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JOURNAL OF  
THE TRANSACTIONS  
OF  
The Victoria Institute,  
OR  
Philosophical Society of Great Britain.

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EDITED BY THE HONORARY SECRETARY,  
CAPT. F. W. H. PETRIE, F.R.S.L., &c.

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VOL. XI.



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## ORDINARY MEETING, 17th JANUARY, 1876.

H. CADMAN JONES, ESQ., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following election was announced :—

ASSOCIATE :—E. Beacham, Esq.

Also the presentation of the following Works to the Library :—

“Proceedings of the Royal Geographical Society,” Part 1, Vol. XX.

*From the Society.*

“Molecules and Atoms.” By J. G. McVicar, D.D. *The Author.*

“The London Quarterly Review.” *A. McArthur, Esq. M.P.*

The following paper was then read by the author :—

ON THE SCIENTIFIC CONCLUSIONS AND THEOLOGICAL INFERENCES OF A WORK ENTITLED  
 “THE UNSEEN UNIVERSE, OR PHYSICAL SPECULATIONS ON A FUTURE STATE.”—By the Rev.  
 PREBENDARY IRONS, D.D., Bampton Lecturer for 1870,  
 Rector of St. Mary Woolnoth, London.

## OUTLINE OF THE ARGUMENT, &amp;c.

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1. THE Book recently published, entitled "The Unseen Universe," is a defence, on the ground of the "Principle of Continuity," (p. 209) of the possibility of a Physical Immortality for man. It has been received, as Professor Clifford observes, with strange eagerness by some religious persons, who evidently betray their need of scientific assurance that faith in a future life is not quite impossible. But we may notice, on the other hand, that there are men of science who on this occasion have shown an unbalanced temper, and who regard the eminent authors of this religious and scientific volume with feelings of scarcely-veiled resentment, or even with the *animus* betrayed at times by conspirators in assailing those who turn "king's evidence." Such excitement on either side is scarcely creditable, if indeed it be not childish. That must be a feeble faith in a future which is suspended, as supposed, on verdicts of physical science; and that a very faint love of truth which is angry at an honest statement of facts.

*Fortnightly Review*, June 1, 1875.  
See also "Appendix" to this paper.

The reception of this book by the public.

2. But this either "religious" or "scientific" flutter which has been stirred by "The Unseen Universe," is by no means the only phenomenon to be observed in connection with its appearance. Some of the readers of the book assume a mental attitude, even less to be admired than Professor Clifford's, or his theological friends', and, as if they were yet more forgetful of what is due both to truth and faith, declare themselves profoundly "grateful" to the distinguished authors for openly saying what (it must be presumed) those writers know or believe to be scientifically true. The Senior Wrangler, and others of perhaps equal fame, to whom the work has been popularly

Unworthy in many quarters. assigned, will be little flattered by such adherents ; any more than by others who have tenderly welcomed them as hopeful converts to the true faith.

Not a few readers have, further, discovered with some *naïveté*, that the whole scientific statement takes them by surprise, and, with a mingled ingenuousness and knowingness scarcely compatible, advise religious people at once "to look into the subject," as it is really "worth attention." Perhaps, however, the most offensive coterie of "critics" is that which would jocosely treat the book as a kind of enigma, and smile at its "subtilities," and pretend they "cannot understand," while, taking it as half-religious and half-sceptical, they distantly applaud.

