

none to oppose him,—when he can wipe his sword, and settle down to civil life, having “fought a good fight.”

The Rev. Joseph Cook was, in all probability, a want supplied to the orthodox at the right instant. The moment the claims of this David became known, the faithful of all denominations flocked to his standard at once with the natural impulse of drowning men striving to grasp the proverbial straw, to keep themselves on the surface an instant longer. Whether it be really better than a straw that they are grasping at remains to be seen. In the meantime they are exultingly ranged under their leader's banner, fancying in their infatuation, that he is rapidly clearing the horizon of the scum who have actually had the audacity to formulate conclusions based upon their laborious discoveries in the world of nature, which are at variance with the recognised dogmas of Christian Theology. Since the Rev. Joseph Cook has attained this position among the orthodox, he is entitled to some degree of attention by virtue of the position in itself. Let us see how he stands the very moderate test applied to him in the current number of the “Popular Science Monthly.” No one who knows the careful and painstaking as well as conscientious character of the worthy Editor of that periodical, will scarcely care to carp at the decision he has arrived at, especially as he has made the ground which the Rev. Joseph Cook's book covers; particularly his own.

The standard by which the “Popular Science Monthly” proposes to test Mr. Cook's performance is simply “common morality.” So low is this level, that we are disposed to call it a sarcasm, but a little patience assures us that the critic was quite right in making common morality the test, and if the standard be a sarcasm blame Mr. Cook but not his critic, who was forced to adopt it. At the outset, in his book on Biology, Mr. Cook gives an account of an examination made by Mr. Huxley of a substance brought up from the sea bottom. “In 1868,” says the Reverend Biologist, “Prof. Huxley, in an elaborate paper in the “Microscopical Journal,” announced his belief that the gelatinous substance found in the ooze of the beds of the deep seas is a sheet of living matter extending around the globe.” To this statement the “Popular Science Monthly” retorts as follows: “We have carefully read that article, and have found no such statement and nothing equivalent to it, there.” Now Mr. Cook: “To this amazingly strategic and haughtily trumpeted substance found at the lowest bottoms of the oceans, Huxley gave the scientific name Bathybius, from two Greek words, meaning *deep* and *sea*, and assumed that it was in the past, and would be in the future, the progenitor of all the life on the planet.” The “Popular Science Monthly” answers: “It is not true that, in the article cited by Mr. Cook, Prof. Huxley made any such assumption as is alleged, any more than it is true that the word Bathybius has the derivation here assigned to it. This characterization of the announcement of Bathybius is simply a slanderous misrepresentation. * * * Nothing could be more false, as we shall presently show, than the impression conveyed by this language.”

The ground taken here by the Reviewer is of a decidedly unmistakable character, and could only be justified by the most absolute proof that Mr. Cook had really vilified Prof. Huxley regarding his position towards Bathybius. If he has done so, however, then the low test has failed, and the orthodox party who have received him with such unbounded applause, will sooner or later have the melancholy duty of retracting what they have said, and of shrinking within themselves with shame at having so recklessly put trust in a leader so untrustworthy and unscrupulous. Let us see what the “Popular Science Monthly” has to put forth in vindication of the strong language used towards Mr. Cook. It begins by briefly glancing at the history of the substance, in which it appears that Prof. Huxley did not at first adopt the view he afterwards was led to take. His language in the original report published in 1858, and quoted by the reviewer is as follows: “I find in almost all these deposits a multitude of very curious rounded bodies, to all appearance consisting of several concentric layers surrounding a minute, clear centre, and looking, at first sight, somewhat like single cells of the plant *protococcus*; as these bodies, however, are rapidly and completely dissolved by dilute acids, they cannot be organic, and I will, for convenience sake, simply call them *coccoliths*.” However, this was not the end of the matter, Professor Huxley was led to reconsider the subject by some observations made by Messrs. Wallick and Sorby, and giving it a prolonged study with higher microscopic powers, he arrived at the result “that the minute microscopic objects belonged to the lowest forms of the living world.” The passages in the “Microscopical Journal” of 1868, in which his conclusions are stated, and quoted in the “Popular Science Monthly,” are as follows:—“Such, so far as I have been able to determine them, are the facts of structure to be observed in the gelatinous matter of the Atlantic mud, and in the *coccoliths* and *coccospheres*. I have hitherto said nothing about their meaning, as, in an inquiry so difficult and fraught with interest as this, it seems in the highest degree important to keep the questions of fact and the questions of interpretation well apart.”

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“I conceive that the granule-heaps and the transparent gelatinous matter, in which they are imbedded, represent masses of protoplasm. Take away the cysts which characterize the *radiolaria*, and the dead sperozoom would very nearly resemble one of the masses of this deep sea *Urschleim*, which must, I think, be regarded as a new form of those simple animated beings which have recently been so well described by Haeckel, in his ‘Monographic der Moneren.’ I propose to confer upon this new monera the generic name of Bathybius, and to call it after the eminent Professor of Zoölogy in the University of Jena, B. Haeckelü.”

This modest and somewhat cautious statement, according to the reviewer, is the whole announcement of Bathybius; and if so, and we have no reason whatever for doubting it, it establishes beyond question the validity of his epithet as applied to Mr. Cook. The shining honesty beyond everything we would expect from a clergyman who had gone out of his usual sphere to expose the rottenness in the scientific world, is in this matter, conspicuous by its absence. The charlatanism of his pretensions, and the rottenness in his own purpose is all that he has succeeded in establishing by that departure, and the orthodox will gradually awake to the realization that far from putting the hosts of the Philistines to discomfiture and flight, the measure of the Rev. Joseph Cook's success has been disreputable to himself, and not less so to the partizans who have so readily been swindled by his conclusions.

