

## SIR WILLIAM DAWSON ON EVOLUTION.

At the recent meeting of the British Association at Birmingham, Sir William Dawson, in his presidential address, made a pronouncement with regard to evolution which may be taken as a partial acceptance of that theory. He said: "Lastly, these twenty-one years have been characterised by the 'coming of age' of that great system of philosophy with which the names of three Englishmen, Darwin, Spencer, and Wallace, are associated as its founders. Whatever opinions one may entertain as to the sufficiency and finality of this philosophy, there can be no question as to its influence on scientific thought. On the one hand, it is inaccurate to compare it with so entirely different things as the discovery of the chemical elements, and of the law of gravitation; on the other, it is scarcely fair to characterise it as a mere 'confused development' of the mind of the age."

Sir William Dawson has probably been the most eminent scientist, of late, opposed to the theory of evolution. He has attacked it from the theological as well as from the scientific standpoint, and has repeatedly affirmed that he considered the theory inconsistent with revealed religion. His present attitude should be welcome to every evolutionist. It can hardly be claimed by the most advanced advocate of the theory, and Darwin himself did not claim for it, that it was as firmly established as the law of gravitation. But on the other hand, it might be possible to point out the analogy between the state of the theory as Darwin left it, and the state of the atomic theory (so intimately connected with the discovery of the chemical elements) as John Dalton left it. The atomic theory has undergone a wonderful development since the days of Dalton; but its most advanced advocate, the late M. Wurtz, did not claim that it was as fully established in its present state as the law of gravitation. Yet from its first inception by Dalton in 1808 until the present time, the atomic theory has been the instrument of progress in almost every advance which has been made in chemical science. It has been, in fact, a working theory. The same might be claimed of the theory of evolution. Imperfect as its present state may be, it has, in the hands of Huxley, Mivart, Haeckel, and others, produced unquestionably great results in biological science, and should therefore command a reasonable degree of assent.

Sir William Dawson's pronouncement, however, will probably come as a shock to many in the religious world who have looked upon him as the champion of orthodoxy against what has been supposed to be the materialistic tendency of evolution. Changes of base in the scientific, as well as in the political, world should be followed by explanations, and I submit that a "History of An Idea" is in order from Sir William Dawson. A statement of the "conditions" under which the theory of evolution might be favourably looked upon, from so eminent a scientist, would undoubtedly be valuable to evolutionist and Christian alike. J. C. SUTHERLAND.

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## NOTES FROM THE CONTINENT.

At what age does memory with an infant commence to be fixed? At the age of three, the souvenirs of the first two years dwindle to unconsciousness. Now, to know man, it is necessary to study the child. The period between three and seven years, M. Perez regards as that where the intellectual development of an infant is most continuous, and where the evolution is most marked. It is then that the blood is driven in rapid and abundant currents to the brain, to feed and form the growing connections. It is the age most favourable to the registration of perceptions, of emotions, and of simple judgments. At three years the infant hardly remembers things which have occurred within the last eight or ten months; or at least they rarely float in the flux and reflux of superior reminiscences. At least, we can discover no trace of the impressions of that tender age in those writers who have narrated their childhood. Rousseau confesses his inability to recall what he did farther back than when five or six years old; he knew not how he learned to read; they were the impressions of his reading that he could only bring to his mind, and it was about the same time that commenced, and continued, the consciousness of self. Jules Valles, Daudet, and other modern writers who have treated of their infancy do not relate any of its incidents.

M. Ribot states that often in cases of great mental excitement the memory of adults will summon up circumstances dating from their early youth. Instances have occurred where a child remembers a circumstance happening when aged only two, failing to recall what took place at four years old. Every one can test that it is easier to evoke souvenirs of events which occurred in early childhood—three to seven—at twenty-five to thirty years of age, than when only ten or fifteen. It is by noting the differences in the retentive faculty—which, according to Bain, is at its

maximum between six and eleven years—that the educationist can measure the dose of knowledge to administer to youth, and thus place instruction on a rational basis.

