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## CANADIAN ILLUSTRATED NEWS.

Montreal Saturday, 17th June, 1876.

### SCIENCE AND RELIGION.

This is the title of an Address delivered at the last Convocation of McGill University by Dr. ALEXANDER JOHNSON, Professor of Mathematics and Natural Philosophy, and published in a neat pamphlet by DAWSON Brothers. We have read it with much interest both on account of the circumstances under which it was given, and because of the deservedly high character of the learned lecturer himself. The Graduates of McGill are doing a wise thing in causing to be published these mature discourses of their professors, thereby laying in a store of local literature which shall in time form one of the most precious treasures of the University. The object of Dr. JOHNSON'S Address is the very natural one, coming from a physicist, of reconciling the theories of TYNDALL with metaphysics and theology, and thereby clearing them of the damaging charge of Atheism. In the performance of this task, he goes over a great deal of interesting ground, but we must own to a feeling of disappointment. The Doctor is by far too modest. He gives us the views of others, already known, whereas we should have much preferred to hear directly from so competent an authority as himself. In two or three places he lays bare the state of the question, but immediately adds that he will elucidate it by citations from prominent writers. By this process, his argument loses that closeness of reasoning and that cogency of conclusion which individual ratiocination would have brought, and when we have finished the whole we ask ourselves where the pith of the final deduction is to be found.

We humbly believe that it is best to view the atomic theory of TYNDALL—for all his views are resolvable into that—squarely in the face. There is nothing alarming in the theory. There is even nothing new in it. Any student of the history of philosophy knows all about the molecules and empty spaces of DEMOCRITUS, the fixed and eternal laws attributed to matter by EPICURUS, and LUCRETIUS' sublimely poetic conception of a plurality of worlds. He is also aware that GIORDANO BRUNO anticipated the theory of Evolution, in the sixteenth century. Why Prof. TYNDALL devotes a large portion of his lectures to a summary of the doctrines of these men, we are at a loss to divine, for their rank materialism will not bear examination, and surely he can have no sympathy with them. Following up the interesting phenomena of natural evolution is one thing. Referring them to a final cause is quite another thing. The first process belongs to the naturalist; the

second to the metaphysician. Atoms exist. They are plastic and multifarious. They produce and are reproduced. But in studying their evolutions we cannot go back and back into the infinite progression which is an absurdity in dialectics. We must at last come to the first atom, the *causa causæ*. There physics end and metaphysics begin. That first cause, the *ultima ratio*, belongs essentially to the spiritual. The material can be created only by the immaterial, the finite by the infinite, the imperfect by the perfect. Existing atoms may be everlasting, as EPICURUS states, that is they may never have an end, but they must have originated from a Cause which is eternal, that is, which had no beginning. These are elementary ontological truths, indeed, but it is because they are elementary that we are astonished to see how generally they are forgotten, and what a stir the implied negation of them makes in the scientific world. GASSENDI, in the 17th century, recognized them when he formally acknowledged that God in the first place produced a definite number of atoms which constituted the seed of all things. DARWIN and MAXWELL follow the same course when they assert that atoms are the prepared materials, "formed by the skill of the Highest" to produce, by their subsequent interaction, all the phenomena of the material world. With this rational and indispensable basis, the atomic theory and its manifold deductions, under various new names, may be a battle against revelation, but not against reason, and, as such, can well demand that fair field and no favour which Prof. TYNDALL so eloquently claims for them. The Professor himself evidently takes this view, as is clear from his attacks on the theologians, both in the way of historical allusion and open defiance. But even here, he should be followed with caution. Theology does not rest wholly for its conclusions on revealed truths or the interpretation of Scriptures. It ought and does rest mainly on reason and irrefragable ratiocination. Philosophy is the hand-maid of theology, and its noblest flights of analysis or synthesis are those which are applied to the elucidation of dogmas and mysteries. It follows, therefore, that the physicist or the naturalist must not blindly array himself against theology, as such, whenever it applies its lens to the examination of new scientific discoveries. Give both sides a fair chance. Surely if DARWIN and TYNDALL consider themselves competent to discuss theology, TOLEMI and MOGNO may prove themselves able to investigate the natural sciences.

Prof. HUXLEY is fairer and more discriminate than his colleague. In treating the delicate and interesting Cartesian question—whether animals are automata—he calls philosophy "the mother of all sciences," and admits that there are problems which cannot be solved by physical science, as such, but must come within the scope of philosophic decision. All he asks is that logical consequences, whatever they are, should be honestly accepted. Every conscientious, unbigoted student will agree with him there, because, as he ably states, logical consequences, while they are the scarecrows of fools, are the beacons of wise men. Following these principles, the Professor has discussed the question of animal automata in a manner quite satisfactory to the searcher after truth.

The untrammelled liberty of scientific inquiry, which both TYNDALL and HUXLEY contend for, should and must be granted. The *ultima theologorum* is not quenched, but it is gradually melting into something like forbearance. The fires which burned around the manacled BRUNO, at Venice, are dead forever. Religion, properly understood, has nothing to fear from science. Every discovery in the ether above, in the rocks beneath, in the living organisms on earth; every new fact connected with the smallest beast, bird, insect, fish, leaf, flower and shell adds not only substantial strength and logical completeness, but also authentic fulness and moral beauty to the argument which religion has built up in honour of the great First Cause.

### HOW TAXES MAY PAY THEMSELVES.

As things now look it seems as if this country would become one more vast grazing ground to grow beef and butter for the wealthy manufacturers and artisans of the United States.

It is a strange law that the easier and the more intellectual work is, the better it is paid. We know of a lawyer who earned \$500 in seven hours in the amusing pastime of getting an innocent man condemned to the penitentiary. How long would it take a farmer to toil and toil to earn that sum? A journeyman watchmaker can earn \$4 a day and have plenty of energy, when his short working day is over, to read and improve himself. The farm labourer has to sweat from dawn to dark, till he is too used up even to glance over a newspaper, for a hundred cents.

