and hardship, when cyclones swept fields bare, and June snows destroyed the crops, the constant need of neighbourly offices drew the people together and wrought them into a whole, dominated by Puritan habits and practices. Probably nothing was more conducive to this result than a common desire for "the Ministration of the Word." Even eccentric Lorenzo Dow, with an Eastern Township reputation, gathered about him large congregations, who sat for hours upon stumps in the clearings, thrilled by graphic descriptions of a dread or of a blissful hereafter. Wandering preachers were sure of a welcome if not of the warmest. Sometimes they took a quick revenge for any disrespect, and many were as ready of wit as he who witnessed a rapid transformation scene, when a more favoured visitor drove in at the gate after supper had been laid. His grace was apposite and has become historic in the neighbourhood:

The Lord be praised, but I'm amazed  
 To see how things have mended!  
 Here's cake and tea for supper I see  
 When mush and milk were intended!

Such spiritual pastors could not long satisfy the people, so the Presbyterians of Caldwell's Manor and their Lutheran neighbours united in efforts to establish a church. At last their prejudices were buried, and all agreed to support the Church of England, which supplied the first missionaries of the district. In 1815, a rector came to live in the village, and there he remained for fifty years, ruling the community with authority, impressing it with his fine character, strengthening its people in all efforts to love righteousness and to get understanding. Good schools soon followed and the village yearly attracted men of different callings who gave variety to the village-life and added to the number of its characters. One of the quaintest of these lived until 1890 to amuse the village children with heroic tales in which he figured as chief actor. Up to the time of his death, he was in demand in cases which defied the skill of veterinary surgeons, and many who were ashamed of their belief said that he effected strange cures. His great age, pompous manner, absolute faith in himself, and wisdom, supposedly derived from Indians over whom he had been captain, combined to make the application of "the sticks" an impressive ceremony. With a secret charm, a mystic formula, three slender twigs about four inches long were cut from a sweet-maple tree and sharpened at both ends. Having been laid in the wound of the patient for a few minutes, they were removed, wrapped in paper and tied with a knotted thread. As it was most important that they should be kept warm, the magician wore them near his heart both day and night. If all these details were carefully performed, the most dangerous wound invariably healed rapidly. His neighbour, the blacksmith, was an independent personage, living his life and speaking his mind unhampered by respect for his "betters." Uncle Zeke, as he was always called, never visited the church, and one day made his remissness as excuse for a refusal to contribute towards its repair. The rector finally ended the interview with a grave shake of his white head and the words, "The door is always open, Mr. Johnston, the door is always open." To his surprise, Uncle Zeke made no apt reply. A few days later, however, a detailed account for blacksmithing arrived at the rectory. The bill was indignantly disputed and the smith reminded that his rival had the rector's patronage. Uncle Zeke solemnly shook his head, and in approving tones replied, "My door is always open, Mr. Stewart, my door is always open."

The New Englanders brought with them many superstitions and a belief in witches and in possession of demons. They tried, however, gentler exorcisms than their forefathers. The daughter of one of the earliest Methodist preachers was a dreamer of dreams and a seer of visions that too often proved realities. Naturally, only possession by an

evil spirit could explain her powers. Notwithstanding a series of prayer-meetings held in the house, the manifestations increased and the demon apparently took unto himself fellows. Only the removal of the family from the neighbourhood ended the unseemly occurrences. It was a disgrace for such a curse to be laid upon the elect, although worldlings might well be thus punished. So, too, insanity was often attributed to an evil eye. An officer of Isle aux Noix, having cast a wandering glance upon a handsome woman living upon the mainland to the south, brought upon her the curses of his Spanish wife. Ever after, the former was haunted by the gleam of burning eyes. They peered through the windows, they followed her about her tasks, they shone through the night-watches and silenced her prayers, only death at last bringing her relief.

Ghosts walked, even the commonplace pirate that guarded the pot of hidden gold. Of course the treasure had been buried by Captain Kydd, who must have taken a canoe up Lake Champlain and studied the possibilities of Windmill Point. Not more than eighty years ago, so late into the nineteenth century did ghostly pirates find Canada a congenial home, an adventurous party chose a dark night for exploring an uncanny spot where treasure lay. Four men and a boy who was "clerking it in a store on the lines," dug long and late. At last, the spades struck the cover of an iron pot. At that moment, however, blue flames flashed, loud crashes sounded through the trees, and a piercing shriek echoed overhead. Four men disappeared, wild swingings of their lanterns marking their progress across the swamp as they sprang from log to log. The boy remained behind to enjoy with companions the well played joke.

A little later nothing produced more fearsome thrills in village children than the grave in the orchard. Not even the vulgar explanation that an old man asked to lie there in order to protect his rare fruit from plundering boys, could destroy the romance, nor make the grave less than the very mouth of hell from which would eventually issue horrors felt rather than seen. Near it, a lonely house with staring windows looked unblinkingly over the trees towards the gleaming stones. Through one, the children saw each day, as they passed to school, a woman's face, waxen with inward-gazing eyes, that had looked upon life and found it evil. A weary uninterested spectator of all that passed, she hated life but feared death more. Years before, she had left husband and children with a man greatly her social inferior, who desired her beauty and paralyzed her will. Together they fled to the North, hoping in the newly opened wilderness to find love and forgetfulness. They prospered, but at the expense of others, until every glance that



fell upon them seemed full of hate. The soul of the man was filled with a fierce desire for possessions, and only an incurable disease turned his thoughts to the possibility of another world. He wandered in spirit outside the heavenly gates, cursing the day when he met her who had given him all, but whom he believed had woven the "boundless net of fate" in which he lay entangled. A desire for revenge for life lost, both in this world and the next, coloured all his plans. An attendant took a solemn oath, that when death came he would enclose him with his strong box in a huge coffin that stood ready, would seal the lid and never leave him until all was cemented firmly in a deep grave prepared in the orchard, close enough to the house to serve as a constant reminder of a miserable past. He died suddenly, however, when his servant was away. A kindly neighbour, who performed the last offices, gave over the box of gold and securities to his wife, but all the other instructions were carried out. Mrs. Lanson was now free to go whither she would, but a strange fascination held her to the spot. She hated life, but feared death more. For in the undiscoverable world a soul awaited her, and with him she would pass the dreary ages of eternity enveloped by his hate, the victim of his passion, dying hourly with him the death she had so often died in life. At last, silence descended upon her, too. The house and the orchard passed to the son, the possessor of his mother's early charm and weak will and of his father's coarse desires. Everything withered in the winds that blew across the solitary grave, and at last only the silent stones remained to tell of the old story already becoming part of a forgotten past.

New homes are founded on the old, but the gray-green poplars bordering the village street still point heavenward. On either side, rise the blue peaks which speak of endless possibilities beyond, and beckon to the children, who go to find success elsewhere. Many still cling to the homes of their forefathers, but have yielded to the restless spirit of the age, and have made room for the French Canadian, interested in other traditions than those told of men and women who struggled for homes in a land where the king reigned.

CARRIE M. DERICK.

## WHAT IS PRACTICAL EDUCATION?

---

(An Abstract of an Address to the Association of Protestant Teachers of the Province of Quebec.)

Some time ago I was asked to address a convention of kindergartners in Toronto on the subject, "What are the vital things in the education of young women?" The topic was not of my choosing, otherwise I should have feared to rush in where angels might well fear to tread. But the question interested me. It should interest everyone who is either teacher or parent. From the parent's standpoint it is oftentimes a very proper question to put. What have courses of study and methods of teaching to do with things that are vital in education? Where comes in the ablative absolute, the rule of three, and quadratic equations in such a scheme? Is there anything of more consequence than the ability to parse *Paradise Lost*, to spell *Nebuchadnezzar*, or "to work every example in partial payments" (every one, I mean, that the text-book gives—no one ever saw the like outside a text-book)? To ask a pedagogue, therefore, what is vital in education, is a shrewd way of finding out whether he belongs to the union or not. Next time, I suspect those Philistines will want to know whether I work overtime or take less than union wages.

Nevertheless, I told them straight what I thought of the education of girls. Since then I have been thinking of what is vital in the education of boys. And I really cannot see where to draw the line. We want our girls to become women—the best possible women; and we want our boys to become men—the best possible men. The sexes may differ in important particulars, just as individuals of the same sex have peculiar characteristics; but what is *essential* in education pertains to all alike.

The other day I received a letter from the president of a city school board in England, who wanted to know what I thought of co-education. My reply was that I didn't think much about it. If he meant the presence of both sexes in the same school, I could see no harm in it as long as parents supplied us with boys and girls; if he meant the same training for both sexes, he would have to seek further

for his information, because in this country no two boys have the same training, to say nothing of the identical training of both sexes.

Herein is an educational principle of wider application than we oftentimes realize. If it is hard to find two people who *look* alike, it is harder still to find two personalities that *are* alike. By inheritance, temperament and taste I am unlike any other being, so far as I know, and no conceivable discipline that I could be subjected to, would make me just like anyone else. Browning says in his *Paracelsus* that,

“Truth is within ourselves . . . .  
 . . . . . and, to KNOW  
 Rather consists in opening out a way  
 Whence the imprisoned splendour may escape  
 Than in effecting entry for a light  
 Supposed to be without.”

What is essential in education is not so much a matter of discipline and training as it is a question of ends to be attained. For every mountain peak worth scaling there may be innumerable paths that lead to the summit. For every boy or girl worth raising there may be many routes to success in life. But when a person does attain success it should be as patent as standing on the mountain peak.

Knowing what we want our children to become, the practical question is, “What should we do for them while they are growing into manhood and womanhood?” It is a question directed to parents as well as to teachers. I speak as a *parent* to-day. What counts most in the making of men and women? If we parents were free to act in the best interests of our children; if schools did not have fixed schedules and classes and courses of study and marks and examinations and prizes and promotions and graduations and bouquets—and envious heart-burnings; if teachers were all wise and omnipotent; if our friends and neighbours would only let us do some things that they don’t care to do, instead of forever goading us on to do as others do; if only we had the nerve to do what our common sense dictates—what should we do with our children while they are growing into men and women?

Shall we send them to college? I fancy some of us put that question to the babe in the cradle. At any rate, I know of parents who enter their boys in a famous New England school as soon as their names are decided upon. Unfortunately, or fortunately (I don’t know which) the schooling of girls is not taken quite so seriously. But nevertheless we do begin to think very early of the schools to which our daughters are to be sent. We begin inquiries concerning dancing masters and music

teachers; we discuss the relative values of classical and modern languages; we are very insistent on good spelling and a proper pronunciation—all these are matters within our own control! But the baby's food, the air she breathes and the water she drinks—these are mysteries known only to nurses, physicians—and grandmothers; just as if bacteria and bacilli were dispensations of Divine Providence! So long as the baby is contented and happy (and lets us sleep o' nights) what difference does it make whether or not her diet contains the proper proportions of fats, proteids and carbohydrates? Carbohydrates are starch, and starch becomes sugar in digestion; what harm, then, can sweets do? The only trouble with this argument is that most of us parents do not even know enough of chemistry to use the terms properly—to say nothing of making the right food combinations. Like politicians who are willing to overlook a little matter of constitutional law when among friends, so we are quite willing to neglect the nutrition of our children in the home. No greater shock ever came to me than when I once called a physician to diagnose the illness of one of my children and was told very bluntly that what primarily ailed the child was lack of food. The child was actually starving in the midst of plenty! I am satisfied that the major part of our bodily ills are due to the bad start made in the nursery. With proper nutrition and plenty of sunshine and out-of-door exercise, resistance to disease is at its maximum, and the conditions are right for the development of a sound mind in a sound body.

