

## SIR J. W. DAWSON



SIR JOHN WILLIAM DAWSON, K. C. M. G., an eminent Canadian scientist and educator, was born Oct. 13, 1820, at Pictou, Nova Scotia, and died at Montreal, Nov. 19, 1899. He was educated chiefly at the grammar school and college at Pictou. From a youth he was especially interested in geology, mineralogy, natural history, and chemistry, and in 1840 went to Edinburgh to complete his training in those sciences. He returned to Nova Scotia in 1847, and in 1855 was appointed principal of McGill University, Montreal, which he succeeded in raising to a high degree of efficiency. He took an active part in the establishment of the Royal Society of Canada. In 1884, he took great interest in promoting the meeting of the British Association at Montreal, and was knighted in recognition of his distinguished services in the cause of science and education. In 1886, he presided over the meeting of the Association in Birmingham. Failing health obliged him to resign his principalship in May, 1893. Among his works are: "Archæia; or, Studies of the Creation in Genesis" (1858); "The Story of Earth and Man" (1872); "The Dawn of Life" (1875); "The Origin of the World" (1877); "Fossil Men" (1878); "Chain of Life in Geological Time" (1880); "Egypt and Syria" (1885); "The Meeting-Place of Geology and History" (1894); and "Fifty Years of Work in Canada" (1901). In geology, Sir William is known as the discoverer of the now celebrated "Eozoon Canadense"—the only animal remains in the Laurentian rocks, which had hitherto been considered Azoic.

### ON THE HIGHER EDUCATION OF WOMEN

FROM LECTURE DELIVERED OCTOBER, 1871, BEFORE THE LADIES' EDUCATIONAL ASSOCIATION, MONTREAL

THE ancient Stoics, who derived much of their philosophy from Egypt and the East, believed in a series of great cosmical periods, at the end of each of which the world and all things therein were burned by fire, but only to reappear in the succeeding age on so precisely the same plan that one of these philosophers is reported to have held that in each succeeding cycle there would be a new Xantippe to scold a new Socrates. I have sometimes thought that this illustration expressed not merely their idea of cosmical revolutions, but also the irrepressible and ever recur-

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ring conflict of the rights and education of women. Notwithstanding all that may be said to the contrary, I believe that Xantippe was as good a wife as Socrates, or any of his contemporary Greeks deserved. She no doubt kept his house in order, prepared his dinners, and attended to his collars and buttons (if he used such things) and probably had a general love and respect for him. But she was quite incapable of seeing any sense or reason in his philosophy, and must have regarded it as a vexatious waste of time, and possibly as a chronic source of impecuniosity in family affairs.

The educated Greek of her day had small respect for woman, and had no idea of any other mission for her than that of being a domestic drudge. No one had ever taught Xantippe philosophy, hence she despised it, and being a woman of character and energy she made herself felt as a thorn in the flesh of her husband and his associates. In this way Xantippe derived from her husband's wisdom only a provocation of her own bad temper, and he lost all the benefits of the loving sympathy of a kindred soul; and thus the best and purest of heathen philosophers found no helpmeet for him.

So Xantippe becomes a specimen of the typical uneducated woman in her relation to the higher departments of learning and human progress. In ordinary circumstances she may be a useful household worker. If emancipated from this she may spread her butterfly wings in thoughtless frivolity, but she treats the higher interests and efforts of humanity with stolid unconcern, or insipid levity, or interferes in them with a capricious and clamorous tyranny. In what she does and in what she leaves undone she is equally a drag on the progress of what is good and noble, and the ally and promoter of what is empty, useless, and wasteful. If the Stoics

anticipated a perpetual succession of such women they might well be hopeless of the destinies of mankind.

But the Stoics wanted that higher light as to the position and destiny of woman which the Gospel has given to us; and it is a relief to turn from their notions to the testimony of the Word of God. The Bible has some solution for each of the difficult problems of human nature, and it has its own theory on the subject of woman's relations to man.