3. But, notwithstanding the various ways in which it has been received, it is no fault of the writers. If ever book were plainly written, this is the book. Its great plainness, and the method to be adopted respecting it. If the unworthy religious reception of it in some quarters wrung from the authors at last, in the "Third Preface," the bitter and scarcely consistent words (p. vii.), that they "do not covet the title of theologians of any kind," the so-called "theologians" have chiefly themselves to blame; though, on the other hand, the authors, (p. xv.) in their first Preface, and elsewhere (p. 61, &c.) complained beforehand of "the orthodox," in the too usual fashion. Or again, if Professor Clifford's attack, from a scientific point of view, has subjected him to some deserved rebuke, he might have prevented it by dealing logically, instead of jauntily, with the subject, and remembering, as our authors say (p. 42), "that men of science must be perfectly recipient, though guarded, in the interests of truth." A book like this eminently demands fair treatment. The upright course to adopt in reference to any competent work submitted to analysis is (at least for the sake of those who read rapidly and loosely), to give such a description of its contents as the authors themselves would allow to be just; and then apply our best attention and method in testing the religious or scientific conclusions, so far as we question them. Such, at least, is the twofold course which (without assuming deep scientific or religious knowledge in all our readers), we are about to adopt in this address.

The seven-fold division of the volume. 4. The book is in seven chapters, and the attempt to condense it into an hour's reading, and at all comment on it, will perhaps need forbearance on the part of some whose attention we yet would claim.

## PART I.

## CHAPTER I.

THE First Chapter at once announces the Religious object of the writers. They are going to compare certain facts of historical, religious, and moral experience, with the most recent or accepted ascertainments of physical Science; and especially to trace certain consequences of its all pervading "Principle of Continuity," too little observed (p. xvi.).

The thesis of their first chapter is that "the great mass of mankind have always believed, in some fashion, in the Immortality of the Soul." The general belief in Immortality.

This general but undefined belief (pp. 1, 2) is disturbed by an active, intelligent, and virtuous minority, said to be now on the increase. It is worth while inquiring, say our authors, why some scientific men, who swell this minority, seem prone at times (p. 2) to deny that immortality, which is so naturally received by mankind at large that we can hardly conceive of society going on at all without some such belief. Is there anything in Science, or in its admitted conclusions, which leads to a denial of human Immortality?—Our authors think not (p. 2).

5. The facts both religious and scientific, and the broad religious fact in the first place, must here be looked at. The expectation of a Future Life, whether popularly or philosophically expressed—(and this seems insufficiently distinguished),—is an unquestionable phenomenon of human experience. A brief historical *resumé* will suffice to show this. Our authors, therefore, in very simple outline, put rapidly before us the old Religions from the earliest times, all, of course, implying a future life or unseen world of some kind. The history of religion till the birth of Christ. Those of the Egyptians, the Hebrews, the Greeks, and the Romans; those also of the Hindoos in their many varieties, are glanced at; those of the Persians, too, and others allied with them.

According to some, it would seem that Future Existence is regarded as shadowy; and, according to others, it is substantial. A third class of opinion—(pp. 4, &c., to pp. 22, &c.)—stands in doubt as to *man's* personal share in the assumed future. If, *i.e.*, a future world there be, yet still some other unseen beings may inhabit it, such as "angels," which are believed by almost all, though invisible to us, to exist as agents both of

good and evil. Theories of their relation to man are at times met with; and expectations of judgment to come are often connected with them. A doctrine also of man's ultimate personal annihilation in a remote future is (somewhat inconsistently perhaps), prevalent in certain civilizations, and, still more, a belief in transmigration of souls, which is apparently regarded by our writers with more favour.—(p. 23).

6. As to some "Unseen Universe," there thus has been almost a *consensus* of belief. People who had been doubtful of their own attainment of life hereafter, still had held that there were "immortals," who even might communicate with earth.

In fact, this particular expectation of some Divine communication from the Unseen was very keen, and widely spread among civilized nations at the time of the birth of Christ (p. 24). At this point, then, our authors leave the pre-Christian ages; and they pursue their subject into Christian times, in the following way:—