The first question, therefore, is not, what college shall we send the child to, but what shall we give it to eat? If higher education is concerned at all, the question should be what college or course of study should the parents enter.

When you ask me what counts most in education I have no hesitation in putting to the front *good health*. I cannot think of anything worth attaining in life for man or woman that will not be worth more, giving more joy, satisfaction and zest to life, if good physical health accompanies it. "What shall a man give in exchange for his soul?" He has nothing to give that is worth taking if his digestion is ruined, his nerves shattered or his brain unbalanced.

The responsibility for good health, as I have already indicated, does not rest primarily with the school. It is the duty of teachers, of course, to observe hygienic laws and not to ask more of a pupil than can reasonably be expected, but what is usually called "overburdening" of the pupil is really "underfeeding" and malnutrition. The schools have sins enough of their own to atone for without adding those that ignorant but well-meaning parents commit. The pathetic part of it all, however, is that the mischief is done before the school has a chance to try its

hand. Only one recourse is left to the school and to the intelligent parent, namely, so to instruct the boy and girl, who will some day have children of their own, to correct in their children those faults from which they themselves have suffered. "Is it not an astonishing fact," Herbert Spencer asks, "that though on the treatment of our offspring depend their life and death, their moral welfare or their ruin, yet not one word of instruction is ever given to those who will hereafter become parents?"

I do not know how long we shall wait for such instruction, but the time is coming when it will be given. If it is incompatible with college education, then college education will have to give way to something more rational. If a boy cannot be taught how best to use his own body there is something lacking either in the boy or his teacher. If the principles of reproduction and heredity, of physiology and hygiene, and of food selection and preparation cannot be given properly in a secondary school to girls who will soon be in need of such information, then there is something radically wrong with those schools or with our modern notions of what is worth teaching.

The greatest peril of our education to-day is that it promises an open door to every boy and girl up to the age of fourteen, and then turns them ruthlessly into the world to find most doors not only closed, but locked against them. Throughout this country we are telling thousands, yes *millions* of boys and girls that anything they please may be had for the asking; during the six or eight years of the school course they are instructed that nothing is beyond attainment. Then, too, our democratic notion of equality of opportunity is responsible for the attempt to hitch some very ordinary waggons to stars of the first magnitude. The result can only be bitter disappointment. Instead of a happy, contented and able farmer we make of the ambitious country boy a clerk or helper in some city industry or a cog in some factory wheel. Instead of helping the quick-witted city boy, who leaves school at twelve or fourteen years of age wise far beyond his years, to employ his mental strength in shortening the term of apprenticeship in the trades and in improving the quality of the output, we turn him over to the tender mercies of the trades union or allow him to bungle ahead in his efforts to become a capable workman. What wonder that our skilled craftsmen are foreigners, and that our best American boys become petty politicians or walking delegates, or seekers after the soft places? We do not teach them to do the day's work in such a way as to find pleasure and satisfaction in it. The result is grumbling and fault-finding and discontent in private life, and in civil life the beginnings of socialism and anarchism. How can you expect a nation long to endure that bends every effort to rouse ambitions and stir aspirations in the breasts of all its citizens up

to the age of fourteen and then ruthlessly turns them out to shift for themselves? Is this the way to promote civil order and social stability? No other civilized state follows a plan so manifestly suicidal as ours. No other people, so far as I know, gives so much heed to the mental training of its citizens and leaves to chance those matters which are really essential in life.

Think of what it means to our girls to enjoy for eight or ten years day dreams which the first contact with life shatters. Is it any wonder that the girl of eighteen or twenty, who has never had an hour's instruction in the scientific and æsthetic interpretation of those duties which confront her should find no pleasure in home-making? The situation is bad enough in the country, but it is infinitely worse in our great cities. What chance has the girl of the tenements, even though she be well schooled and quick-witted? She leaves the school at fourteen or fifteen to get her post-graduate training in housekeeping from her mother. Think of what that means! A home of two or three or four rooms in a crowded quarter; every member of the family at work or seeking it; living confined to the barest necessities; no conveniences for doing the ordinary work of a home even if that were necessary! What is left to the girl? The street; and it is nothing remarkable that some thoughtful persons should hold our public schools responsible for adding to the dangers of city life for bright and attractive girls. The surest way to break down family life and destroy the sanctity of the marriage tie is to mate an ignorant man with an ignorant woman—ignorant, I mean, of what marriage means and unfitted to meet its obligations.

The desideratum that I shall mention next (because of its dependence on physiological functions) is *proper manners and morals*; in a word, suitable habits. I am not sure that there is any hierarchy in these practical ideals that I am enumerating here. Good health was put first because without it all else is worthless. Next, I put proper manners and morals, because without some such norm there can be no effective participation in social life.

It is a commonplace that a man must be honest and that a woman must bear a good reputation; that, like Cæsar's wife, she must be above suspicion. We go even further and say that the great object of education is the development of good character, but we don't always include in that the whole round of conduct which marks the agreeable member of society.

I am not concerned here with the origin or inculcation of customs or conduct. It matters little whether they come from mere imitation, or result from definite instruction reinforced by persistent effort. It is what we *do* that counts most in society. And every grade of society demands that its members conform to an accepted norm. We recognize

this insistent demand when we require our children to eat with the fork, to acquire the toothbrush habit, to dress becomingly or to speak grammatically. Reverence, courtesy, gentleness, sympathy, modesty, obedience, bravery, when socially considered, are virtues crystallized in good manners and morals. They are the surest evidence of what we call good breeding. Moreover, from the social standpoint these virtues have a value directly proportional to their habitual expression. Veracity as a fixed habit is far preferable to truth-telling for a consideration. Temperance induced by fear of evil consequence is far less effective than instinctive self-restraint. When these desirable modes of conduct become thoroughly ingrained—become natural, we often say—then character is fixed. "Manners makyth man" is an adage of greater truth than is commonly recognized in our modern educational practice.

How to get on with other people—for that is really the criterion of proper manners and morals—is the chief end of one great type of education. The Persians, according to Xenophon, insisted that their leaders should learn both to rule and to be ruled, to command and to obey. These ends are not secured by formal instruction; they are the result of discipline under conditions which are favourable to the fixing of habits. "Education," says Professor James, "is the organization of acquired habits of conduct and tendencies of behaviour." Walt Whitman, in one of those strange outbursts of his, tells how it is that the child goes forth every day into a new world and becomes part and parcel of all that he beholds:

"There was a child went forth every day;  
And the first object he look'd upon, that object he became;  
And that object became part of him for the day, or a certain part of  
the day, or for many years, or stretching cycles of years.

The early lilacs became part of this child,  
And grass, and white and red morning-glories, and white and red  
clover, and the song of the phœbe-bird, . . . .  
And the school-mistress that pass'd on her way to the school,  
And the friendly boys that pass'd—and the quarrelsome boys,  
And the tidy and fresh-cheek'd girls—and the barefoot negro boy and  
girl,  
And all the changes of city and country, wherever he went.  
His own parents, . . . .  
The mother at home, quietly placing the dishes on the supper-table;  
The mother with mild words—clean her cap and gown, a wholesome  
odour falling off her person and cloth<sup>es</sup> as she walks by;

The father, strong, self-sufficient, manly, mean, anger'd, unjust;  
 The blow, the quick loud word, the tight bargain, the crafty lure,  
 The family usages, the language, the company, the furniture—the  
 yearning and swelling heart,  
 Affection that will not be gainsay'd—the sense of what is real—the  
 thought if, after all, it should prove unreal,  
 The doubts of day-time and the doubts of night-time—the curious  
 whether and how,  
 Whether that which appears so is so, or is it all flashes and  
 specks? . . . .  
 These became part of that child who went forth every day, and who  
 now goes, and will always go forth every day.

A very serviceable education can be given with a modicum of formal instruction. In fact, we seldom hear a course of study justified because of the information it gives. It may be well that some of them put forth no such claim, but the truth is that much of what we claim for study may be gained—and is gained by far the greatest number in any society—from leading a wholesome life with one's fellows. English education as given in the great Public Schools is pre-eminently of this type. No better picture of it has ever been given than Mr. Kipling puts into his story of the Brushwood Boy, who "won his growth and chest measurement, and a few other things which did not appear in the bills, under a system of cricket, football, and paper-chases, from four to five days a week, which provided for three lawful cuts of a ground-ash if any boy absented himself from these entertainments" in a school which "was not encouraged to dwell on its emotions, but rather to keep in hard condition, to avoid false quantities, and to enter the army direct, without the help of the expensive London crammer, under whose roof young blood learns too much." He was then passed into Sandhurst with a training which "had set the public school mask upon his face, and had taught him how many were the 'things no fellow could do.' By virtue of the same training he kept his pores open and his mouth shut."

The next *vital* thing in the education of anybody—man or woman—is the *ability to engage in useful occupation*. I had almost said, the ability to earn a livelihood, but someone may object to the utilitarian limitation of that statement. But I am not troubled thereby. Let me put in the word *decent*—the ability to earn a *decent* livelihood—and I am as satisfied with the one expression as with the other. We do want both our boys and our girls to succeed in doing something which is worth while, and which is suited to them. We also want them to



have sufficient ability in some useful occupation to gain a living thereby in case of need.

Now, I wish to emphasize this demand. We do want just this thing—all of us—regardless of our social standing or wealth or any other consideration. If sometimes we fail to talk out loud about it, the reason is, we are willing to take chances on the future, to run the risk of leaving to someone else the duty of instructing our children in doing the day's work when the need of the day's work arises.

