

Allow me now, sir, to remind you of the following lines, which occur in p. 301 of the same number of the *Journal of Mental Science*: "Galileo was morally a representative of his age, deficient in native firmness of character, as Scarpa has clearly shown, conceited but without personal dignity, he combated the malignant baseness of his enemies by subterfuge and pusillanimity . . . What was persecuted in Galileo, what was attempted to be stifled with terror, was not so much an astronomical hypothesis as the liberty of scientific investigation; and what Galileo has especially upheld, when defending Copernicus and himself, is the right of science to develop itself in all the plenitude of its independence."

The medical man who, in all his writings, has upheld the unalienable rights of humanity and science, would rather a thousand times have closed his house than commit an act for which his conscience would reproach him.

Accept, sir, and honoured *confrère*, the assurance of my distinguished sentiments.

A. BRIERRE DE BOISMONT.

We gladly publish M. Brierre de Boismont's explanatory letter. The facts he refutes were quoted, as will be seen by reference to the "Occasional Note" in question, from a curious paper in the "Cornhill Magazine" for June. We must, however, adhere to our statement (which M. Brierre de Boismont leaves unnoticed, except by implication) that we have been informed on undoubted authority, such as M. Brierre de Boismont could not question, that the second Empire—as did the first, according to the writer in the "Cornhill"—frequently sends noisy political adversaries for temporary treatment in the Bicêtre. Difficulties have arisen, as he can easily inform himself, with the physicians of that asylum and the Minister of the Interior on this very question.

VITAL AND COSMICAL FORCE.

To the Editors of the Journal of Mental Science.

GENTLEMEN,

I noticed in your issue for July a short but clever critique of a recent paper of mine on the above subject, in which I attempt to show that there is no occult principle present in vital phenomena, but that the problem of sensation and self-motion is one entirely for natural science and rational inquiry.

Aware, as you are, that I have advocated this view for at least twenty years past, I hope that however much you may distrust my data and inferences, you will yet, for the sake of fair play and an open field to consistent scientific convictions, however unpopular, and opposed alike to the current vulgar superstitions of civilised Europe and the pedantry of savans and systems, not shrink from the responsibility of giving insertion to the following brief elucidatory remarks from my own hand in the forthcoming number of the *Journal of Mental Science*.

My argument is that vital action is electrical—using the term electricity as one of the modes of physical force—the correlative of light, heat, and attraction. The rationale of this hypothesis becomes quite apparent if we assume (the grounds for which are detailed further on) that oxygen gas—the element alike essential for respiration and combustion—can exist in the "capillaries," where the ultimate processes of vitality are effected, as an imponderable ether. By this assumption we get rid entirely of dualism in the seemingly double, but really single, kingdom of animate and inanimate creation.

This postulate seems self evident. If oxygen gas (fire air or vital air) be capillary force, which is merely another name for animal function, the entire phenomena of the cosmos, including sensation and voluntary motion, are seen to have for their factor the self-same universal principle, only under different conditions of activity. In other words the distinction between the personal, indivi-

dual, or subjective on the one hand, and the impersonal or objective on the other—the ego and non-ego of German ontology is an artificial, not a natural one, and all supernaturalism is resolved into the same confusion of subject and object—the mistake of a defectively analytic mind, incapable of grasping the whole truth of the question, as is the source of the delusion in the case of the astronomer in Rasselas.

To myself this central fact has appeared for more than twenty years past to supply the solution, in a natural sense, of all mysticism and transcendentalism, and completely to rehabilitate common sense and right reason, all that transcends ordinary familiar experience being merely organic derangement—centric or eccentric—of the sensorium commune. Without such a synthesis, establishing a physical basis of life on a certain and intelligibly datum, the healing art as applicable either to mind or body, one and indivisible, can never become a science, but must continue to occupy its present equivocal and empirical position, which is the same as that of natural philosophy or chemistry, anterior to the generalizations of Newton and Lavoisier.

My reason for assuming that oxygen can exist both as a gas and member of the group of correlative forces rests on the fact of having exalted the function of the vagus nerve by water, applied as in the water cure, and of having suspended the same by ammonia. My inference from these symptoms is that oxygen, necessarily reduced to a condition of infinitesimal volume and gravity to be capable of operating in infinitesimal spaces like the ultimate parenchyma of tissue, is the factor in innervation, and knowing, as we have long done, that the oxygen of the arterial blood is essential to all animal function whatever, we thus get rid entirely of any separate nerve force, and may regard all vital force as identical, its manifestations only differing according to differing histological characteristics.