In the old record in Genesis, Adam, the earth-born, finds no helpmeet for him among the creatures, sprung, like himself, from the ground, but he is given that equal helper in the woman made from himself. In this new relation he assumes a new name. He is no longer Adam, the earthy, but Isha, lord of creation, and his wife is Isha,—he the king and she the queen of the world. Thus in Eden there was a perfect unity and equality of man and woman, as both Moses and our Saviour in commenting on this passage indicate,—though Milton, usually so correct as an interpreter of Genesis, seems partially to overlook this. But a day came when Isha in the exercise of her independent judgment was tempted to sin, and tempted her husband in turn.

Then comes a new dispensation of labor and sorrow and subjection, the fruit, not of God's original arrangement, but of man's fall. Simple as a nursery tale, profounder than any philosophy, this is the Bible theory of the subjection of woman, and of that long succession of wrongs, and sufferings, and self-abnegation which have fallen to her lot as the partner of man in the struggle for existence in a sin-cursed world.

But even here there is a gleam of light. The seed of the woman is to bruise the head of the serpent, and Isha receives a new name, Eve, the mother of life. For in her, in every generation, from that of Eve to that of Mary of Bethlehem,

resided the glorious possibility of bringing forth the Deliverer from the evils of the fall. This great prophetic destiny formed the banner of woman's rights, borne aloft over all the generations of the faithful, and rescuing woman from the degradation of heathenism, in which while mythical goddesses were worshipped the real interests of living women were trampled under foot.

The dream of the prophets was at length realized, and in Christianity, for the first time since the gates of Eden closed on fallen man, woman obtained some restoration of her rights. Even here some subjection remains because of present imperfection, but it is lost in the grand status of children of God, shared alike by man and woman; for according to St. Paul, with reference to this divine adoption, there is "neither male nor female."

Our Lord himself has given to the same truth a still higher place, when in answer to the quibble of the Sadducees he uttered the remarkable words, "They who shall be accounted worthy to obtain that world, neither marry nor are given in marriage, for they are equal to the angels."

If both men and women had a higher appreciation of the dignity of their position as children of God; if they would more fully realize that world which was so shadowy to philosophic Sadducee and ritualistic Pharisee, though so real to the mind of Christ, we should have very little disputation about the relative rights here of men or women, and would be more ready to promote every effort, however humble, which may tend to elevate and dignify both. Nor need we fear that we shall ever, by any efforts we can make, approach too near to that likeness to the angels which embraces all that is excellent in intellectual and moral strength, and in exemption from physical evil.

But what bearing has all this on our present object? Much in many ways, but mainly in this, that while it removes the question of the higher training of women altogether from the sphere of the silly and flippant nonsense so often indulged in on the subject, it shows the heaven-born equality of man and woman as alike in the image and likeness of God; the evil origin of the subjection and degradation inflicted on the weaker sex, and the restored position of woman as a child of God under the Gospel, and as an aspirant for an equal standing, not with man only, but with those heavenly hosts which excel in strength.

In this light of the Book of Books, let us proceed to consider some points bearing on our present duty in reference to this great subject.

Only a certain limited proportion of men or women can go on to a higher education, and those who are thus selected are either those who by wealth and social position are enabled to claim this privilege, or those who intend to enter into professions which are believed to demand a larger amount of learning. The question of the higher education of women in any country depends very much on the relative numbers of these classes among men and women, and on the views which may be generally held as to the importance of education for ordinary life, as contrasted with professional life.

Now, in this country the number of young men who receive a higher education merely to fit them for occupying a high social position is very small. The greater number of young men who pass through our colleges do so under the compulsion of a necessity to fit themselves for certain professions. On the other hand, with the exception of those young women who receive an education for the profession

of teaching, the great majority of those who obtain what is regarded as higher culture do so merely as a means of general improvement, and to fit themselves better to take their proper place in society.

Certain curious and important consequences flow from this. An education obtained for practical professional purposes is likely to partake of this character in its nature, and to run in the direction rather of hard utility than of ornament; that which is obtained as a means of rendering its possessor agreeable is likely to be æsthetical in its character, rather than practical or useful.