I have said that this categorical imperative is directed to girls as well as to boys. The woman who has nothing to do in life may be left out of account. She must be a freak, if, indeed, she is not already an inmate of a lunatic asylum. And if there be work for women to do, her pleasure and satisfaction in life, her influence upon others and her returns for her labour, all demand that she be fitted for her task. I am not thinking only of so-called "working women" (scrub ladies, as I heard them called recently), or professional women, or of any particular class of those who work for money. If anyone thinks that getting married relieves a woman of work and responsibility—let her try it and see for herself! If there is any occupation that induces greater physical strain and nervous waste, any profession that calls for more of the moral virtues, or profits more from the use of common sense than the profession of wife and mother, I should like to know what it is. It is not a money-making profession; it is, on the contrary, pre-eminently the money-spending profession. And, in my opinion, to spend money wisely is far more difficult than to earn it. We hear much of a living wage, but the real problem is not what the workman receives, but in what his wife spends. I will undertake to guarantee the stability of our American democratic institutions if you will see to it that American wives are taught how best to spend the money their husbands earn. Somewhere in that last ten per cent. of a man's income are hidden away his present happiness and future prospects. If the margin between ninety per cent. and one hundred per cent. (that last ten per cent.) is expended along with what has gone before, life must soon become a dreary routine, destructive alike of good health and high ambitions. If we could stop the noisy clatter of our educational machinery for a moment, I think we should hear in the awful silence these words: "With all thy getting, get understanding." And the interpretation thereof is this. The chief end of education is not (as many seem to think) to earn, to EARN, to EARN, but rather to spend, to SPEND, to SPEND: To spend prudently that there may be no waste; to spend wisely that the best may be obtained; to spend generously that as many as possible may be benefited thereby; to spend money that represents a man's toil so as to lighten his labours;

to spend energy in such a way as to give increased strength; to spend time in order that more time may be had for the things that count.

This leads me to my fourth point—*the appreciation of what is best in life*. Good health, proper conduct, ability to earn a livelihood (even to the extent of accumulating great wealth) are meaningless to him who knows not the relative values of what life offers. Lord Kelvin has said that “the end of education is first to help a man earn a living, and then to make his life worth living.” Life—human life—is a succession of choices. It is the glory of man that he can choose, that he is free to put his own valuation on what is offered to him. How important, then, that he should see life in the proper perspective, that he should feel the charm of nature, see the beauty in art, feel the uplift in literature and history, respect the truth of science, take comfort in religion, and find good in everything! This is the goal of all education. All else is a means to this great end. The one thing needful is the ability to discriminate in what life offers, to single out the best and to appropriate it in the struggle for attainable ideals.

Notwithstanding what I have said of the shortcomings of our public schools, I do believe in the best ideals of American education, just as I have an abiding faith in the ideals of American life. Equality of opportunity as guaranteed in our civil and industrial life is a possession of which we may well be proud. It comes to us sealed with the blood of our forefathers and it is our duty to hand it on unsullied to our children. But we should not blind our eyes to the fact that it is the greatest experiment of the ages. Every other great nation that I know of has attained its greatness by a system of education that is calculated to keep the many down while helping up the few. Germany and England to-day have one system of training the masses and another and quite different system of training leaders. Our salvation depends upon our ability to work out a scheme of education which will make of every person who wills it a leader in his own way. The man of trained intelligence who works on the farm, or in the factory, or at a trade, may be a leader of as much social value as the man who engages in business or enters a profession. Granted good health, the habits of conduct which make of one an agreeable member of a community, and the ability to earn a decent livelihood, I have no fear of social unrest or domestic unhappiness. The man or woman who can do something well is sure to take pride in the work and to find satisfaction in doing it.

The final effort of all education, therefore, should be directed to the proper appreciation of the opportunities that life offers. The education to which we are accustomed in school and college is properly the evalua-

tion of what is best in life. I do not ask that we abate in the slightest degree our zeal for the best in literature, history and science. My plea is that we do those things of which I have been speaking—not that we should leave these undone.

The struggle to find what is best and the determination to pursue that course to the end is the record of every good man's life. It is well that history and literature portray great characters and record their struggles. What man has done I can do, is the watchword of the boy who is surely going forward. The attainment of any virtue is made easier if good example attend the precept. The great ideals of Christian character were exemplified in the *life* of the Master. He did not appeal to his disciples to follow truth for its own sake, nor did he present the beautiful and the good in the abstract. And he who would uplift boy or girl, man or woman, must show that the good, the beautiful and the true are the dynamic forces which make life worth living. The greatest good is the good than man can do; the purest beauty is the beauty that man may be; the noblest truth is the truth that makes man free.

Not long since, I visited in the South an institution that is linked with the names of two great men—Washington and Lee University. I was taken into the chapel of that institution on a beautiful spring afternoon by a man eminent in southern life who himself was a student there forty years ago. He said, "My home was near here in this Shenandoah valley, and I was a boy too young to go to war. My father went and did not come back. One brother after another went and failed to return. Home was broken up, everything lost, father and brothers gone. After the war was over, when General Lee returned to the ways of peace and settled down as a teacher and as president of this institution, my mother and I felt that there was only one thing for me to do, to become a student under General Lee." I thought of those four horrible years when that valley was a scene of carnage and destruction, when Lee's victorious army would sweep northward, and then Sheridan and his men force him back; back and forth through that valley, the granary of the Confederacy, they fought. And then I thought of this little boy, too young to take a part, but not too young to suffer the consequences, striving with the help of his entire family to get inspiration from the nearer approach to that man who was reckoned a demigod by those people of Virginia. And as we stood in that chapel that afternoon and looked upon that magnificent recumbent statue of General Lee, he said, "Do you know that the turning point of my life came one night right on this spot? It was a custom after General Lee died for the cadets of the school, the students, to guard his tomb; in my turn I

stood guard all night long in this aisle with a musket in my hand, and how much it meant to me! From that time my life seemed to merge into his."

Can you imagine what that means for a boy or for a girl? Why, that is almost all of education—standing guard not over but with a noble soul!

JAMES E. RUSSELL.

(Dean of Teachers' College, Columbia University.)

# THE FAIRY QUEEN'S AWAKENING.

(A Fairy Sings.)

Lady, awake! The last footstep of mortal  
Rustles no longer in bracken and heath;  
No longer folds of the dying sun's portal  
Scatter their flame on the moorland beneath.

(Chorus of Fairies.)

Where the marsh grass silky-white  
Carpets thick the dreaded ground,  
Elf-fires, now gone, now alight,  
Glisten, glisten in their flight,  
Bidding fairies tread the round  
Of richer green:

Awake, O Queen!

Lady, awake! O'er the east ridge is growing,  
Lucid as dewdrop, the pale argent sky;  
Dark and still darker the cleft peaks are showing,  
Ere the moon veil them with light from on high.

List! The moth with wings in play  
'Creeps upon the tufted broom;  
Now beneath the hedge-row spray  
Glowworms cast their mellow ray  
Where the velvet mosses bloom  
In grot unseen:

Awake, O Queen!

Lady, awake! Let thine elves place a token  
Where the near hamlet has buried its pride;  
Round her young grave shall they keep watch unbroken,  
Lest in the night-hour mischances betide.

Come and gather blossoms meet —  
Roses, for her beauty's sake,  
Jasmine, for her graces sweet;  
From the amber brook's retreat  
For her troth blue speedwells take  
Of tinct serene:

Awake, O Queen!

CHAS. E. MOYSE.

## SOME IDEALS OF TEACHERS.

---

*(An Address to the Association of Protestant Teachers of the Province of Quebec, October, 1905.)*

One ideal which we as teachers must never cease cherishing is the moral element in our work. For some years educators and legislators have deemed it wise to separate to a very great extent the secular and the religious; and so far as this separation has been the means of affording them when thus brought together the opportunity of working in harmony and of learning that by common aims and united efforts they may benefit not only themselves but also their community, their country and humanity in general, it is a good thing. But while it has been found necessary, chiefly no doubt because there is in our religion so large an admixture of sectarianism and dogma, to abolish formal religious teaching altogether from our school curricula or to reduce it almost to the vanishing point, we as teachers must be all the more alive to the goal of all true education, the development of moral character. As Lowell puts it, "The ten commandments will not budge." Without wearying you with details as to the best way of reaching this goal, I should like to say that it is more a matter of example than of precept. And this being so, everyone who has anything to do with the appointment of a teacher ought to see to it that he possesses this qualification of character, putting it above scholarship, culture, polished manners, prowess in athletics, and every other endowment, be it ever so desirable. Let there be no mistake on this question. If our politics are to be kept free from corruption, and if different and higher standards are to prevail in commerce and in life generally, the schoolroom more than ever must send out pupils, not only with developed bodies and minds, but also with characters so moulded, that they will readily refuse to sacrifice what is altruistic and imperishable for what is merely selfish and evanescent.

To a teacher possessed of the right kind of personality, the ordinary work of the classroom will furnish sufficient opportunities for moral teaching. Let him maintain a right attitude in his duties as counsellor and guide, and pupils will, unconsciously and silently it may be, but none the less effectually and ceaselessly, learn to have a deep and abiding respect

for the right. Especially will they be greatly influenced by the manner in which a teacher handles a difficult case of conduct. If a teacher is able to deal with such a case with justice and mercy, the pupils are quite certain to advance on the road of respect and reverence and to be prepared to think on whatsoever things are true and just, pure and of good report.

Another ideal which, in my opinion, we as teachers ought to strive after is to use our best efforts to retain boys and girls as long as possible in school. That our pupils are leaving us in large numbers both in Elementary and Secondary Schools can hardly be doubted. So far at least as the latter are concerned, I believe it is one of the educational problems confronting us in this city and province. Last July I had the pleasure of attending the National Educational Association of the United States, and found that this question had a prominent place on the programme of the Department of Secondary Education, a large part of one session having been devoted to it.

And those of you who have had the management of schools will know by observation and experience that this premature withdrawal from school is one of the regrettable features of school work.

In some cases, a knowledge of the home circumstances forces us to the conclusion that the withdrawal is almost or altogether the only course to follow; for important as education is, the means of supporting life must take precedence of it, so that all we can do in such instances is to regret the hard lot which the children, from no fault of theirs, have to share, and to commend them for coming at the call of duty to the help of the home, bidding them to keep their courage strong and their hearts free from complaining and bitterness, and to remember that,

“Not once or twice in our rough island story,  
The path of duty was the way to glory.”

More frequently, however, we meet with cases that call for strenuous effort on our part. The commercialism of our age has created a great demand for the services of young people, especially of young boys, and holds out offers to which the novice and the inexperienced too often yield, thinking that they will be great gainers in exchanging the irksomeness of home- and school-lessons for the freedom and independence of earning their own living. Such a withdrawal, whether prompted by distaste for the course of study or by inclination and ambition to get on in the world, is hard to check. Indeed, in some cases it might be wrong to try to check it. Still I cannot get away from the thought that for the average boy and girl it is a good thing, yea, the best thing, to finish a course which they have begun, whether it be in school or college.

During the holidays, when some parts of this address were simmering in my mind, I often took long walks for pleasure and exercise on one of the shores of our great Atlantic. On one day the water and the sandy beach would be peaceful and smooth, but the following night a storm would arise, and the next day everything was changed. Mighty waves had taken the place of quiet waters and had cut gullies four or five feet deep in the sandy shore, and the remnant of a wreck on which the previous day I had sat and sunned myself had been carried one hundred yards or so shoreward. At the time I thought that the conditions without any great exaggeration might be applied to the case of a young pupil leaving school before the end of his course. When life is smooth, he thinks that he is quite well enough equipped to make a voyage over it, but later, when a storm has arisen and the billows of competition and remorseless opposition are breaking over him and dashing him hither and thither, he finds that the voyage is not so easy and that he is all too little prepared to make headway against the forces which confront him.