The coming and the teaching of the great Christian Master marks an epoch in the history of belief in a Future Life. His followers connected His alleged Resurrection from the dead with man's rising hereafter to a bodily future of a much more definite kind than had hitherto been professed by any philosophy. Yet the future "bodiliness" which was thus taught did not altogether reproduce that which we recognize in the present life. It was termed a "spiritual bodiliness,"\* and was not unlike that which was attributed by the Jews "to angels." Christ's descriptions of it † meant to be such, no doubt, as the national and local traditions would assimilate. Heaven, or the immediate "paradise" of souls at least, was "Abraham's bosom"; and "Hades" was a "place of torment" ‡ (*Βάσανος*) for some, and "repose" (*παράκλησις*) for others. Gehenna was so called, as if a "valley of Hinnom,"—the place outside Jerusalem for putrefaction and fires, with rites of lamentation.§

7. No doubt the value of this teaching would depend on the person and authority of the teacher; and here new inquiries arise, since a great difference of opinion prevailed, even among Christ's own followers, as to His Person and His exact position. (This our authors slightly describe, p. 28.) Apparently during His life, His own relation to the Universe and its laws, so far as commonly known at this time, was similar to ours:

\* 1 Cor. xv. 44.

† St. Mark xii. 25.

‡ St. Luke xvi. *ad fin.*

§ St. Matt. v. 29; viii. 12.

yet that it was not altogether the same, His followers before long began to perceive. As there was very soon a variety of opinion, so, as time went on, it continued, wherever His teaching became known, whether among the cultivated or uncultivated. And this diversity was specially influential on the idea of the kind of hereafter which was looked for by Christ's disciples (p. 31). The educated might naturally be affected (some ardently, some more dimly) by the elevated hope of "being for ever with their Divine Lord," and being "like Him as He is"; while others would be awed into a yet distincter faith of a certain kind, by the possibilities set before them of a perdition of the most fearful and explicit description, which was assigned to unbelief in Christ.

The belief was much influenced by the ideas entertained as to Christ's person.

A somewhat undefined, but sublime, view of the Christian future (in connection with an advancing definitiveness of expression as to the Person of Christ), was thus generally prevalent in the world for three or four centuries,—say up to the times of Constantine, and perhaps in the age that followed; but a preciser doctrine as to our hereafter seemed henceforth to take hold more and more distinctly on the Western mind, in proportion as the unsettlement of earthly civilization unhinged men, and the fall of the Roman empire became imminent. But, meanwhile, the East had, in this matter, a new destiny before it.

Course of thought in the West.

8. Another religious system, involving a different doctrine of the future life, rose suddenly in the seventh century, and swept over the whole sphere of Oriental Christianity (p. 32). The prophet of Arabia, borrowing from the most realistic forms of natural faith, gave a bodily glow to his heaven and hell, exceeding in distinctness all that had been thus far accepted. Heaven to Mahomet was a "paradise" of intense earthly delights, and hell was delineated for the unbelievers in all the imagery of physical terror typified by the old Jewish "Gehenna"; of which, in less detail, early Christianity had made use.

Mahomet and his views of the future life.

Subsequent to the rise of Mahometanism, the physical developments of the hereafter became much more distinct among Christians, though accompanied by some speculations of an alleviating character. The certain Future Judgment of souls, and therefore the personal sameness of men at that judgment, now gave new prominence to the somewhat undeveloped thought of Bodily Resurrection.

(See the *Church of All Ages*, p. 373. Hayes, London, 1876.)

9. This, of course, had eventually to encounter the strongest

The Mediaeval controversies as to the Resurrection life.

Scientific opposition. To "buttress up the falling edifice" of a literal Resurrection of the same body, great efforts were made, and many theories resorted to. Some asserted that the sameness of the future man (p. 33) was entirely dependent on the immortality of his soul. Others, denying that the soul was naturally immortal, regarded the immortality as a gift conferred hereafter by the Creator. (This at a later age among ourselves, was Priestley's idea.) Few, however, could persuade themselves that the future life depended on a miracle to be thus wrought in every case to qualify each of us for immortal existence. Then returned, of course, a still growing indistinctness of conception, which induced in some an abandonment of all real faith in that human future, which nevertheless mankind are known to aspire to.

