

A French *savant* has propounded a theory that coal was originally a liquid generated by the decomposition of inferior vegetation in an atmosphere highly charged with carbonic acid. The carbon of the jelly-like mass thus formed, after passing through various transformations into asphalt, petroleum, bitumen, &c., finally assumed the form of coal. The author cites various facts, connected with the occurrence of coal, which, he thinks, are better explained on his theory than by the usual one.

It has been maliciously said that Volapuk is already a dead language. It is, on the contrary, making rapid progress as an international speech. Two hundred of its adherents lately lined together in Paris; and now Herr Alfred Kirchoff, of the University of Halle, has compiled and published an elaborate guide to the language. Herr Kirchoff, in this volume, gives us some specimens of Volapuk rhyme, from which we extract a verse:—

abofub of botell lejonik e yuuk,  
palofob ta of pul lanimalik a stunk,  
akutol plu ka balena in flenug,  
binom—Volapuk.

The words do not look very harmonious. They contain an allusion to an old kind of universal language, and may be translated as follows:—

I once loved a maiden, a marvel to see;  
And she in turn was devoted to me;  
Of kissing her lips I contracted a trick—  
Twas my Volapuk.

### TRUE EVOLUTION.

We are all more or less wedded to our opinions, and strongly imbued with the idea that our methods are the best that can be adopted, and this, too, notwithstanding the fact that we have to almost daily admit that our opinions are liable to be changed by altered circumstances, and our methods superseded by those that are more scientific. When the youthful Victoria ascended the throne, her subjects believed that they were living in one of the most enlightened ages of the world, compared with which the time of the Restoration appeared dark indeed; but if the Victorian era commenced so auspiciously, what shall be said of it after fifty years have recorded the advance of the times? Fifty years ago, Astronomy, the first born of the sciences, had achieved a grand position; it was then thought that the universe was within our grasp, and that the further development of the science was in a measure limited. To-day, with a clearer conception of the laws which govern the universe, with a more correct knowledge of the relative position of the solar systems, with photography lending its aid to facilitate investigation, and with the knowledge that the aggregate information with respect to astronomy that can now be obtained is many times as great as that which was accessible to our forefathers; we, nevertheless, realize that this eldest brother among the sciences is still an infant in arms, and that with his childhood, youth and manhood will come revelations which will startle mankind, rudely upsetting our preconceived opinions, and strongly shaking our belief in everything except the great Creator Himself.

But what shall we say of Geology, that master of sciences, which, dealing with things terrestrial, appeals to our sensibilities even more strongly than does the universe without? Fifty years ago, we had but scratched the surface of our planet. We knew but little of the great cosmical truths which its upturned crust has since revealed; and we were ready to fight with prejudice the deductions which savants sought to draw from the discoveries they had made in the bowels of the earth. The half century which marks the Victorian era marks a great forward step in science—a material advancement in art, and a complete revolution in thought and methods. This is evolution in its true sense. It is not the evolution of Darwin, which would fain obliterate the great First Cause, but it is the evolution of progress, guided and directed by an all-wise Providence, an evolution which is beautifully exemplified in the formation of planets and stars from nebulae, to which our attention was first directed by Kant and Laplace. Their nebular theory is now accepted by all intellectual men; and the evolution which here takes place is but an illustration of that law of growth and progress which applies alike to science, art, and manufactures, material, prosperity and human thought. We should then firmly grasp the idea that evolution is compatible with unchanging opinions and cast iron methods, and that conservatism in these respects is but a losing battle against progress and improvement.

### THE GULF OF ST. LAWRENCE.

The *Proceedings of the Nova Scotia Institute of Natural Science for 1885-6* contain a Paper by Mr. J. J. Fox, which, though read as long ago as May, 1886, has, so far as we are aware, not been particularly noticed by the press. Mr. Fox, writing from the standpoint of thirty years' experience and observation as chief officer of Customs at the Magdalen Islands, has comprehended his subject in a manner which renders his article well worthy of serious attention.

The subject to which he more particularly directs attention, is that of the currents of the Gulf, which he states to be to some extent variable, about which a general ignorance prevails among navigators, and which are almost annually, more or less fatal to shipping. Mr. Fox points out that forty years have elapsed since the last survey of the Gulf was made by officers of the British navy; that their observations were then confined more to the above tides than to midchannel currents, and that though some additions have been made, the basis is the old survey.