In this connection I think it is our duty as teachers to point out, first, that school life affords conditions for developing and broadening character which are impossible under present industrial methods. A writer in one of our educational magazines has well expressed this in the following words:—"Minute division of labour forces a boy into a routine so narrow that his natural powers contract until he has neither satisfaction in his work nor hope of promotion beyond it. A child thrust into industry is often a man thrust out of it, for individuality has been smothered and initiative arrested in him by the too rapid closing of routine upon his period of vague ideals, emerging desires, and personal ambitions. To delay entering upon business is to win time for school where plastic thought and fluent movement set free the forces that broaden vision and strengthen character."

In the second place we can impress on our pupils that initial delay is more than compensated by the speed of promotion after they have proved their fitness.

Moreover, it is an encouraging sign to find that so many of our best business concerns specifically ask for applicants who have completed their course in our secondary schools. For my own part I very frequently receive such applications, and when our pupils know that there is a growing demand for such candidates, they will be more willing to finish their course and not be, as the new Classical Professor at McGill expressed it at the annual university lecture last Friday, so desirous to hurry on prematurely with the practical end in view to the detriment of the complete and all round training of the man. I shall conclude



this part of my paper by quoting from an address delivered last March before the Canada Club, by Professor Peterson, in which he says, "It is calculated that in Germany during the last thirty years the number of men of university training has doubled itself."

A third ideal which we should keep in view is what I have called *magnanimity in discipline*. I am a firm believer in putting at the disposal of the teacher every reasonable means for maintaining discipline which is so indispensable an element in all successful teaching, and in asking him to use these means sparingly and wisely. I am not an advocate for the abolition of corporal punishment, though I am aware in saying this that I am exposing myself to the charge of being old-fashioned and behind the times. The Chairman of our Protestant Board in addressing the pupils of the High Schools a week ago last Monday was loudly applauded when he said that one of the things he observed in a recent visit to the schools of New York, was the entire absence of the strap. As he wittily put it, the teachers there were making "stars" without "stripes." Still, I believe that corporal punishment, when wisely administered, may be far less cruel than stinging words from the teacher or tantalizing remarks by the pupil. I would, however, surround the strap or the cane with a very great deal of mystery. Few things appeal more to the youthful imagination than the mysterious. I would have a boy know that there is a strap in the school, that it has been used—on rare occasions, and that it has produced considerable physical pain, but I should think long and seriously before using it for the first time on any boy. In fact, I believe that when a boy has had it once its virtue is largely gone. The spell of the mysterious and the unknown has been broken, and what, when locked away, was a valuable aid to discipline, has now lost its magic and its power, and is ranked with the other familiar and not much needed things of life.

But I must not forget what I started out with under this heading. Let a teacher convince a pupil that he is prepared to give him the benefit in any and every impulsive and thoughtless act, or still better, to pass it over altogether, or to mark it merely by a look of gentleness or of warning, and I venture to say that the pupil, if he has a spark of pride or manliness—and ninety-nine times out of a hundred every pupil has—he will set a close watch on himself and instead of laying himself out to annoy and worry, will be won over to the side of the teacher, and will be a help instead of a hindrance to the order of his class, both teacher and pupil being among the rare cases which Shakespeare regarded as exceptional when he wrote in his *Tempest*, "The rarer action is in virtue than in vengeance."

Before leaving this topic of discipline, I should like to say a few words on the teacher whom I am accustomed to call a legalist, one who practises strict adherence to the law, especially to the letter of the law. Such a teacher thinks it his duty not only to see and know every offence committed by a pupil, no matter how slight, but also to tax his ingenuity in devising a punishment to fit each offence. And when these punishments, inflicted with undeviating regularity, do not bring about—and they seldom do—the desired reformation, he is naturally disappointed and worried. The obedience that such rigour brings about is at best of a forced and unlovely kind. Far better would it be for us if we tried to see those offences from the standpoint of the pupil. Then they would appear in a truer light, and many of our customs would be honoured more in the breach than the observance. It is well to have regulations, but we ought to teach in such a way that the attention of our pupils would be too closely riveted on the topic of work to think of violating these regulations. I know that it is a good deal easier to talk of securing attention than to actually secure it. Still, if we are to amount to anything as teachers, we must be able to get and keep the attention of our pupils, for without it there can be no real fixedness of thought. In this matter of attention I think we frequently err in striving too much after what our psychologists call *voluntary* attention, that is attention secured by the exercise of the will. It must not be forgotten that the power of the will in the case of children is not strong enough to compel attention for a long time. It is useless, therefore, to try to bring about this mental state by commanding or by scolding. We shall find our task an easier one if we exert ourselves to gain that second type of attention which we designate as *involuntary*. Involuntary attention, as the name indicates, is not under the control of the will. It depends on objects that are of interest to us. Now, I do not intend to give here an exhaustive enumeration of the different interests which in childhood control attention. Indeed, these interests are so diverse and subtle that they may be said to defy enumeration. But the wise teacher will never forget what Patterson Du Bois calls “the point of contact.” He will begin with what the child knows and lead him up by skilful gradation to what is unknown, thus linking new truths to old ones. St. Paul gives us a good example of this doctrine of interest when in the cultured city of Athens, surrounded by innumerable gods and altars he began his discourse with the words, “I found an altar with this inscription.” With such a beginning we may be sure that there was no lack of attention on the part of his hearers. And if we as teachers thoroughly grasp this fundamental law in teaching of arousing interest in our pupils, we shall not waste so much valuable time

in conduct marks, detentions and other forms of punishment for the purpose of maintaining discipline.

A fourth ideal which I believe ought to be kept prominently before us, is that we should be constant learners. The teacher who is always endeavouring to add to his knowledge and to improve his methods of instruction and of discipline cannot fail to have the double satisfaction of increasingly enjoying his work and of having that work produce increasingly good results on his pupils. These two results are almost axiomatic. What can be more self-evident than that the more light we have on our pupils themselves, on the subjects they are studying, on the ways of presenting these subjects, and on the maintenance of discipline, the more shall we enjoy our work and the more will that work be enjoyed by our pupils?

No matter how great our natural ability for teaching, or how extended our experience, be it ever so successful, we are almost sure to fall into ruts and to become narrow and dogmatic, unless we are constantly testing ourselves and our methods by the best that there is in the field of education in our own and other lands. But I fancy I can hear some of you saying, "This is talk of a trite and platitudinous kind. Tell us, more particularly, how the monotony and narrowing effects of teaching can be replaced by interest and a wider outlook." Well, an analysis will yield us two main particulars, inclination and the means of gratifying it. For the first we must look within. A teacher who, year in and year out, has the care and responsibility of training our boys and girls to take their part in this new and growing country, will, if he is not a bundle of conceit or of narrow and hidebound ideas, be all aglow with inclination. The means of gratifying this inclination are in some cases hard to find. Still, where there is a will there is a way. Besides, there are some opportunities which need little more than inclination to make them available. For all of us there is the banding of ourselves together in local and general associations for improvement and interchange of ideas. For all of us, too, there is at a small cost good reading—both literary and educational. Then we can all keep closely in touch with the circumstances of our pupils and with their homes, and, despite the unreasonableness of some parents, mainly through a lack of such intercourse, there is here, I believe, a much larger field for profitable cultivation than many of us have hitherto dreamed of. In Montreal, our McGill University is doing a great deal in the way of providing afternoon classes which are open to teachers at a small cost. And I am glad to be able to say that many of our teachers are availing themselves of these opportunities, thus showing

unmistakably that their desire for improvement and further equipment is more than a barren wish.

The one means which is somewhat independent of us, and yet not entirely so, is the lack of money. To me one of the saddest features connected with teaching is its inadequate remuneration. To see a teacher forced to deny himself at every turn that kind of life which he knows he ought to lead in order to be thoroughly equipped for all the demands which his pupils have a right to make both inside and outside the schoolroom, is not a pleasant sight. But to see a teacher, after practising this self-denial, forced to spend his nights in "coaching" individuals or conducting night classes, so that he may be able to give to his family an education and even the minimum of the good things of life is a sight still less pleasant. But even here we need not despair, for the dawn of a better day is, I believe, not far distant. If teachers continue to do their duty, and perseveringly and unitedly work for better salaries, success will surely crown their efforts.

A fifth ideal which we as teachers should be specially mindful of in this formative period of our young Canada, is the development of patriotism among our pupils. "There is a tide in the affairs of men which taken at the flood leads on to fortune." I believe that there is at the present time a tide of attention directed to Canada, a tide of faith in its future destiny, which we as schools ought to embark on if we are to take our proper share in its voyage, stormy or otherwise, to true national greatness.

So far as we are able, we should endeavour to make our schools centres in which will be cherished and fostered a strong Canadian sentiment, and from which will go forth year after year a goodly number of boys and girls who will have a firm faith in their country, and who will be ready and able by their intelligent knowledge of its laws, and the enterprise and moral excellence of its people.

A school will not fail in instilling this love of country in the pupils if the teachers of the school are fully persuaded in their own minds that the land in which they live is a goodly one, if they have faith in it and can give an intelligent reason for this faith. In the High Schools we depend mainly for this result, as for so many other results, on the individual teachers. But we try to keep, in our library, magazines and books which furnish the needed material. Then we have our Empire Day on which we have patriotic songs and exercises, and an address from some one of weight in this field. Last May, for instance, Dr. Peterson spoke to us. Lastly, we have our Monday morning gatherings, some of which aim at inculcating a proper pride in our young nation. All around us there are not wanting signs that we are getting away from

the narrow and parochial point of view, and are coming more and more to look at things from a broader and national standpoint. As last week's edition of our new paper *The Standard*, says: "A large horizon is dawning upon the general view. The consciousness of nationhood is stirring in the breast. All who move about a little cannot be indifferent to this feeling. Already we see the effect in a more confident note, in the larger phrase, in the more permanent forms in which literary effort is being recorded, in the keener desire of our people to learn more about their country."

Three other ideals I have only time to touch on—non-jealousy in education, the development of the artistic nature, and the emphasizing of the dignity of labour. Education is a goddess whom we all woo. She is great enough and good enough to satisfy all. None need press his suit in vain if he is humble and keeps his mind open to receive the precious and inexhaustible possessions of her storehouse. As to the development of the artistic nature, I shall make only one remark and give one illustration. Such development, far from being dissociated from the daring and the heroic, is found associated with these qualities in the highest degree, as is well illustrated in the Japanese who, we must all admit, are splendid examples of this combination of the artistic and the heroic.