But disturbance in the belief as to the Resurrection of the Body (p. 35) was accompanied by the re-opening of many other fundamental questions which ensued. The Being Himself; and the existence of other immortals there; such as the good and bad "angels" already referred to. The divergences of thought seemed, however, to be ultimately determined by the growing, though seemingly dangerous, recognition of "invariable law" as pervading the whole Universe (p. 36).

10. To reconcile the invariableness of Law with some real Theism, and still more with the Moral government of the world, was the next effort of thoughtful persons. The latter difficulty was not worked out. The Scriptures were explained in allegorical senses, so as to meet some of the Theistic difficulties. Still, the admission of a Deity who was to be nothing but the administrator of rigid law, proved to be irreconcilable with all Religion. And, further, it was plain that it would not be worth while to admit or deny an "Unseen world," into which, omitting all "Religion," we might just mechanically pass on hereafter. All the Christian ideas of prayer, duty, and future rewards would thus become impossible. (Even the Moral idea of *Right* would seem excluded.)

Amidst the manifold difficulties as to the very elements of the Christian belief in a Future Life, which thus had sprung up, some persons from time to time arose, pretending to have "received new and *supplementary* revelations" on the subject.

Swedenborg and others thought to supplement the Christian Revelation.

Passing over all others, our authors choose Swedenborg, as one

whose views "merit fuller treatment." They describe his system, not in its scientific character—(though he "foreshadowed, if he did not anticipate, many of the scientific doctrines of the present day"),—but in its "mode of viewing the spiritual world," if not the moral (pp. 38 and 43).

According to Swedenborg (pp. 38 and 43), "Man, considered in himself, is nothing but a beast." His distinction from the beast is that "the Lord dwells in his will and understanding, and never leaves him." At his birth man puts on his body, and at his death he puts it off, "retaining only the purer *substances* of nature," his faculties and functions. "The natural world corresponds to the spiritual collectively, and in all its parts" (p. 39).

As to God the Father, the teaching of Swedenborg is very explicit. "He is invisible, and, being invisible, can neither be thought of nor loved" (p. 40). Apparently we have to do with Christ alone, as representing the Father.

Swedenborg also believed in particular Providence, and in Purgatory, in the sense of an intermediate state, whence souls are drafted off to heaven or hell (p. 40; comp. p. 30). The spiritual world is related to the natural throughout, as cause and effect.

11. This, say our authors "is the system of a profound thinker." "It is one thing however" (they add) "to admit the beauty, the philosophical completeness, and even the possible truth of many of his statements; and another to believe that he actually conversed with the inhabitants of another world in the way he said." "There is no reason to suppose Swedenborg's speculations to be anything else than the product of his own mind" (p. 41). In relation, however, to the doctrine of a future life, or invisible or spiritual world, Swedenborg's position (p. 43) is "that that world is not absolutely distinct from the visible universe, and absolutely unconnected with it, as is frequently thought to be the case, but rather is a Universe which has some bond of union with the present." With this view of the doctrine of the Unseen Universe, as taught by Swedenborg, our authors conclude their historical epitome as to the belief in Immortality. They add, that a line of argument similar to Swedenborg's in this respect (p. 43), is to be developed in the following chapters of their book.

12. We pass on then to the Second Chapter.

## CHAPTER II.

Leaving the Religious speculations awhile, we have before us now a purely physical investigation. Our authors write for students of Science generally, and first state the position they take, their "Physical Axioms."

The existence of a God is self-evident.

(But compare this with p. 169, where the "Creator" is the absolute One, or so "looked on.")

And laws of the world fixed by its governor.

They "assume as absolutely self-evident the existence of a Deity, who is the Creator and Upholder of all things." "Every phenomenon," says H. Spencer, whom (3rd edit.) they quote, "is the manifestation of some power." (Darwin would add, "of a lower power into a higher?") "The laws of the Universe are those laws according to which the beings in the Universe are conditioned by its Governor, as regards time, place, and sensation" (p. 47).—(The statement is made afterwards, that the "conditioned cannot proceed from the unconditioned." Comp. pp. 169, 173, 174.—The Eternal Father is not Creator?)