The question is, are we, as a nation, to let others do all the easy work and get the large pay, or are we to do it ourselves?

Manufactured goods can be sent long distances for a trifling percentage of their value. Farm produce is often worth, at the market, double of what the poor man gets who grows it. Is Canada to have a home market, or is it to send its butter and cheese long distances to compete with what is made on the spot?

There is another consideration. Gardening is light pleasant work. The produce of a rood of garden fetches often tenfold more than an acre of farm-land. Now without a large body of artisans in a place, there is comparatively no market for "garden-sauce." Are we to let our southern neighbours do all the gardening, while we Canadians all fall back on the dull profitless work of the plough and the hoe?

All we can manufacture we should manufacture. Protection, not Prohibition, should be our motto. The wise government of a struggling infant nation should see what it is naturally adapted to make. For instance, with unlimited water-power, with myriads of men wanting employment, we can make cloth as cheaply as the next man. Let us carefully see what duty on cloth is necessary to enable our mills barely to compete with foreign makers. If it be a high rate of duty, it is evident that our country is unfitted for cloth making, and the article may be admitted free. But if not, why not let our farmers have the profit of supplying food to thousands of artisans working at high wages? One mill at Sherbrooke paid \$50,000 cash a year in wages. The bulk of this found its way to the pockets of the farmers. It increased the value of every farm in the neighbourhood. A stone quarry a month old at Grande Ligne paid \$1,400 one day last week, in wages. The proprietor was offered all the stone he could quarry free, if he would move this well-spring of wealth just across the Lines, into the States.

We do not advocate that our manufacturers should have a monopoly. We ask that they should have just such protection as will enable them to manufacture at all. The money the consumer thus pays for the imported article, of which, through the vagaries of taste, he is sure to use a good deal, will pay the expenses of the country, which he has to pay anyhow. If the duty required be excessive, let us give up the idea of manufacturing that speciality.

If we do not impose these duties what will be the result? We must have the goods, and when our neighbours find we have no means of turning out a given article before a certain time for ourselves, they have had plenty of practise in forming rings to run up the price.

Our farmers may well beware lest after the States have killed the home market for their products, by every trick of drawbacks and bounties, they may lay a heavier duty on butter and cheese when imported from Canada, in which case, instead of the struggle for a comfortable livelihood which they have at present, they will find themselves involved in a desperate struggle for bare subsistence.

As it is, instead of being protected from our neighbours, there is not even the first

element of a fairness in our relations to them. They can rush in their dead stock almost free, and sell it at cost price, and kill Canadian manufacturers with a few sharp blows, while the high duties, made still higher by every trick of misinterpretation of the letter of the law, entirely shut us out from their markets. Like rival traders we should at least deal with them on the terms on which they decide to deal with us.

The remedy for our commercial depression is obvious. Let us see what we can manufacture, and raise our necessary revenue by duties just as low as will possibly enable us to manufacture it. Admit all else free to the immense and clear gain of the consumer.

Otherwise, like the Jebusites of old, we shall be mere hewers of wood and drawers of water to alien lords and masters.

### ENGLAND AND THE EAST.

Some surprise has been expressed that England peremptorily refuses to be a consenting party to the tripartite convention, held at Berlin, by Germany, Russia and Austria in reference to the Turkish question. But the wonder must cease when the nature of that convention is properly understood. When questioned in Parliament, Mr. DISRAELI and Lord PRIME could naturally not go into particulars, but the *Times* came to the rescue in an article which for the fullness of its details might almost be taken as coming from official sources. The "dispositions described by Count ANDRASSY"—that is to say, the dispositions of the three Northern Powers towards harmony and a common policy—are, the *Times* says, "simply a diplomatic fiction. The unity, the pacific manifestations, and the conciliatory overtures, are all external and conventional. Behind and below them are the real forces which will suddenly dissipate all the pretences of the hour. The three Powers are ostensibly united, and will probably remain so, but it will be by all of them adopting one of two conflicting policies represented respectively by Russia and Austria." How essentially the present is but a "passing phase of the negotiations" will be shown, we are told, "by a retrospect of the Conference," and such a retrospect, which up to the present would have been a mere looking back upon the closed doors of a council chamber, the *Times* has now apparently been placed in a position to make with much more advantage. It states positively that "Count ANDRASSY went to Berlin pledged and resolved to oppose to the utmost the plans which were supposed to find favour with the Russian statesmen." It "need hardly be said that the plans originating with the Russian Chancery and with the Russian Embassy at Constantinople tended to more or less radical changes, beginning with a virtual tutelage of the Turkish Empire and ending with its dismemberment." This was firmly opposed by the Austrian Minister, who found, it is said, a supporter in the Czar himself, who "was unwilling to urge a policy objected to by Austria, and possibly doubted the expediency of hurrying events forward towards a goal to which they were of themselves tending." Germany, again, leaned towards the Austrian views, and the upshot was an agreement that the original project of Count ANDRASSY should remain the basis as before, and that "the purport of this second scheme"—that is, the scheme formulated in the memorandum in which England has refused to concur—"should be the finding of guarantees for the execution of the reforms," or, in other words, "for giving the ANDRASSY Note a practical effect." But the more energetic policy, we are told, though defeated on the main plan of action, triumphed upon the settlement of the details of the plan actually adopted. The new scheme proposed, though Austrian in principle, is Russian in detail. The proposal of "a lengthened armistice to be imposed on the Sultan's generals and a mixed Commission to administer one of his provinces have more of the spirit of Gortschakoff or Ignatieff than of an Austrian or a British Minister."