Manual Training is yielding us many good results, and one of them is that it emphasizes the dignity of labour. Some one has said that it is a sublime thing to work for one's living. To do well the thing a person is created for, is a splendid achievement. A rich man who had not much sense once said to a rising lawyer: "I remember the time when you had to black my father's boots, sir." "Did I not do them well?" was the reply—a reply that bespoke as much greatness as the remark of the other betokened smallness. That there is plenty to be done we are reminded in the last words of Cecil Rhodes: "So much to do, so little done; good-bye."

WELLINGTON DIXON.

## ON A FALLACY AFFECTING THEORIES OF CANADIAN EDUCATION.

---

The introduction to the Book on Education in the *Li Ki*, or Sacred Ritual Books of the Chinese (compiled in the second century A.D. from older material), is as follows:

“When a ruler is concerned that his measures should be in accordance with law, and seeks for the assistance of the good and upright, this is sufficient to secure him a considerable reputation, but not to move the multitudes. When he cultivates the society of those who are remote (from the court), this is sufficient to move the multitudes, but not to transform the people. If he wish to transform the people and to perfect their manners and customs, must he not start from the lessons of the school?”<sup>1</sup>

This is not only in the spirit of Plato; it is also modern. To whatever school of education we belong; whether we are Greeks or Trojans on the classical issue; whether ours is the liberal or the utilitarian view of curricula; whether we attach chief importance to knowledge or to discipline, to the excellence of teaching in the teacher or the development of initiative in the pupil, we should all endorse the sentiment of the *Li Ki*. And yet in the dust and smoke of present-day controversy, how difficult it is to see these simple first principles with the freshness in which they may have appeared to the Chinese thinkers, and surely did appear to Plato! We are all tired of education now, as those who have been in the thick of the fray or in the heart of one or other of the innumerable “movements” are apt to think. But it will not do to be weary or to let weariness cloud our vision when so much has yet to be done. The first principle, the first law in this matter, is to look at the question with eternally fresh eyes, to see it each day as in its aurora, as one educator observed after twenty-five years amongst scholastic details, many of them trivial. Nor, however weary, does any one who has once had insight into the vital importance of this factor in life

---

<sup>1</sup> Max Müller, *Sacred Books of the East*.

and has wished thereby to "move the multitude" or even "transform the people," dream of laying aside his banner or hanging up his armour. Volumes of nobly-written discourse, ancient and modern, voice the obvious truth that the function of education is to develop to highest actuality the whole force which is dormant in any human being. This greatest store of valuable energy in the known universe, the human, is through education to be freed and set in its true direction, for this is the need of the world. Or, to bring out another aspect—this indefinite amount of glad activity, potential in every normal child, is to be given a sphere in which it will be beneficial to others whilst allowing the agent the sum of happiness of which he is capable, for this is due to the individual. All this will be admitted when it is the abstract or ideal human being who is the object of consideration, but in forming schemes of education, no administration, not even the administration of a radical English or a Republican French Government, or that of the Fathers of the American nation and the common school system, has been able to keep its attention fixed merely on the ideal youth.

Practically, although the present age has been behind none in the loftiness of its utterances respecting education, it has proceeded further than all others in its development of what must be called for want of a more suitable term the utilitarian theory and utilitarian systems. "Education is for life." Certainly, it is agreed. But what kind of life? Life in what plan, what trade or industry, even what rank or station? If the aim must be, as Richter says, nothing less than to release the ideal human individual concealed in every child, we must see to it that this ideal person is one who can exist in the niche and the kind of life which circumstances, under the conditions of the struggle for existence, are going to offer him (grudgingly in all probability and meagrely), it may be as stoker, as factory hand, stenographer, hospital nurse, teacher, or in some sphere wider or more limited than these. He may if he has abundance of energy have some choice, but in the years of education the die will most probably be irretrievably cast by powers beyond his control, and happy will he be if his lot falls unto him in ground if not fair, yet broad enough for him to stand thereon.

Such a tone has perhaps a weary, old-world sound in it. How is it in the New World? In the New World it is generally supposed that there is more of utilitarianism than in the Old. It might plausibly be argued that there is less. What there is, however, is more loud-voiced, and especially in the sphere of education. Over and over again it is asserted that there are certain products of the older civilizations which must not be looked for in a young country, a certain kind of life not appropriate to it, forms of genius which cannot appear until the heyday

of its youth is passed, and, therefore, that different educational principles and methods may, very likely, be needed for its people. The time of leisure has not yet arrived; traditions have not been formed. The nation is not yet so strong but that it must throw all its energies into activities which will increase its vitality and resources.

Such propositions may seem self-evident. They require, nevertheless, some analysis. A great deal of hazy thinking takes place on this subject of young nations. The individuals who make up the "young nations" of our own day belong to old civilizations, and have behind them very long traditions. Is it possible to create a young people by taking out of ancient communities certain groups and planting them on an earth and under a climate new to them, in a land as yet little touched by human labour? The lost youth of mankind cannot be recovered by such devices. Greece was once young for the Greeks; Italy had her youth; England, France, theirs. But the American nation was never young in the New World, nor was the Canadian. Youth lay far behind these nations in the land of their forefathers when they first began to make history in a continent that was previously without it, to give a continuous past to regions that had only lived for the human mind in the fragmentary chapters of the savage life, to arouse a memory in lands where all things had been forgotten. There is no pure memory and tradition of an American childhood for any of the various peoples which came out of Europe to found national systems in the Western Hemisphere. What would be the noble tradition of the Puritan Fathers without the preceding history which was cause and unforgettable ground of the founding of the American nation? What meaning has the past of those who form the heart and core of the English-Canadian people without the remoter past in New England and in Old England of the forefathers of United Empire Loyalists? By sending out the scions of an ancient race to lands unknown and fresh to them, you do not make a new race any more than you could give back to the oldest passenger on the Mayflower as he first knelt on the New Earth, his infancy with heaven shining about him. The very manner of our reflections upon our youth betrays its theatrical character. It is only a Jaques who has known maturity who can review the Ages of the individual or the race, and coolly decide what labours and joys, what thoughts and actions are meet for each stage, declaring the others to be intruders when out of season.

There is then no precedent to which we can look in the consideration of a scheme of education which should fit such a people as the Canadian at such a time as the present. If the nation is young, it is with a youth not known before in national history. Nations of the old world in their childhood were not composed of individuals and groups completely and



intimately in touch with all the advanced thought and systems of life of other highly developed peoples and unable to grow independently if they would. In broad outline, the education which these young nations of the present need, is the same as that required by the oldest. Their ways of thinking, their needs, æsthetic, intellectual, are the same. They are not less than any people heirs of all the ages and formed, spiritually and intellectually, to demand the use of their inheritance. This is so obvious as to sound absurd in the statement. And yet the truism hardly seems to be realised fully by those who reiterate the cry, "a practical education for a young country," in so far as they signify thereby that the "practical" here needed is more practical than what is needed elsewhere or differently practical, and that there is something unpractical in the provision to satisfy that hunger and thirst of the mind which the New World, no less than the Old, stimulates in the twentieth century.

Another aspect of the question of the young country and its educational needs is connected with the modern conception of progress. When we take up this subject, we are in a different atmosphere from that in which is heard what may be called the self-deprecatory talk about a young country and the comparatively unambitious task which must be attempted by its educators, the self-denying ordinance which they should lay upon themselves in respect to the higher subjects developed by leisured classes in the older country. As regards progress it is hoped not unnaturally by those who have carried furthest the doctrine of the young country, that its star is in the West. Assuming that a people can conceivably go out from old countries which are working out their salvation under the restricting and burdening conditions of heavy traditions, and, throwing aside traditions, open its spirit wide to all the breath of the newly born thoughts of the coming age, assuming that this is psychologically and sociologically possible, this people should be in the van of progress. That is, they should know best in what direction it lies; they should be best able to lead their country, first, to the kind of prosperity for which the modern nation asks, and thus get ahead of those members of the older group of nations which lack the freedom of attitude and unprejudiced attention to the voices of the present age.

Here again a little analysis is demanded. To take first the splendid hopes reasonably based on the agricultural future of great regions of this country. The main point here relevant is the obvious fact that there is no analogy between the life, thoughts, social temper of the people who are developing the agricultural resources of the West and that of the nations of the Old World in their early agricultural epoch. That they live on the land, that the basis of their life is the bounty of nature, is the barest element of community—the difference is that which separates

the modern from the ancient spirit and system of life, a complex from a primitive civilization. They take with them into their work on fields and ranches, the spirit of modern industrial organization; their struggle with nature does not destroy the mental weeds which belong to their generation. They will not produce a Caedmon, a Langland, or even a Robert Burns. Nor, on the other hand, will they be satisfied with the mental pabulum of Caedmon's or Langland's rural contemporaries. The spirit native to the workers of our day is the mechanical, industrial spirit. This is applied to every kind of physical labour, but it is most at home in the works that belong to the city and are the products of modern mechanical science. Study of ancient history, with all the new light thrown upon it by archæological discovery, brings home to us the feeling that the one thing that is wholly new is applied science, the systems of work resulting from it and the enlarged possibilities it affords of accomplishment in human life. We look at the Library of the Assyrians with its books of brick tablets in the British Museum and feel that the students who turned them over in Nineveh a thousand years B.C. may have had much in common with those now thronging the neighbouring Library, the centre of the modern world of books. For their civilization, too, was old. From the point of view of material progress, it is mainly through the works of mechanical science that the immense change which we associate with the expression "industrial development" has been wrought. And this kind of material progress, this, which in some form abides in the minds of nine-tenths of the people who talk about modern progress, this, the outcome of the foremost civilizations of our time, is the kind which is striven for by the most typical activities of our new countries no less than of the old. Here again, then, we come upon the fact that the young countries are not to be separated off from the old as though their people required a different preparation for life and its labours and interests. The people have kindred mental tendencies and needs and their industries and occupations are also largely the same.

Dogmatism about these conceptions, "young country," "age of progress," has then, it is suggested, increased the difficulty in arriving at clear conceptions on the subject of education in Canada. It has, for instance, added to the false emphasis commonly laid on the question of subject. Starting from the postulate, which is common in the pre-reflective stage of educational opinion, that the object of education is to acquire knowledge of a certain number of subjects, it is natural to argue that, since subjects are very numerous and the capacity and time of youth limited, stress must be laid in each case upon those particular subjects which should according to circumstances be most appropriate or useful to the learner in his after-career. In its extreme form this

view tends to the advocacy of something that seems to revive the ancient caste systems of education, of a special sort of education for each order or each of the community that destines the individual members for only one kind of life. In England we still hear, in America we at present hear, fears expressed of an education which will, it is supposed, educate people out of their station or is inappropriate to their class or sex.