13. We cannot conceive of purely finite beings existing in the Universe without some sort of embodiment. "Materialists agree with us" (p. 48) in disbelieving in disembodied spirits (p. 53).

Finite beings are conditioned under those laws.

But here they may ask, whether this necessity of conceiving some "embodiment" does not show that there is a "reality about matter which there is not about mind"? Say, finite consciousness *e.g.* may be distinct from matter; but may it not be the result of the position of a certain number of material particles, brought about by different "forces" and ending when that position ends? The answer is, that we have nothing to justify us in so concluding. To say, "that the brain consists of particles of phosphorus, carbon, &c., such as we know them in the common state" (p. 50), and that when the particles of the brain have, in consequence of the

Consciousness is not a known result of physical conditions.

operation of physical forces, a certain position and motion, then consciousness follows," exceeds all that we are warranted in affirming. We are unable to identify consciousness with its known physical conditions.

Nor may we assume that consciousness, however produced, is less permanent than matter; because the latent possibility of consciousness remains behind. The connection between mind and matter is granted to be most intimate; but we are in profound ignorance of its exact nature. How intimate the connection is, the physical facts of Memory may teach us. For memory is a requisite "organ" of continued conscious existence (p. 52). By it we retain a hold on the past; as truly as by an inner life we have also latent capacity of action in the present.

Need of Memory and Activity, for continuous conscious being.

is a requisite "organ" of continued conscious existence (p. 52). By it we retain a hold on the past; as truly as by an inner life we have also latent capacity of action in the present.

14. Bearing in mind these preliminaries, the authors proceed to consider the "Principle of Continuity," as now scientifically accepted.—At first sight, we suppose, it might seem nearly equivalent to the Scripture saying, "all things continue" (LXX. διαμένει, and 2 Pet. iii. 4) "to this day, according to Thine ordinance, for all things serve Thee." Things in this sense doubtless hold on without a break. But it means, with our authors, more than this. Not only is it true in point of *fact*, (so that we, with the Psalmist, may acknowledge the upholding power of God), but it is implied that there is a pervading *necessity* for this—a necessity not merely such as all causation demands, (a connection of phenomena with preceding *power*—see p. 48—which introduces another idea), but a holding on of a *physical* kind. By virtue of this Continuity, the Universe is but one whole, and if we catch the thread at any point, it is a clue to sure science throughout.

The Principle of Continuity.

It is the holding on of a physical law.

A Continuity of necessity, not of causation, is implied.

15. This law or principle of Continuity is illustrated by familiar astronomical examples (pp. 53–59). It is shown, too, that this law does not necessarily imply an easy progress, or an always smooth level road, but is consistent with temporary difficulties (p. 60). "It does not preclude the occurrence of strange, abrupt, unforeseen events in the history of the Universe, but only of such events as must finally and for ever put to confusion the intelligent beings who regard them." God does not give us rationality in order so to thwart it. The idea, then, that the Law of Continuity interferes with God's Governing is erroneous; though the law certainly forbids some theories of His miraculous and perhaps other interventions. Such supposed Divine interferences as would subvert natural order, the Law of Continuity no doubt resists: and the law itself is such as will work on till it works itself out, even, (as some say), till the Universe itself comes to an end;—(though, we suppose, even then the law would remain a principle condition of all possible rationality)?

Examples.

It does not preclude all interference, but only such as is destructive of natural law.

Our authors, however, are not of those who admit that the whole Universe of things will come thus to an end (p. 64). It may be true of the transformable energies of the *visible* Universe, or even of *matter itself*; but it seems "monstrous to suppose" (3rd edit.) that universal nothingness will ever be arrived at by the Law of Continuity working itself out. "The principle of Continuity upon which all such arguments are based, demanding a continuance of the

The Universe as a whole is Eternal.