The principal currents noted by Mr. Fox are the following:—

1. A branch of the Polar current setting in a southwesterly direction through the Straits of Belle-Isle,

2. A dangerous current setting into the Gulf from the Atlantic Ocean between the Newfoundland and Nova Scotia coasts, which often proves fatal to ships about Cape Race. This current, after passing Cape Ray, is traversed obliquely by the Polar current first named, which itself, after passing the south-east end of the Magdalens, divides, one portion swerving up the Gulf towards the Bay of Chaleur, round the North Cape of Prince Edward's Island and through the Straits of Northumberland, towards the Gut of Canso. The other portion flows round the East Cape of Prince Edward Island, meets the former, turns south-easterly, and along the coast of Nova Scotia, and out of the Gulf between Capes North and Ray to the ocean.

3. A strong river current sets outwardly through each channel formed by the Islands of Anticosti, especially in the spring. The Polar current through the Straits of Belle-Isle strikes the northernmost of these obliquely, and causes eddies and counter-currents, which often bring vessels on the Anticosti coast. The southernmost of these currents flows south-easterly so strongly that it is sometimes felt below the Magdalen Islands.

4. The water of the Polar current first named having its temperature sometimes heightened by south-west winds, occasionally creates a surface current to the north-east, the colder current below setting in the opposite direction.

During the summer solstice, when the Gulf water attains a high temperature, surface currents are controlled by the winds, the cold Polar-current sinking below. Most of the currents are thus influenced by various agencies, such as winds, specific gravity, changes of atmosphere and equilibrium. Mr. Fox, therefore, has full reason to urge the necessity of renewed and more frequent observation, and of fuller published information than is at present available to navigators. He dwells on these points in the interests of the great traffic annually carried on by the "large fleet of magnificent steam and sailing ships laden with costly merchandize, and thousands of lives, and the heavy losses annually incurred through the ignorance of navigators of the force and direction of the currents crossing their tracks, which, they assert, are not laid down in their charts or sailing directions."

"As Mr. Fox justly observes, "every ship is a national loss, and falls upon the community." It would, therefore, seem to be quite time for a fresh scientific survey, the importance and necessity of which should be urged upon the Dominion Government by those of the Maritime Provinces, in order that, if necessary, the Imperial Government may be moved to direct an Admiralty survey on a scale which would ensure the speediest results consistent with accuracy.

### PROFESSOR GOLDWIN SMITH.

Dr. Goldwin Smith has a somewhat unique record. Possessed of great literary ability, and a consummate knowledge of history, he has yet essayed no work which will inscribe his name on the roll of great historians. In his own department he does not stand on a level with Freeman, Green, or even with Froude, whom indeed he is every now and then impelled to attack in a manner which excites a suspicion of jealousy. One might almost be tempted to the conjecture, so erratic as an Oxford magnate has been his course, that a consciousness of not being in the first rank at home, may have engendered the idea of expatriation to parts where, at all events, the role of a "triton among minnows" is not difficult.

Yet this is perhaps too hard a thing to say, for Mr. Smith's talents are of a high order, and Canada owes to him the highest effort in the way of journalism she has yet been able to produce.

The truth would seem to be, that Mr. Smith's mind is of that kind which is prone to too nice a balancing of pros and cons, and is unable, as such minds always are, to seize and hold fast to a bold political idea. Hence a good deal of wavering and inconsistency. We discern a curious mixture of leanings to republicanism, mixed with a clinging to more aristocratic historical associations—a strong admiration of the States, and a strong deprecation of Home Rule. Such mixed feelings as these are not by any means of their own nature necessarily inconsistent with each other, but in Mr. Goldwin Smith they combine with other indications to convey an impression of inability which we regret to see borne out by quotations recently given in one of our daily contemporaries from two speeches recently delivered by him.

If there is one thing more than another in which Mr. Smith has shown consistency, it is in depreciating Canadian nationality, decrying the C. P. R., which has accomplished it, and insisting on geographical versus political deliberations. Yet, like Mr. Gladstone, it seems that he is, even here, not incapable of moulding his utterances to the tendencies of his audience for the time being. Speaking at the Toronto Board of Trade meeting in May last, to a body of men, pro-British and Canadian in their feelings, Mr. Smith said:—

"He did not believe that annexation would follow from commercial union, but on the other hand he felt that Canadian nationality would be safer under it than by having our present relationship to the States continued. As far as annexation was concerned, he abhorred the word."

At Detroit, on the 27th August, speaking to an assemblage of Michiganders, hungry for Canada's trade, he told quite a different story. He is thus reported:—

"Some parties in Canada, he continued, were afraid of commercial union, because they were afraid of annexation. 'I believe,' said the professor, 'that annexation would be best for both countries. I believe it is bound to come.' It was not possible in this era of civilization to keep apart two peoples so much alike as these. Their manifest destiny was to come together, and commercial union was but a step, though a large step to that end."

This sort of blowing hot and cold does not tend to increase consideration for a gentleman in many other respects highly worthy of it.