Another effect of this kind of thought is the advancing tide of professionalism which threatens to creep over one sphere of education after another. If the best chance of success in the career of manhood is given by the most exact discipline in the subject-matter of that career which can be had in early life, then such discipline cannot be started too soon, and every year given to what used to be regarded as a liberal education may seem to be wasted. The logical conclusion of this manner of argument appears to be that the aim of education is to make of the individual a piece of mechanism, perfect to form some work demanded. The Chinese worker, it is said, is such a dangerous rival of the white man just because his constitution makes him "the perfect complement of the machine, a veritable wheel in the great mechanism of industry."<sup>1</sup> But, fairly faced, this would not truly be admitted as the ideal of the modern educational system. Success may be bought at too dear a price. At one end of the scale, the multi-millionaire who has no interest in life, when once he retires from the stock market, is an unhappy paradox; at the other, the artisan, who does a little less well than the machine and can do nothing else, seems to have been denied some of the rights of his manhood.

As already suggested, the cry for professional or industrial education seems to be even louder and more persistent in the young than in the older countries, and that mainly on account of the common opinion that a young country must pass through a stage in which it devotes its strength to the business of acquiring national prosperity, and that such prosperity is only to be had by complete concentration of the energies from early youth upon the means of seeking it. Criticism of this opinion does not argue that there is no element of truth in it, but is directed to the danger of obliterating the boundary-line between the sphere which professional training should occupy in youth and the sphere of true education. The latter is that discipline, whatever it may be, which calls out to fullest development the human powers. For the application of these powers to some definite sphere of use, some special instruction or discipline may further be necessary, and this is professional or technical training. It is often asked, why should not the two be combined?

---

<sup>1</sup> *The Commons*, Chicago, September, 1905.

Cannot any subject be so treated as to afford the kind of discipline which, whilst it makes the intellect keen and subtle, refines the perceptions and gives firmer grasp to the will and above all a large and lofty view of man's place in the universe, and at the same time furnishes the knowledge and skill required for a special trade or industry? Yes, this ought to be perfectly possible. The reason why the spirit of a liberal education is nevertheless more frequently unreconciled with the drill of a utilitarian education, is that it is the end or ideal which makes the character of the education and that the professional end if it dominates the education from the outset, narrows its scope and dehumanizes it. The Greeks had a word, *Banausia*, to describe the result of the mind forever precluded from the free exercise of its spiritual powers on the larger questions of human interest because of the narrowing effects of a special training begun too soon. The Athenians falsely exaggerated the truth they had perceived in their dismissal of all professional, technical, industrial education as *banausic*, or illiberal. There is small danger that the modern world will fall into the same mistake. In our day it is the upholder of the non-professional branches of education who is more often made to feel that he is unnecessary, that the world has "no use" for him. This is a false exaggeration on the other side, not less fraught with danger. Has not the hour come when modern educators, inheritors of the educational theories of all the ages, coming after the long line of those who have in all civilized nations wrestled with this problem, can harmonize the truth in these two extremes? It would be best with this end in view not to suffer the invasion of the sphere of the first and liberal education by any of the professional disciplines. To give one recent illustration. "We have had a suggestion from local authorities," said Sir William Anson, Vice-president of the Board of Education, (in the course of his speech on proposing the vote for the Educational Grant, in the British House of Commons, August 1st, 1905)<sup>1</sup>, "that they should connect day-training colleges with technical institutes, but we have had to point out that a technical institute, valuable as it is on its own lines, does not give that general education which we think ought to form at any rate a considerable part at present of the work of the training college." Elsewhere in the same speech, he observes, "It is useless for young men or young women to embark on advanced technological study unless they have the rudiments of knowledge necessary to enable them to profit by these studies." Here another point is brought out, namely, that the utilitarian object itself is liable to frustration unless the previous foundation of a more liberal education is laid. In fact,

---

<sup>1</sup> Report of Parliamentary Proceedings. The Times, August 2nd, 1905.

as earlier hinted in this paper, that development of energy in the individual, mental, moral, physical, which a complete education involves, is, probably, an even more essential factor in practical success than any merely technical training, although the latter may be also indispensable for some special industry or profession. It is to be also noted that there is a liability to misconception in the matter of "practical education." No education can be practical in the sense of taking the place of actual experience. Before this test so-called practical education fails, almost equally with the theoretic. The fact that the teacher-in-training is teaching for practice and not professionally, or that the student of engineering is laying down an imaginary railway-line which will never be actualised, removes the spirit of their performance far from that of real professional work. In the realm of education, general or professional, we cannot have the living reality, and it is better not to delude ourselves and our young people into the belief that we can, by hyperboles over the value of a practical training for the fierce competitive struggle of modern life. Nothing can be truly substituted for experience itself in the open fields of life and away from all the schools, however much we might wish to substitute a less ruinously expensive teacher and course of study. After all, a final hope, and no slight one in the preservation of some remains of a liberal education, may be placed in the nature of youth and especially of the child. If the fire-escape of the New York tenement house may be a Jacob's ladder for the child, so may the most exact system of industrial or domestic science training be translated by the unconquerable needs of his forming mind into a liberal education. "We receive but what we give," and the normal child has the indefinite expectation that the future belongs to him and a free choice of occupations in this many-coloured life. For he transforms, after the manner of all poets:

"Wenn die Natur des Fadens ew'ge Länge  
Gleichgültig drehend, auf die Spindel zwingt,  
Wenn aller Wesen unharmon'sche Menge  
Verdriesslich durch einander klingt;  
Wer theilt die fliessend immer gleiche Reihe  
Belebend ab, dass sie sich rhythmisch regt?  
Wer ruft das Einzelne zur allgemeinen Weihe  
Wo es in herrlichen Accorden schlägt?"<sup>1</sup>

<sup>1</sup> *Faust*. (Vorspiel.)

# MAN.

---

## I.

Now let the sun be instant to redress  
Thy hurt, O Soul! while quickening we make  
Past all these islands to the larger lake;  
Where sudden in a windy wilderness  
The stir of dizzy waters shakes the light  
Into a thousand hopes. O heaven of might  
To drown the weary knowledge, and to break  
The acquiescing stupor of distress!

And here, here also, come and blow,  
Ye spirit-cooling breezes! hover  
By banks of rocky indigo  
And crooked cedars leaning over!  
For now the rowan-berry wakes,  
Now, between the tossing lakes,  
Come new whispers to the leaf,  
To the heart a keener air;  
And immortal songs prepare  
In the shades of noble grief;—  
Grief in no private mourning suited,  
But hugely dark, as vastly rooted:  
Anguish for Man, forever thrust  
By impious hands into the mire,—  
The speechless groan  
Of bitter loathing and disgust,  
Knowing the hands that never tire  
Are but his own,—

Endeavour prostrate in the dust,—  
Faith distraught with love and ire  
Hot to levy from her throne  
Ultimate peace, and rule alone  
Man's heart of fire,  
Man's heart of stone!

## II.

But lo! if it were possible to forget  
 Those monstrous folds that strain about us yet  
 Of our own selves the misbegotten woe  
     And pitiless age-long pestilence;  
 Though noon should lavish loveliness, although  
 The soul were utterly drowsed with glutted sense,  
     And every dreaming petal furled;  
 Yet still tempestuous misery shakes the world:  
     The people build on sand;  
     The high things are not scanned;  
     Evil men in darkness trust;  
     Weak men falter and are dust;  
     Innocent sufferers bear the chance  
     Of Time or old inheritance;  
 War besets the nations worn with hate;  
 And war the boasted concord of the state,  
 Where Justice in old garments hides her face,  
 And Liberty on that side, and on this  
 Equality, forget their plighted kiss  
 And seek her separate favours and embrace  
 A cloven glory, a divided grace;  
 And wealth superb or knavish, poverty  
 Helpless or fierce, lay waste the sober fields  
 Of plain men's labour. Order quells her see  
 With heathen hands, or more ignobly yields.  
     All, all is mortified  
     And undetermined dawn;  
     And love is but a fitful tide  
     Still urged and still withdrawn.  
 Still, for the world's corruption, not one soul  
 Hath taintless joy, each festers with the whole —  
 There is no separate life, no sense apart —  
 All have their pulse in one impassioned heart,  
     And each shall feel the poisoned blood,  
     Each give his sorrow to the flood;  
         Whatever self it be,  
         Wherever I or he,  
 In me the kindred sprays are spilt  
 I share the pain and the long troughs of guilt.  
 And while there beats in but one moment's birth

Torture enough to desecrate all earth  
 I cannot wanton in a still retreat,  
 Sooner could I forget these hands and feet;  
 And were I chiefest in the unswerving quest  
 Were I the loftiest, round the loftiest,  
 The shame of all the lowest breathes,  
 The pain of all the saddest wreathes;  
 And though the rapturous diving rills  
 Besought me from the softest hills,  
 Though summer ne'er so rare were set  
 Yet would the memory throb: — But yet  
 O now that it were possible to forget!

### III.

O blest, beside these islands! blest,  
 Floating airily, steeped in rest!  
 Leaning, led from pool to pool  
 By mossy brinks and cedars cool;  
 Watching in the south aloft  
 Over mountains bright and soft,  
 Bright with maple and soft with pine  
 Cloudy haunts of myth recline —  
 Capes and fiords of secret blue;  
 Sun-tipped rivers winding through,  
 Now withheld and now displayed;  
 Meadows, banks of mystic shade  
 In which the birds may dip themselves;  
 Castles hoary and floating elves,  
 Lulled by many a seeming deep  
 Of old enchantment rich with sleep  
 Of a maiden lapped in dreams long since,  
 Waiting now for the lips of a prince,

A touch of light:—

All rudely cleft by a sudden flight  
 Of mocking winds, and quite frayed out  
 Over the hills in a filmy rout.  
 O, cloudy flowers of June, whose touch  
 Ever besought and still returning,  
 Can cool and soothe in heaven so much  
 The heart of all that southern burning,  
 What profits it, when by and by



The breeze that brought your blessing takes?  
 Again the mighty fever wakes;  
 For peace in idle dreams may lie,  
 But fancy breaks  
     What fancy makes,  
 And peace that lives in dreams must die!  
 Leaving a serer waste behind —  
 A scornful soul, a cynic mind,  
 A hot sirocco of derision,  
 The shameless traitor of mankind;  
 Letting the passionate toilers grope  
 Into a sullen hate of hope,  
 Himself consenting to be blind,  
 Who taught in ease might teach the noblest vision  
 That ever heaven revealed to earth,  
 More lovely than the clouds, more constant than their birth.