R. W. DOUGLAS.

A MODERN ‘SYMPOSIUM.’

THE SOUL AND FUTURE LIFE.

Mr. Harrison is of opinion that the difference between Christians and himself on this question of the soul and the future life ‘turns altogether on habits of thought.’ What appears to the Positivist flimsy will, he says, seems to the Christian sublime, and *vice versa*, ‘simply because our minds have been trained in different logical methods,’ and this apparently because Positivism ‘pretends to no other basis than positive knowledge and scientific logic.’ But if this is so, it is not, I think, quite consistent to conclude, as he does, that ‘it is idle to dispute about our respective logical methods, or to put this or that habit of mind in a combat with that.’ As to the combatants this may be true. But it surely is not idle, but very much to the purpose, for the information of those judges to whom the very act of publication appeals, to discuss habits and methods on which, it is declared, the difference altogether turns.

I note therefore *in limine* what, as I go on, I shall have occasion to illustrate, one or two differences between the methods of Mr. Harrison and those in which I have been trained.

I have been taught to consider that certain words or ideas represent what are called by logicians substances, by Mr. Harrison, I think, entities, and by others, as the case may be, persons, beings, objects, or articles. Such are air, earth, men, horses, chairs, and tables. Their peculiarity is that they have each of them a separate, independent, substantive existence. They *are*.

There are other words or ideas which do not represent existing things, but qualities, relations, consequences, processes, or occurrences, like victory, virtue, life, order, or destruction, which do but belong to substances, or result from them without any distinct existence of their own. A thing signified by a word of the former class cannot possibly be identical or even homogeneous with a thing signified by a word of the second class. A fiddle is not only a different thing from a tune, but it belongs to another and totally distinct order of ideas. To this distinction the English mind at some period of its history must have been imperfectly alive. If a Greek confounded *κρίσις* with *κρίμα*, an act with a thing, it was the fault of the individual. But the English language, instead of precluding such a confusion, almost, one would say, labours to propagate it. Such words as ‘building,’ ‘announcement,’ ‘preparation,’ or ‘power,’ are equally available to signify either the act of construction or an edifice—either the act of proclaiming or a placard—either the act of preparing, or a surgical specimen—either the ability to do something, or the being in which that ability resides. Such imperfections of language infuse themselves into thought. And I venture to think that the slight superciliousness with which Mr. Harrison treats the doctrines which such persons as myself entertain respecting the soul is in some degree due to the fact that positive ‘habits of thought’ and ‘logical methods’ do not recognise so completely as ours the distinction which I have described as that between a fiddle and a tune.

Again, my own habit of mind is to distinguish more pointedly than Mr. Harrison does between a unit and a complex whole. When I speak of an act of individual will, I seem to myself to speak of an indivisible act proceeding from a single being. The unity is not merely in my mode of representation, but in the thing signified. If I speak of an act of the national will—say a determination to declare war—I speak of the concurrence of a number of individual wills, each acting for itself, and under an infinite variety of influences, but so related to each other and so acting in concert that it is convenient to represent them under the aggregate term ‘nation.’ I use a term which signifies unity of being, but I really mean nothing more than co-operation, or correlated action and feeling. So, when I speak of the happiness of humanity, I mean nothing whatever but a number of particular happinesses of individual persons. Humanity is not a unit, but a word which enables me to bring a number of units under view at once. In the case of material objects, I apprehend, unity is simply relative and artificial—a grain of corn is a unit relatively to a bushel and an aggregate relatively to an atom. But I, believing myself to be a spiritual being, call myself actually and without metaphor—one.

Mr. Harrison, who acknowledges the existence of no being but matter, appears either to deny the existence of any real unity whatever, or to ascribe that real unity to an aggregate of things or beings who resemble each other, like the members of the human race, or co-operate towards a common result, like the parts of a picture, a melody, or the human frame, and which may thus be conveniently viewed in combination, and represented by a single word or phrase.

I think that the little which I have to say will be the clearer for these preliminary protests.

The questions in hand relate first to the claim of the soul of man to be treated as an existing thing not bound by the laws of matter; secondly, to the immortality of that existing thing.

The claim of the soul to be considered as an existing and immaterial being presents itself to my mind as follows:

My positive experience informs me of one thing percipient—myself; and of a multitude of things perceptible—perceptible, that is, not by way of consciousness, as I am to myself, but by way of impression on other things—capable of making themselves felt through the channels and organs of sensation. These things thus perceptible constitute the material world.

I take no account of percipients other than myself, for I can only conjecture about them what I know about myself. I take no account of things neither percipient nor perceptible, for it is impossible to do so. I know of nothing outside me of which I can say it is at once percipient and perceptible. But I inquire whether I am myself so—whether the existing being to which my sense of identity refers, in which my sensations reside, and which for these two reasons I call ‘myself,’ is capable also of being perceived by beings outside myself, as the material world is perceived by me.

I first observe that things perceptible comprise not only objects, but instruments and media of perception—an immense variety of contrivances, natural or artificial, for transmitting information to the sensitive being. Such are telescopes, microscopes, ear-trumpets, the atmosphere, and various other media which, if not at present the objects of direct sensation, may conceivably become so—and such, above all, are various parts of the human body—the lenses which collect