Universe itself, we are forced to believe that there is something beyond the visible." From this it would appear that the Universe, taking it as a whole, (and not simply the "visible Universe"), is eternal; St. Paul, as our authors think, asserting much the same in the words, "the things that are seen are (*πρόσκαιρα*) temporal, and the things that are not seen are (*αἰώνια*) eternal."\* "If the visible Universe were all that exists," then the first abrupt manifestation of it was as truly a break of Continuity as its final overthrow. But abrupt-seeming beginnings need not be breaches of Continuity, if we consider the whole eternal Universe.

16. To illustrate this position let us not fear to take certain facts of Christianity. Apply what has been said to the marvellous life of Christ Himself. "What Christ accomplished was not in defiance of law, but in fulfilment of it; and that He was able to do so much, was simply due to the fact that His position with reference to the Universe was different from that of any other man."—"Babbage's machine," *e.g.*, having long worked according to a particular method of procedure, suddenly manifested a breach in its method, and then resumed, having been so made as to keep to, its original law. To suggest as possible that Christ's life may have (p. 62) occupied some such position, (by Divine arrangement), and therefore in no way interfere with the Law of Continuity, which goes on as before, may be better than to suppose "a break"; still they regard Babbage's explanation as altogether incomplete.

In what sense real "Creation" is admitted in a Universe so Continuous and Eternal, we are scarcely informed; (comp. p. 167). "Creation" seems an ambiguous term, covering simply the general idea of manifestation: a really "abrupt beginning" of the Visible Universe, or *de novo* Creation, is, as our authors say, against the principle of Continuity. Creation is not simply "pushed back,"—but pushed back for ever.—(But is not "this intellectual confusion"?)

It may sound strange, "that it is the duty of the man of science to push back, (as our authors express it), the Great First Cause in time as far as possible" (p. 65); but science demands that "the part this Great First Cause has to play" must be so pushed back. This is not, they say, an attempt to "drive the Creator out of the field altogether." It is only regarding the Universe as an "*ilimitable* avenue leading up to God." "The extreme scientific school" seem to limit the Principle of Con-

\* 2 Cor. iv. 18. The ordinary interpretation of this phrase refers it to our Divine dwelling, *ἐν τοῖς ἐπουρανίοις* (Eph. ii. 6).

Christ's  
marvellous  
life and the  
Law of Con-  
tinuity.

(See *ante*,  
section 7, and  
p. 30 of our  
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How far  
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tinuity to the visible Universe; our authors carry it physically into the invisible; even though existence (p. 47) may there be conditioned differently (p. 66).

17. Extending the principle of physical Continuity beyond the visible, into the entire invisible and eternal Universe, which is both antecedent and subsequent to the visible, we have a glimpse of that physical "immortality" of which (Ch. I. *in fin.*) we are said to be in quest.

Immortality may be conceived in three ways; either as (1) within the Visible Universe; or (2) as beyond it, and continuously connected with it, as Swedenborg says; or (3) as beyond it, and unconnected with it. The last hypothesis must be at once dismissed (p. 67), if we maintain that the principle of Continuity holds throughout the Universe eternally. Existence would on the *third* hypothesis have no physical connection hereafter with existence now. The *first* hypothesis also is impossible, because there can be no "immortality" pertaining to a world which is to come to an end, as this visible world will. This way of disposing of the first hypothesis must not, however, be taken for granted too hastily; and our authors discuss, (before proceeding to the *second* or remaining view, that immortality may be found in a world connected with this, but beyond it), the position they thus far had assumed, that "this present visible Universe will become effete" (p. 68);—which is essential to this part of the argument.