All objections broached by physicists or biologists against the electrical nature of innervation, founded on the alleged comparative velocities of nerve force and electricity, or whatever else, a good *resumé* of which, under four categories, is contained in the article "Physiology," of the last edition of the Encyclopedia Britannica, seem removed by this unification of nerve force and all other animal force. Mind, on this hypothesis, becomes merely the "propre vie," or special function of certain portions, which it is not part of my thesis to specialize—of the encephalon, an organic process, exactly like those of other viscera.

I cannot, for the life of me, see anything but the prejudice of foregone conclusions and vain pretensions in the objections to hylozoism, from which, under the term materialism, men seem to shrink with horror. "Immaterialism"—the existence of "spirit," in any other than in its etymological and Sadducean sense—as held by theology, and inculcated at Exeter in the harangue of the present President of the British Association for the Advancement of Science, appears to me coherently unthinkable. To pretend that the material structure is not the human being himself, mind and body, seems fatal to all rational knowledge, and brands, medicine, and your specialism in particular, with the stamp of indelible imposture. As far as sublimity goes, the idea that living creatures, with all their potentialities of feeling and motion, are of the same substance as the fixed stars—one with the eternal entities pervading all space and all immensity, co-extensive therefore with the "flamantia mœnia mundi," seems to dwarf all the visionary, hap-hazard speculations of poetry and religion.

We must of course give up *in toto* the notion of the soul's immortality, the idea of an actual eternity of individual self-consciousness, posthumous, as well as antenatal, becoming a mere nursery tale; but we have the sense of it in virtue of the identity of constitution that exists between our sentient organs and the rest of the cosmos—in every pulse beat—and surely, as Dr. Johnson says, of free will, that ought to be enough.

Time and eternity, space and immensity, are not two, but one; and the feeling of infinity, of which our brains are susceptible while organised, is just as grand as—and a great deal more comfortable—than the anticipation of its actual pos-

session. Properly speaking a perpetual sense of endlessness is equivalent practically to its real fruition.

I may add that my view of the internal constitution of water derives corroboration from the demonstrations of Faraday and Becquerel, as to the enormous amount of electricity contained in every grain of that fluid, equal to a tremendous thunder clap. I have always contended that if oxygen gas could be liquefied it would be found to be water, and this opinion has also been given by Mr. Wilde as the result of chemical experiments, detailed at great length in the *Philosophical Magazine*, for August, 1868.

I think, however, that the subject is one, not for chemists, but physiologists, especially for those who bring enlarged scientific views to bear upon the functions, healthy and morbid, of the brain and nervous system.

Believe me,

Sincerely yours,

R. LEWINS, M.D.

Army and Navy Club,
3rd, September, 1869.

We gladly make room for Dr. Lewins' letter, as we feel the subject on which he writes to be one of great interest and importance; but we cannot help saying that we do "distrust his data and inferences," because he has not given us sufficient details to judge of the former, and because the latter are opposed to the whole tendency of modern physics. It is true that a great deal of evidence—not noticed by Dr. Lewins—has been accumulating for some time to prove that all the various forces of matter, which we have looked upon as correlated, are merely modes of local movement, as affected by the intimate arrangement of the atoms of bodies. But this in no way weakens—it rather strengthens—our belief, that matter and force are in themselves distinct and irreducible. The desire to comprehend under one all-embracing principle has been felt by some of the greatest thinkers, and Dr. Lewins need not be ashamed of following in the footsteps of Kant. But the world is not now governed by authority, and he will find it difficult to get his opinions adopted, unless he can adduce more evidence in favour of his fundamental principles, and can connect these more closely with his inferences than he has yet done.

J. R. G.

Appointments.

J. C. COMPSON, M.D., has been appointed Assistant Medical Officer to the Leicestershire and Rutlandshire Lunatic Asylum, Leicester.

J. E. M. FINCH, M.B., has been appointed Resident Medical Superintendent of the new Leicester Borough Lunatic Asylum.

H. C. GILL, M.R.C.S.E., Assistant Medical Officer to the Nottingham County and Borough Lunatic Asylum, has been appointed Assistant Medical Officer to the North Riding Asylum, Clifton, Yorkshire.

R. GREEN, M.R.C.S., has been appointed Assistant Surgeon to the Northumberland Pauper Lunatic Asylum, Morpeth.

J. K. MACONCHY, M.B., has been appointed Visiting Medical Officer of the County Down Lunatic Asylum.

ALEXANDER REID, M.B. Aberd., has been appointed Assistant Medical Officer to the Royal Lunatic Asylum, Aberdeen.

JOSEPH HUME SMITH, M.B., has been appointed Assistant Medical Officer to the Nottingham County and Borough Lunatic Asylum.

H. G. WALKER, M.D., has been appointed Assistant Medical Officer to the Dorset County Lunatic Asylum, Dorchester.