

let me say there should be no wall of partition between science, strictly so-called, and speculative philosophy. I am sure you will be inclined to agree with me when I say that one of the dangers of our modern science, arising from its very vitality and spirit and energy and growth, is the tendency to let speculation outrun knowledge. But the remedy for this is not to bar the way against abstract speculation of any kind, not to forbid or ostracise it in our halls of science, but rather to encourage it, and to remind scientific men, to remind ourselves, and to remind the world, that after all our discoveries how very little our knowledge is; and where science has discovered this she will recognise her proper sphere, and philosophy will be chastened and subdued."

Lord Beaconsfield uttered an opinion, at a banquet held at Glasgow, as to the share which science has had, during the present century, in moulding the world. Speaking of the last fifty years, he said: "How much has happened in these fifty years?—a period more remarkable than any, I will venture to say, in the annals of mankind. I am not thinking of the rise and fall of empires, the change of dynasties, the establishment of governments. I am thinking of those revolutions of science which have had much more effect than any political causes, which have changed the position and prospects of mankind more than all the conquests, and all the codes, and all the legislators that ever lived."

DIFFERENCE OF THE SCIENCES.—The sciences differ only in their matter, or the nature of their truths. In the physical sciences the relations we trace are uniform. Polarity, or turning towards the north, is a universal property of the magnet. But in those sciences in which we have to deal with the powers of living bodies, or mental operations, the true relations are not only difficult to discover, but even after we know them we may frequently be disappointed in the result we wish to produce. New causes sometimes intervene which sometimes elude observation. The constitutions and habits of human beings are different. A motive which influences one person fails to influence another. But by extensive observation we can trace a remarkable uniformity in the great operations of nature. The changes of the moon seem to be irregular to one whose observation is limited. Human life is *uncertain* as regards individuals, but *certain* as regards a number. Men, too, are possessed of certain uniform principles, which can be acted upon by certain moral truths, when they are brought into circumstances necessary for the due operation of those truths.

THE BRAIN OF AN ANTHROPOLOGIST.

M. Asseline, aged forty-nine, belonged to a "society for mutual autopsy," and the examination of his brain was made by his bereaved *cosociétaires*, who were prepared to find in it all the commonly received external indications of a highly refined and intellectual nature. He had been a republican and a materialist; possessed enormous capacity for work, great faculty of mental assimilation, and an extraordinary retentive memory; had a gentle, kindly disposition, keen susceptibilities, refined taste, and subtle wit. As a writer he had always displayed great learning, unusual force of style and elegance of diction; and in his intercourse with others he had been unassuming, sensitive, and even timid. But "the autopsy showed," says *Nature*, "such coarseness and thickness of the convolutions that M. Broc presumed them to be characteristic of an inferior brain. The fossæ or depressions regarded by Gratiolet as of a simian character and as a sign of cerebral inferiority, which are often found in women, and in some men of undoubted intellectual inferiority, were very much marked, especially on the left parieto-occipital. But the cranial bones were at some points so thin as to be translucent; the cerebral depressions were deeply marked, the frontal suture was not wholly ossified, a decided degree of asymmetry was manifested in the greater prominence of the right frontal, while, moreover, the brain weighed 1,468 grammes—i.e., about sixty grams above the average given by M. Broca for M. Asseline's age." The report was made by M. Thulié to the Paris Anthropological Society, of which the deceased M. Asseline was a member.

ANTI-VACCINATION FOLLY.

The coming of an English gentleman, with a craze against vaccination as a preventive of smallpox, has been made the occasion of an attempt to stir up opposition to the practices of our American physicians and boards of health in this connection. By parading a portentous array of figures to show that vaccination does not prevent smallpox and does entail a vast amount

of disease through blood contamination, not a little feeling is aroused, especially among the ignorant; the anti-vaccination spirit prevailing in English and other European circles, embracing no inconsiderable body of the more intelligent classes, being urged as a reasonable ground for similar opposition here.

Those who have echoed the anti-vaccination cry, however, do not appear to be familiar with the circumstance that, owing to radically different methods of obtaining and using the vaccine virus here and in Europe, no argument based on European results can have any application here. The adverse statistics derived from European experience, or from American experience previous to the adoption by our physicians of correct methods and uncontaminated virus, may all be strictly true, and doubtless are substantially true; yet our confidence in proper vaccination need not be shaken in the least. Accordingly our European friends, instead of trying to propagate their notions here, would do much better to study the methods employed in this country and try them at home. Vaccine virus, not contaminated and stripped of its virtue by over-humanization—that is, by repeated transmission from man to man—is both free from risks and of certain efficacy. No better proof of this fact is required than the practical stamping out of smallpox in this great city. In view of the fact that by the general adoption of correct vaccination, smallpox, but lately one of the worst of human scourges, has been so thoroughly brought under subjection in this great city, that with 1,100,000 inhabitants there were last year but fourteen cases of the disease, it is manifestly as unwise as it is absurd for our newspapers to lend themselves to the propagation of anti-vaccination nonsense.

REPLANTING TEETH.—G. W. Weld, dental surgeon, recently read before the First District Dental Society of New York a paper on the subject of replanting teeth. The root of the tooth is first extracted and the decayed portion cut squarely off at or directly under the margin of the gum. A porcelain crown with a tapering screw made of platinum and iridium, which had been securely *baked* in the center perfectly paralled with its length, is then firmly screwed into the pulp-canal of the root, the nerve having first been removed and the canal enlarged by reaming out with an engine-reamer. To facilitate the introduction of the screw, a preparatory thread is cut in the root with a tap. This process establishes a very strong attachment between the natural root and the porcelain crown, and with the additional aid of cement in the canal, it is made perfect. When this operation is completed (which requires from 15 to 20 minutes) the socket is syringed out with tepid water, and the root with the new crown attached is gently but firmly pressed into its original position. Perfect reattachment ensues in from two to four weeks. There is seldom any pain attending the operation, and very little inflammation.

BLOOD OF THE LOBSTER.—Harless found copper in the blood of crustaceans, cephalopods and gasteropods. It has long been known that the blood of these three groups of invertebrates changes its color when it is exposed to the air. Jolyet and Regard concluded that the blood of the crab contains two coloring substances, one blue and the other red. The first is united with albumen, which, when coagulated by alcohol, has a clear blue tint; the red dye remains in solution in the alcoholic filtrate. Leon Fredericq finds the same principles in the blood of the lobster, but the red contains no metal; it does not change color in oxygen or in a vacuum; it is not always present. The blue seems to be identical with hemocyanine and contains copper. The saline portion of the blood has a composition almost identical with that of the water in which the lobster lives. The hemocyanine easily unites and parts with oxygen and thus acts as a stimulant to respiration, the nutritive functions of the blood being confined to plasma.—*Bull. de l'Acad. Roy. de Belgique.*

ANOTHER CURE FOR SEA-SICKNESS.—A writer, Mr. Chapham, says in the London *Lancet* that nitrite of amyl is a sure cure for sea-sickness. "With due attention to details the drug is curative in at least 90% of all cases treated." He directs that not more than three drops be taken at a time, inhaled from a handkerchief held close to the nose. It should not be used except under medical advice. The patient when under this treatment should lie in bed, because a good sleep is generally the first result, from which the person awakes wanting to eat. It is usually better to allow one fit of vomiting to occur before the treatment is commenced, "to insure the *bona fide* character of the seizure." Some, however, do not vomit at all, but are very ill, and with these Mr. Chapham considers the nitrate equally successful.