## IV.

See! since ever time began,  
 The Vision was the path of Man,—  
 The very ocean of his being,—  
 Himself though all uncomprehended;  
 The patient light that needed but his seeing  
 To have forever ended  
 The wrath and tribulation of this vale,  
 Wherein each separate will  
 Pursues his narrow purpose still,  
 And for the one to win the many fail.  
 O, endless mockery of Success!  
 That changes but the face of bitterness!  
 The names and not the numbers of distress!—  
     For you the Vision waits  
 That was uplifted upon Calvary;  
 For you in the division of your hates  
 The last of sorrow hung upon that tree:  
 The last if only ye would turn and see  
 The Body, in whose shadow's form to stand  
 Until the eternal noon of love make one  
 The Shadow and the Substance of the Son,  
 Is but your destiny and His command:—

He, the representative  
 In whom alone can pity give  
 (As though she dried the tears of grace)  
 Her love to them that smite her face.  
 His Comforter is yet within you  
     Daily with more fulfilling power.  
 If ye would hearken, joy would win you  
     Everlastingly that hour:—  
 Joy, that shakes his cramped wing!  
     Joy, impetuous to despise  
 Paltry spirits, libelling  
 The light unseen and not the unseeing eyes!  
     O, teach no more rebellion! teach  
     Liberty, and love to each!  
     And Wisdom, and the Universe;  
     For Nature known could never curse;  
     Nor life be aught but blessing then  
     In a world of sinless men!—  
     The world that yet shall be  
 When we that dally at our duty, we  
 That turn to mockery or despair our sense  
 Of all the foul distraction of offence,  
 Shall shut our eyes to nothing sad nor wrong  
 But bid the heart within it to be strong,  
 As one made infinitely precious  
 Not in himself, but in the whole,  
     That can alone refresh us  
 With draughts of that unwearied Soul  
 Whose labour is our life, whose fullness is our goal.

## V.

Leap, O Winds! exalt your pinions!  
 Come from piny far dominions  
 Where deep scents are strong!  
 And smite us loud and long!  
 For never since your joy began  
 On a sadder string you blew  
 Than the aching heart of Man,  
 But Man with double joy can answer you!  
 All his life to music springs  
 At the sweeping of your wings,

O Harbingers! O Hierarchs!  
 Cleansers of his morbid darks;  
 Calling to the broader flow  
 Of waters where your coursers go;  
 Propheying from the gate  
 Where the mighty spirits wait  
 Heretic to candid Fate:  
 Spirits whose sublimer youth  
 Yet before the world shall close,  
 One with all-achieving truth  
 Shall give the lie to all he knows.  
 Ye, whose messengers are here  
 Ever constant, ever dear,  
 Soothing with a summons, not with rest;  
 Taking not the toil away, but breathing pride into the  
     ardent breast.  
 Now, let shallow doubt be sped!  
 Rouse the ruddy life instead!  
 Call him to immortal war!  
 Sing him of the ancient passion grander, purer than before!  
 All the viking soul within him blown to action, bursting  
     forth  
 To a more imperial hope than ever stung the galleyed North.  
     With a subtler foe to fight,  
 Taunting a diviner answering might,—  
 Thy double immortality, O Man,  
 In whom unfolds the heavenly plan,  
 In whom the ages plot.  
 Yea, now let all things be forgot!—  
 All that fill ignoble tears!  
     O, proclaim  
     The deathless aim  
 That drives the wreckage of the years!  
 Sing the increasing exaltation  
 From generation to generation!  
     Sing aloud  
 Of hope within the fiery cloud!  
 That imperfection is the path  
 Unto the peace perfection hath —  
 A peace by lusty warfare won:  
 No peace that never braved the sun.

Sires, we take the curse ye spread  
 By ignorance and sinning led —  
 The curse ye shouldered from the shores  
 Of ages more infirm than yours!  
 We take the curse, but O, we find  
 The veteran arm, the chastened mind —  
 Accepting to destroy!  
 A sterner struggle dares our powers:  
 'Tis well! — a larger faith is ours  
 And a sublimer joy! —  
 That sees the exultant Cherubim  
 Lowering their flames to Him  
 That made the Garden, Who shall lead  
 Loved and gathered from the gloam  
 All the toiling Adam home,  
 Whole at last, and Man indeed!

## VI.

Then from His breast, the All-holding, All-revealing,  
 In whom all we that nurse our separate woes  
 Are but one anguish, bodied for one healing,  
 Breathe, O Thou Spirit, masterful repose!  
 Such as the Days conspire  
 That brood on starry fire  
 Yet scheme their azure still.  
 Breathe courage that alone can make us free;  
 And labouring faith, Thy patient alchemy  
 Of chaos into all-pervading will.  
 Let him that staggers in the road  
 Accept as though he chose the load!  
 Yea, though ten times most innocent,  
 Let him that suffers be content!  
 He bears what others might have borne  
 Rebellious, impious, and forlorn.  
 He too a warrior is, and he,  
 More greatly conquering though he fall,  
 Can grasp the spears of tyranny  
 And in his bosom hide them all;  
 And hark his comrades through the breach  
 His faith could win, his will could reach.

And evermore and vaster shall arise  
 The visible form of night-begotten Man;  
 Till all the Thought be uttered, and the Word  
 Make one the unheard Music and the heard.  
 But for ourselves that die from span to span,  
 Inevitable Father, Thou art wise!  
 What clouds can keep our spirits from Thine eyes?  
 Our noblest are not perfect, and our worst  
 Are but thine own. They clamoured not for breath,  
 And in their hands is neither life nor death.  
 It is the World that suffers and is curst;  
 And the great World in Thee forgiven, forgives;  
 And in One hope leaves every soul that lives  
 Here or in silence, till the height be won.  
 Ours but to trust Thy purpose, nor the sphere  
 Of bodiless love betimes attempt, for here  
 We have a plainer task beneath a simpler sun;  
 Leaving our separate souls to Thee; content  
 With bourgeoning fellowship, and such a light  
 As prayer can shower, or philosophic sight,  
     Or Art that captures more and more  
     The waftings from that secret shore  
     With colours, preaching forms divine,  
     The aspect true, the flawless line,  
         And ordered music's might,  
     And lyric joy from stately lips,  
     Nay, even the fire that speeds the ships  
     Of commerce with an equal aim,—  
     Such a light and such a flame  
 To lap the world in scapeless government  
 More spiritual ever, less in awe  
 To soulless habit, unillumined law.  
 So towers our ever-widening commonwealth,  
 Arms to the weak, and to the sinning health;  
 Trusting the liberate conscience of mankind,  
 And love that deepens with the broadening mind;  
 Till the whole earth, conforméd to the leaven  
 Of her inherent, underlying heaven,—  
     All beauty crowning one infinity,  
     All life the speech of one Divinity,  
     All thought, all action, all the sum

Of being, in one radiance blest,—  
 A little while shall contemplate  
 The loveliness of her estate  
 Wherein our hills of sorrow have become  
 The gentle pathways of her evening rest;  
 Then, not a voice of all her voices dumb,  
 Leap to the Sovereign Breast!

WARWICK FIELDING CHIPMAN.

# UNIVERSITY PUBLICATIONS, SESSION 1904-1905.

**Books and Papers published by Members of the University Staff  
since the beginning of the last Session.**

*This list does not include non-technical articles published in local journals. A supplementary list  
will be published in the next number of the McGill University Magazine.*

---

## DEPARTMENT OF BOTANY.

PENHALLOW, D. P., D.Sc. A Systematic Study of the Salicaceæ. Amer.  
Nat., Vol. XXXIX, pp. 509-535, No. 464, Aug., 1905; pp. 797-  
838, No. 467, Nov., 1905 (figs.).

## DEPARTMENT OF CHEMISTRY AND MINERALOGY.

HARRINGTON, B. J., M.A., LL.D. On an Interesting Variety of Fetid  
Calcite and the Cause of its Odour. Am. Jour. Sci., New Haven,  
Conn., Vol. XIX, May, 1905.

A Modification of Victor Meyer's Apparatus for the Deter-  
mination of Vapour-Densities. Am. Jour. Sci., New Haven,  
Conn., Vol. XX, Sept., 1905.

On the Composition of some Montreal Minerals. Trans.  
Royal Society of Canada, Ottawa, Vol. XI, 1905. (Read May  
24th, 1905).

Physico-Chemical Researches from the Macdonald Chem-  
istry and Mining Building.

WALKER, J. WALLACE, M.A., Ph.D. 1. Further Proofs of the Higher  
Valency of Oxygen.

2. The Ethereal Salts of the Optically Active Lactic,  
Chloropropionic and Bromopropionic Acids. In association  
with Miss M. Violette Dover, M.Sc.

3. The Electrical Conductivity of Salt Solutions in Aceta-  
mide. In association with Fred. M. G. Johnson, M.Sc.

4. A Quantitative Study of the Interaction of the Alcohols with the Halides of Phosphorus. In association with Fred. M. G. Johnson, M.Sc.

5. The Production of Aliphatic Amines from Ammonia and the Alkyl Halides. In association with Miss Annie MacLeod, M.Sc.

McINTOSH, DOUGLAS, M.A., D.Sc. The Basic Properties and Quadrivalence of Oxygen. Jour. Am. Chem. Soc., Vol. XXVII, Jan., 1905.

The Basic Properties of Oxygen at Low Temperatures. Additive Compounds of the Halogens with Organic Substances containing Oxygen. Trans. Chem. Soc., Vol. LXXXVII, London, 1905.

The Basic Properties of Oxygen: Compounds of Organic Substances containing Oxygen with Nitric, Sulphuric and Chlor-Sulphonic Acids. Jour. Am. Chem. Soc., Vol. XXVII, Aug., 1905.

The Halogen Hydrides as Conducting Solvents. Part I. The Vapour Pressures, Densities, Surface Energies and Viscosities of the Pure Solvents. In association with B. D. Steele, D.Sc.

The Halogen Hydrides as Conducting Solvents. Part II. The Conductivity and Molecular Weights of Dissolved Substances. In association with E. H. Archibald, M.A., Ph.D.

The Halogen Hydrides as Conducting Solvents. Part IV. The Abnormal Variation of Molecular Conductivity, etc. In association with E. H. Archibald, M.A., Ph.D. This, and the preceding parts, in Philosophical Transactions of the Royal Society of London, Series A. Vol. CCV. (Read Feb. 16th, 1905).

EVANS, NEVIL NORTON, M.Sc. Chrysoberyl from Canada. Am. Jour. of Sci., New Haven, Conn. Vol. XIX, April, 1905.

EGLESON, J. C., B.Sc. An Examination of some Canadian Micaceous Minerals. Trans. Royal Society of Canada, Ottawa, 1905.

#### DEPARTMENT OF CLASSICS.

PRINCIPAL PETERSON. The Manuscripts of Cicero's Verrines. Journal of Philology, Cambridge, England.

The Vatican Palimpsest. American Journal of Philology. Various shorter papers in The Classical Review, London.

Canada and her Future, in The Empire and the Century, London. John Murray.



- The Unity of Learning. An Address delivered at the Jubilee of the University of Wisconsin, June 9th, 1904.
- MACNAGHTEN, R. E., M.A. Banking in Ancient Greece. Canadian Banking Magazine, Feb., 1905.
- Imports and Exports. Economic Review, April, 1905.
- Public House Trusts. Canadian Magazine, June, 1905.

DEPARTMENT OF ECONOMICS.