The conclusion of our authors' second chapter is thus arrived at. They have not—it will be observed—yet explained precisely what they mean by the "Visible or Physical Universe," nor the term "Creation." As to the latter, they incline to La Place's view,—that the solar system was "condensed into its present state from a chaotic mass of nebulous material"; and to Sir William Thomson's, that there were "primordial atoms of the Visible Universe *some-how produced* in a pre-existing perfect fluid,"—if that prove to be "tenable" (p. 65); (so far as we are able to judge.)

The Eternity of the whole Universe, as based on the Law of Continuity by our authors, is not to be confounded with the theological belief that God was never without some action, or that he "ever worketh," or ceaseth, as he may please—no one work having been Eternal, but only Himself. According to our authors, the whole Universe is *per se*, eternally continuous; each transition being what is but termed a "Creation,"—for if we do not misapprehend their meaning, a creation out of nothing is denied;—"Creation" itself "belongs to Eternity" (pp. 118 and 138):

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La Place's theory.

Sir William Thomson's.

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## CHAPTER III.

18. The testimony of science as to the Physical Universe, and its Laws (p. 69), its beginning, and end, (as bearing, too, on the *first* hypothesis of Immortality), has now to engage us.

Within the last generation "there has gradually dawned on the minds of scientific men the conviction that there is something beyond Matter or stuff in the physical Universe" (p. 70). They used indeed to talk of light, heat, and electricity as "imponderables," but that was only an evasive term. Something that is not Matter "has objective, though not substantial existence." As to Matter, experience of the most varied kind shows us its real existence external to us (p. 71). We find it amenable to our control, except that we can neither increase nor diminish its quantity. This fact we may call "the *Conservation of Matter*" (p. 72). The same experience, however, which teaches us this Conservation of Matter, teaches us also the Conservation of something else which is not Matter, and which equally has objective reality (p. 73).

This is explained by illustrations as to the "*Conservation of Momentum*," "*Conservation of Moment of Momentum*," and "*Conservation of Vis viva*," or "Energy." Newton's third law of motion is, that *action and reaction are equal and opposite* (p. 74). It follows from Newton's first interpretation of this law, that the *momentum* of any system of bodies is not altered by their mutual action. The sum of the *momenta* generated by the mutual action of the system is zero. The same appears as to the Conservation of *moment of momentum*, when we deal with quantities of the order of the moments of forces about an axis.

So again of *Vis viva*, or the Energy, or power of doing its work, which any body contains. It is independent of the direction in which it is moving, and is proportional to the square of the velocity, so that a *double velocity will give a fourfold energy* (p. 76).

Experiments in dynamics further assure us that there are two forms of Energy, which change into each other. These are known as the Kinetic and the Potential.

19. The Conservation of Energy being as real as the Conservation of Matter (pp. 82 and 92), we have to regard it in

reference to both forms of energy.—Visible kinetic energy as that of a cannon-ball shot upwards) is changed, as it rises, into visible potential energy; and as the ball descends, its energy is again changed into the kinetic. The ball strikes the earth, and again the visible kinetic energy is changed into a *kinetic energy of invisible motion*, called "*Heat*." Whenever visible kinetic energy is suddenly impeded, it changes into "*heat*" (p. 80). Energy of every kind is found to have great powers of transmutation; and Sir W. R. Groves's instructive "Correlation of Forces" brings together many varieties of cases. (And see p. 106.) Life, so far as it is physical, depends on transformation of energy (p. 81). In any system of bodies there are various kinetic and potential energies, the sum of which remains for ever unaltered. Hence "Energy," even when invisible, has as much claim to be regarded as objective reality, as "Matter" itself. The difference between them is that energy is a very Proteus in change, while matter is always the same. The only real things in the physical, or, so-called visible Universe, (for it is not all really visible), being "matter" and "energy,"—matter being passive,—*all* physical changes are merely transformations of energy, "each change representing a kind of creation and annihilation" (p. 81).

Energy is conserved as truly as Matter.

Suddenly impeded Energy changes into Heat, which is invisible Motion.

But are all "Energies" equally transformable?