FRANCE had eleven "National" exhibitions, between the first in 1798, with one hundred and eleven exhibitors, and the last, in 1849, with 4,532. The Prince Consort originated the idea of the "International" show, and and Sir Joseph Paxton gave it a glass home in 1851 at London. France copied this in 1855, with her first Universal Exhibition, and 24,000 exhibitors; this was succeeded by the World's Fairs of 1867 and 1878; the latter with 53,000 exhibitors. To these may be added the decided-upon Centennial Exhibition for 1889.

The Directory, in 1798, in its plan of an exhibition of national products, ranked it as merely a "spectacle of a new kind." It was a sort of pendant to the fête organised in 1798, to welcome the reception of the artistic spoils that General Bonaparte carried away as the sequence of his Italian campaign, which art treasures France had to return to their rightful owners by the Treaty of Vienna. The practical business proposition of focussing specimens of the nation's industry, for the first time—and on the Champ de Mars too, that "fair green" of Parisians, was due to a poet—François de Neufchâteau. He urged that an appeal be made to all the useful arts which contribute to the prosperity of the nation, which nourish man, which minister to all his wants, and which aid his natural faculties by the invention and employment of machines—those arts in a word, which form the bond of society, which are the soul of commerce and agriculture, and the most fruitful source of riches and joys.

The Exhibition nearly collapsed, owing to the refusal of England to make peace. The English Government was consequently roundly abused for "conspiring against French liberty and the whole world." The Directory publicly announced its revenge on England for disturbing the Festival of Peace. An army was enrolled to invade Great Britain; Napoleon, who had just arrived in Paris, was nominated to its command, but he preferred to wound England through India, by annexing Egypt, and making the valley of the Nile the headquarters for his invasion of the East. In due time the effervescence calmed down, to take an industrial revenge on the British.

The Exhibition building in the Champs de Mars was an amphitheatre, enclosed by a square frame of wooden pillars. The exhibits were to be French, and the best of their kind. Admission was free. The inauguration took place on the *première sans-culottide*. When the jury had indicated the model exhibits, the latter were collected into a special space called the "Temple of Industry." In this holiest of holies an orchestra executed the choicest symphonies, while at the same time the porticoes of the building were illuminated. The names of the prize-winners were announced between salutes of artillery. The bouquet of the ceremony consisted in the bombardment of a big ship, symbolizing England, with grenades and Greek fire thrown down from balloons. Further, in the officially reserved places no individual was allowed to enter, unless clad in home manufactures. It is thus that appeared nankeen—then for the first time manufactured in France—jackets and pantaloons to match.

There were only one hundred and eleven exhibitors, representing sixteen out of the eighty-eight departments; and, like all subsequent shows, the building was not completed on the day of inauguration. The Exhibition appeared to realize what the decree of Turgot, of 1776, laid down in principle—emancipation of work; that is, the liberty to sell. Since two centuries, the tailors were divided into Montague and Capulet guilds, respecting the vending of old and new clothing; the shoemakers, relative to new and cast-off shoes; the publishers' apple of discord was over selling second-hand volumes; the locksmiths, because not allowed to make the nails required for their own use. Many inventions and improvements in the arts and industry date from this first national exhibition, and that, the jury declared, fully justified "the envy and jealousy of rivals." The successful exhibitors received silver medals, and the *industriel* whose business inflicted the most fatal blow to any English manufactures, was rewarded with a gold medal. *Tempora mutantur!*

NAVY-LIEUTENANT GOUIN estimates the total population of Tonkin at ten millions, and the area of the delta at eight thousand square miles; the base of the delta is one hundred miles wide and fifty from base to apex. Oyster fishing is original: two men in a small boat stop in the middle of the river, where the water is frequently thirty-three feet deep. They throw overboard a large stone attached to a rope; one of the men glides down this rope—in a few seconds he arrives at the bottom and detaches the oysters. Then he chucks a line communicating with his comrade in the boat, who pulls up the half-asphyxiated diver and his finds. The "natives" thus dredged sell at one or two sous per dozen!