- FLUX, A. W., M.A. Improvements and Rentability. Economic Journal, June, 1905, No. 58, Vol. XV.
- Do Reciprocally Preferential Tariffs tend towards Free Trade? Publications of the American Economic Association. Vol. VI, No. 2, Part I, New York, May, 1905.
- Price Changes and the Cost of Living in the United States. Journal of the Canadian Bankers' Association, Vol. XII, No. 2, Montreal, Jan., 1905.
- Insurance and Speculation. Do. Vol. XII, No. 4, July, 1905.
- The Report of Mr. Chamberlain's Tariff Commission. Do. Vol. XIII, No. 1, Oct., 1905.

DEPARTMENT OF ENGLISH.

- CUNLIFFE, J. W., D.Lit. (Lond.). Gascoigne's Supposes and Jocasta. Heath's Belles Lettres Series, Boston, 1905.

DEPARTMENT OF CIVIL ENGINEERING.

- BOVEY, HENRY T., LL.D., F.R.S. (Eng.). Theory of Structures and Strength of Materials. 4th Edition. Wiley & Sons, New York; Chapman & Hall, Ltd., London.
- MCLEOD, C. H., Ma.E. Text-book on Elementary Descriptive Geometry. Wiley & Sons, New York.
- Record of Difference of Temperature between Mount Royal and McGill Observatory. Communicated to the Royal Society, London; pub. June, 1905.
- OWENS, R. B., M.A., D.Sc. An Electrical Accelerometer. Canadian Society of Civil Engineers, Montreal. (Read, Nov., 1905).
- HERDT, L. A., Ma.E. Electrical Equipment of the Lachine Canal. Canadian Society of Civil Engineers, Montreal. (Read, March, 1904).

## DEPARTMENT OF MINING ENGINEERING.

COLE, L. H., B.Sc. Notes on the Center Star Mine, Rossland, B.C. Can. Society Civil Engineers, 1905. (Students' Prize, Can. Soc. C. E.).

Mine Surveying at the Center Star Mine, Rossland, B.C. Can. Mining Institute, 1905. (Students' Prize, Can. Min. Inst.).

HAMILTON, A. M., B.Sc. Smelting Copper Ores in Reverberatory Furnaces at Anaconda, Montana. Can. Min. Institute, 1905.

MCDUGALL, C. H., B.Sc. The Flue Dust Problem in Copper Smelting. Can. Society Civil Engineers, 1905.

PORTER, J. BONSALE, E. M., Ph.D., D.Sc. A discussion of Methods of Underground Transportation. The Engineering Magazine and Industrial Review, New York, Jan., 1905, Vol. XXVII, No. 4.

The Bearing of Engineering on Mining — a lecture at Kimberly, South Africa, before the British Association. B.A., 1905.

Underground Transportation and Mine Haulage. Engineering Magazine, Jan., 1905.

Mining Teaching and Field Classes. Can. Mining Review, 1905.

## DEPARTMENT OF GEOLOGY.

ADAMS, FRANK D., Ph.D. The Artesian and other Deep Wells on the Island of Montreal. In association with O. E. Leroy, B.A. Report Geological Survey of Canada, Vol. XIV, pp. 74, with three maps and numerous illustrations.

The Artesian and other Deep Wells on the Island of Montreal. Jour. Can. Min. Institute, Vol. VIII, pp. 28 foll.

The Monteregian Hills. A Canadian Petrographical Province. Can. Record of Science, 1905, pp. 47 foll.

Report of a special Committee on the Geology of the Lake Superior Region. In association with C. R. VanHise, *et al.* The Journal of Geology, 1905, pp. 15 foll.

WILSON, ALFRED W. G., M.A., Ph. D. A Forty-Mile Section of the Pleistocene Deposits North of Lake Ontario. Transactions of the Canadian Institute, Toronto, September, 1905, Vol. VIII, Part I.

Physiography of the Archean Areas of Canada. Report of the Eighth International Geographical Congress, held in the United States, 1904, Washington, 1905.

DEPARTMENT OF PHILOSOPHY.

- CALDWELL, W., M.A., D.Sc. Messer's Kants Ethik. Philosophical Review, Vol. XIV.  
Stein's Sociale Frage im Lichte der Philosophie. Philosophical Review, Vol. XIV.
- TAYLOR, A. E., M.A. Truth and Practice. Philosophical Review, Vol. XIV, No. 3, May, 1905.

DEPARTMENT OF PHYSICS.

- BARNES, H. T., D.Sc., F.R.S.C. The Flow of Water through Pipes. Experiments on Stream-line Motion and the Measurement of Critical Velocity. In association with E. G. Coker, M.A., D.Sc. Proceedings of the Royal Society of London.  
The Formation of Anchor Ice and Precise Temperature Measurements. Transactions of the American Society of Mechanical Engineers.  
Molecular Weight Determinations by means of Platinum Thermometers. In association with E. H. Archibald, M.A., Ph.D., and D. McIntosh, A.M., D.Sc. Journal of the American Chemical Society.  
On Frazil Ice. Canadian Engineer.  
Application of the Telephone to Temperature Measurements. In association with H. M. Tory, M.A., D.Sc. Canadian Engineer.  
The Differences in Temperature between the summit of Mount Royal and the McGill Observatory. In association with C. H. McLeod, M.A. Transactions of the Royal Society of Canada.
- BRONSON, H. L., Ph.D. Radio-active Measurements by a Constant Deflection Method. Amer. Jour. Sci., Feb., 1905.  
The effect of Temperature on the Active Deposit of Radium. Amer. Jour. Sci., Sept., 1905.
- EVE, A. S. Comparison of the Ionization produced in Gases by Penetrating Roentgen and Radium Rays. Phil. Mag., 1904.  
Secondary Radiation caused by the  $\beta$  and  $\gamma$ -Rays of Radium. Phil. Mag., Dec., 1904.  
Properties of Radium in Minute Quantities. Phil. Mag., May, 1905.  
The Radio-active Matter present in the Atmosphere. Phil. Mag., July, 1905.  
Infection of Laboratories by Radium. Nature, 1905.

GODLEWSKI, T., Ph.D. Actinium and its Successive Products. Phil. Mag., July, 1905.

Some Radio-active Properties of Uranium. Phil. Mag., July, 1905.

Radiations from Actinium. Phil. Mag., 1905.

RUTHERFORD, E., D.Sc., F.R.S., F.R.S.C. Radio-activity. Second edition, revised and enlarged. The University Press, Cambridge, Oct., 1905.

The Silliman Lectures. A Course of eleven Lectures delivered at Yale University, April, 1905. In course of publication.

Slow Transformation Products of Radium. I. Phil. Mag., Nov., 1904.

Heating Effects of the  $\gamma$ -Rays from Radium. In association with H. T. Barnes, D.Sc. Phil. Mag., May, 1905.

Present Problems in Radio-activity. Address to International Congress of Arts and Science, St. Louis. Pop. Sci. Monthly, May, 1905.

Some Properties of the  $\alpha$  Rays from Radium. Phil. Mag., July, 1905.

The Relative Proportion of Radium and Uranium in Radio-active Minerals. In association with B. B. Boltwood. Phil. Jour. Sci., July, 1905.

Charge carried by the  $\alpha$  and  $\beta$  Rays from Radium. Phil. Mag., Aug., 1905.

Slow Transformation Products of Radium. II. Phil. Mag., Sept., 1905.

#### DEPARTMENT OF ZOOLOGY.

STAFFORD, J., M.A., Ph.D. On the Larva and Spat of the Canadian Oyster. The American Naturalist, Vol. XXXIX, No. 457, Jan., 1905. Ginn & Co., Boston.

Trematodes from Canadian Vertebrates. Zoologischer Anzeiger, Bd. XXVIII, Nos. 21, 22, April, 1905. Engelmann, Leipzig.

#### FACULTY OF LAW.

WALTON, F. W., B.A., LL.B. The Law of the Province of Quebec. (In Burge's Foreign and Colonial Law. In the Press.)

FACULTY OF MEDICINE.

BIRKETT, H. S., M.D. Further Report of Lupus of the Nose and Nasopharynx treated by X-rays. Transactions of the American Laryngological Association, 1905.

Diseases of the Larynx. System of Medicine, by Professor William Osler. (In the Press.)

BLACKADER, A. D., M.D. A Case of Acute Leuhcemia in Childhood. Archives of Pediatrics, November, 1905, and in Vol. XVII of the Transactions of the Climatologists of the Laurentians. American Journal of Tuberculosis, Aug., 1905, and in the Transactions, Vol. XIXII, for the present year.

Recent Views on the Therapeutic Value of Alcohol. Montreal Medical Journal, November, 1905.

BURGESS, THOMAS J. W., M.D., F.R.S.C. Presidential Address. The Insane in Canada. American Journal of Insanity, Vol. LXII, No. 1, July, 1905. The Johns Hopkins Press, Baltimore, Md. Montreal Medical Journal, June, 1905. Medical News, New York, Aug., 1905.

MCCRAE, JOHN, M.B., L.R.C.P., Lond. A Case of Parinaud's Conjunctivitis. In association with J. W. Stirling, M.D. Ophthalmic Review, Oct., 1904.

Pathological Index, No. IV, Montreal General Hospital, January, 1896 to December, 1902. Morton, Phillips & Co., Montreal, 1904.

Two Unusual Occurrences in Typhoid Fever: Acute Encephalitis, and Perforation of the Sigmoid Flexure. Lancet, London, March 18, 1905.

A Case of Multiple Mycotic Aneurysms of the Aorta. Journal of Pathology and Bacteriology. Edin. and London, Vol. X, p. 373, Aug., 1905.

A Case of Congenital Atresia of the Pulmonary Artery, with Transposition of Viscera; a second Case of Transposition. Journal of Anatomy and Physiology, London, Vol. XL, p. 28, 1905.

A Third Case of Transposition of Viscera, and other Autopsy findings. Montreal Medical Journal, August, 1905.

Cancer Statistics of Montreal. Incorporated in Reports of Imperial Cancer Research Fund. No. 2, Part I, London, 1905.

MILLS, WESLEY, M.D., F.R.S.C. On certain Problems of the Nervous System, more especially Nerve Grafting and the Neurone Concept. Montreal Medical Journal, March, 1905.

NICHOLLS, A. G., M.A., M.D. Dwarfism. Reference Handbook of the Medical Sciences. Wm. Wood & Co., New York, Vol. VIII, Appendix.

Gigantism; Reference Handbook of the Medical Sciences. Wm. Wood & Co., New York. Vol, VIII, Appendix.

Otomycosis due to the *Aspergillus Glaucus*. In association with H. S. Birkett, M.D. Montreal Medical Journal, Montreal, May, 1904.

A simple Method of Demonstrating the Presence of Bacteria in the Mesentery of Normal Animals. Journal of Medical Research, Boston, Vol. XI, No. 2, 1904.

On the Nature and Significance of the so-called "Dust-bodies" of the Blood. Transactions of the Royal Society of Canada, July, 1905.