An education pursued as a means of bread-winning is likely to be sought by the active and ambitious of very various social grades; but that which is thought merely to fit for a certain social position is likely to be sought almost exclusively by those who move in that position. An education intended for recognized practical uses is likely to find public support, and to bear a fair market price; that which is supposed to have a merely conventional value as a branch of refined culture is likely to be at a fancy price. Hence it happens that the young men who receive a higher education, and by means of this attain to positions of responsibility and eminence, are largely drawn from the humbler strata of society, while the young women of those social levels rarely aspire to similar advantages.

On the other hand, while numbers of young men of wealthy families are sent into business with a merely commercial education at a very early age, their sisters are occupied with the pursuit of accomplishments of which their more practical brothers never dream. When to all this is added the frequency and rapidity of changes in social standing in a country like this, it is easy to see that an educational chaos

must result, most amusing to any one who can philosophically contemplate it as an outsider, but most bewildering to those who have any practical concern with it, especially, I should suppose, to careful and thoughtful mothers whose minds are occupied with the connections which their daughters may form and the positions which they may fill in society.

The educational problem which these considerations present admits, I believe, of but two general solutions. If we could involve women in the same necessity for independent exertion and professional work as men, I have no doubt that in the struggle for existence they would secure to themselves an equal, perhaps a greater, share of the more solid kinds of higher education. Some strong-minded women and chivalrous men in our day favor this solution, which has, it must be confessed, some show of reason in older countries, where from unhealthy social conditions great numbers of unmarried women have to contend for their own subsistence.

But it is opposed by all the healthier instincts of our humanity, and in countries like this, where very few women remain unmarried, it would be simply impracticable. A better solution would be to separate, in the case of both sexes, professional from general education and to secure a large amount of the latter of a solid and practical character for both sexes, both for its own sake and because of its beneficial results in the promotion of our well-being, considered as individuals, as well as in our family, social, and professional relations.

This solution also has its difficulties, and it cannot, I fear, ever be fully worked out until either a higher intellectual and moral tone is reached in society, or until nations visit with proper penalties the failure on the part of those who have the means to give to their children the highest attain-

able education, and with this also to provide the funds for educating all those who in the lower schools prove themselves to be possessed of promising abilities. It may be long before such laws can be instituted even in the more advanced communities.

In the meantime, in aid of that higher appreciation of the benefits of education that may supply a better, if necessarily less effectual stimulus, I desire to direct your attention to a few considerations which show that young women,—viewed not as future lawyers, physicians, politicians, or even teachers, but as future wives and mothers,—should enjoy a high and liberal culture, and which may help us to understand the nature and means of such culture.

The first thought that arises on this branch of the subject is that woman was intended as the helpmate of man. And here I may first speak of that kind and loving ministry of woman which renders life sweet and mitigates its pains and sorrows, and which is to be found not solely among the educated and refined, but among the simplest and least cultured,—a true instinct of goodness, needing direction, but native to the heart of woman, in all climes and in all states of civilization.

Yet it is sad to think how much of this holy instinct is lost and wasted through want of knowledge and thought. How often do labor and self-sacrifice become worse than useless because not guided by intelligence; how often an influence that would be omnipotent for good becomes vitiated and debased into a power that enervates and enfeebles the better resolutions of men, and involves them and their purposes in its own inanity and frivolity.

No influence is so powerful for good over young men as that of educated female society. Nothing is so strong to

uphold the energies, or to guide the decisions of the greatest and most useful men as the sympathy and advice of one who can look at affairs from without (from the quiet sanctuary of home), and can bring to bear on them the quick tact and ready resources of a cultivated woman's mind. In this, the loftier sphere of domestic duty, in her companionship and true copartnership with man, woman requires high culture quite as much as if she had, alone and unshielded, to fight the battle of life.

It may be said that, after all, the intelligence of the average woman is quite equal to that of the average man, and that highly educated women would not be appreciated by the half-educated men who perform most of the work of the world. Granting this, it by no means follows that the necessity for the education of women is diminished. Every Xantippe cannot have a Socrates, but every wise and learned woman can find scope for her energies and abilities. If need be she may make something even of a very commonplace man. She can greatly improve even a fool, and can vastly enhance the happiness and usefulness of a good man should she be so fortunate as to find one.

But it is in the maternal relation that the importance of the education of woman appears most clearly. It requires no very extensive study of biography to learn that it is of less consequence to a man what sort of father he may have had than what sort of mother. It is, indeed, a popular impression that the children of clever fathers are likely to exhibit the opposite quality. This I do not believe, except in so far as it results from the fact that men in public positions, or immersed in business are apt to neglect the oversight of their children.

But it is a noteworthy fact that eminent qualities in men

may often be traced to similar qualities in their mothers. Knowledge, it is true, is not hereditary, but high mental qualities are so, and experience and observation seem to prove that the transmission is chiefly through the mother's side. But leaving this physiological view, let us look at the purely educational. Imagine an educated mother training and molding the powers of her children, giving to them in the years of infancy those gentle yet permanent tendencies which are of more account in the formation of character than any subsequent educational influences, selecting for them the best instructors, encouraging and aiding them in their difficulties, rejoicing with them in their successes, able to take an intelligent interest in their progress in literature and science.

How ennobling such an influence, how fruitful of good results, how certain to secure the warm and lasting gratitude of those who have received its benefits when they look back in future life on the paths of wisdom along which they have been led! What a contrast to this is the position of an untaught mother finding her few superficial accomplishments of no use in the work of life, unable wisely to guide the rapidly developing life of her children, bringing them up to repeat her own failures and errors, or perhaps to despise her as ignorant of what they must learn!

Truly, the art and profession of a mother is the noblest and most far-reaching of all, and she who would worthily discharge its duties must be content with no mean preparation. It is worth while also to say here that these duties and responsibilities in the future are not to be measured altogether by those of the past.

Several features of the present movement afford, I think, especial reasons for congratulation. One is, that this is an

association of ladies for educational purposes, originating with ladies, carried on by them, and supported by their contributions. Another is that the movement is self-supporting and not sustained by any extraneous aid. It will I hope attract to itself endowments which may give it a stronger and higher character, but its present position of independence is the best guarantee for this as well as for all other kinds of success. Again, this association embraces nearly all that is elevated in social and educational standing in our city, and has thus the broadest and highest basis that can be attained among us for any effort whatever.

We are not alone nor are we indeed in the van of this great work. I need not speak of the United States, where the magnificent Vassar College (with which the name of one of our excellent and learned women was connected so usefully), Cornell University, the University of Michigan, and others, have marked strongly the popular sentiment as to the education of women.

In Canada itself, Toronto, and even Quebec and Kingston, have preceded us, though I think in the magnitude of our success we may hope to excel them all.

In the mother country the Edinburgh Association—which has afforded us the model for our own—the North of England Educational Council, the Bedford College in London, the Cheltenham College, the Hitchin College, Cambridge (since developed into Girton College), also Newnham College, the Lady Margaret Somerville Halls at Oxford, the Alexandra College in Dublin, are all indications of the intensity and direction of the current.

On the continent of Europe, Sweden has a state college for women; the Victoria Lyceum at Berlin has the patronage of the Princess Royal; the University of Paris has established

classes for ladies; and even St. Petersburg has its university for women.

All these movements have originated not only in our time, but within a few years, and they are evidently the dawn of a new educational era, which, in my judgment, will see as great an advance in the education of our race as that which was inaugurated by the revival of learning and the establishment of universities for men in a previous age. It implies not only the higher education of women, but the elevation, extension, and refinement of the higher education of men. Colleges for women will, as new institutions, be free from many evil traditions which cling about the old seats of learning.

They will start with all the advantages of our modern civilization. They will be animated by the greater refinement, tact, and taste of woman. They will impress many of these features upon our older colleges, with which, I have no doubt, they will become connected under the same university organizations. They will also greatly increase the demand for a higher education among young men.

An Edinburgh professor is reported to have said to some students who asked ignorant questions, "Ask your sisters at home, they can tell you,"—a retort which I imagine few young men would lightly endure.

So soon as young men find that they must attain to higher education before they can take a creditable place in the society of ladies we shall find them respecting science and literature almost as much as money and attaching to the services of the college professor as much importance as to those of their tailor.