It is of the utmost importance, however, here to know—whether all forms of "energy are equally susceptible of transformation?" If any one form be less transformable than others (p. 82), though the whole quantity of energy may remain, it will become less and less available (p. 82). Now this is the case with heat.

20. The investigation of the transformation of this form of energy—Heat—into work, has taught us the dynamical theory of heat; and also the principle of the "Dissipation of Energy"; and it has been shown that only a *portion* of the heat can, (even under the most favourable conditions), be transformed into useful work (p. 83). Some invisible finite agencies, (playfully called "demons" by Sir W. Thomson), may here have something to do (pp. 127 and 148); for while it is possible to change mechanical energy into heat (p. 90)—only a portion can be retransformed; and that too would be more and more "dissipated" on repeating the process. Heat not, in fact, being wholly "conserved,"—or not in an available form,—will bring the system of the Universe ultimately to an end. This point is carefully elaborated by our authors. "Conservation of

Heat is an Energy which is not as transformable as other kinetic energies.

Energy" therefore, says Professor Clifford, is a term, only very nearly approximate to the facts (p. 91), (*Fortnightly*, p. 789).

The sun (p. 91) supplies us with energy, but himself grows cooler, and after long ages will be extinguished. *The visible Universe is a vast heat-engine*, and the tendency of heat is towards equalization. If the present physical laws remain long enough in operation, there will be, at immense intervals, mighty catastrophes, due to the crashing together of defunct suns, the smashing of the greater part of each into nebulous dust surrounding the remainder, which will form an intensely-heated nucleus. Long, long in the future eternal rest will come.

Heat is partly dissipated, and so the Universe will be dissipated at last.

The Visible Universe is a vast heat-engine.

Such scientifically being the *necessary* future—"that the now visible Universe will become effete,"—what, let us ask, is the necessary past? (p. 67).

There was a time when the visible Universe was nothing but gravitating matter and potential energy.

Immortality impossible in such a Visible Universe as this.

Within such a Universe, of which we see the *beginning* in the past, and the *sure end* in the future, we find that, of course, "Immortality" is impossible.

We must, therefore, dismiss the first hypothesis, (see § 17), that Immortality is transference to any other part of the *visible* Universe (p. 93).

There remains only the alternative theory (see p. 43), that the Immortality we seek may be transference to some Invisible Universe connected with, but no part of, this visible system; which accords with Swedenborg's view—"the line of thought we are now developing,"—that our bodies will at death be entirely put aside, and our powers and energies be transferred to an unseen part of the Universe, in some way connected with the present; the *available* energy of the Visible Universe being appropriated by the Invisible" (p. 118).—[Of the unavailable energy, account is not yet taken.]

Hence we shall not rise hereafter in our bodies (as Swedenborg, indeed, had also seen).

## CHAPTER IV.

21. We have considered the Conservation of Matter, and Energy. We have now to examine, in our Fourth Chapter, what is "Matter"? or rather, what is that wonderful form of "Matter" which is the vehicle of all the "Energy" we receive from the sun, and the vehicle of all

What is Matter?

our information as to the Visible Universe, so far as we know anything of it? (p. 97).

The doctrine of Lucretius is here described and dismissed; partly as metaphysical, (which our authors may take to mean speculative or fanciful—that we suppose is the vulgar notion), and partly as superseded (p. 102).

Atomic theory of Lucretius.

The doctrine of Boscovitch is next stated, and it is said that it was somewhat supported by Faraday. This wholly denied the Lucretian atom, and all atoms, getting rid of *substance* in favour of central force, “residing in *nothing*, but related to everything” (p. 102). This our authors also dismiss as an “over refinement of speculation”; for it does not provide for “inertia,” at all.

Central force theory of Boscovitch (residing in nothing).

A third speculation as to the intimate nature of Matter, would regard it as non-atomic, but infinitely divisible, or the utter *reverse* of atomic. This is scarcely reconcilable, however, with “gravitation-attraction,” and might at length dispense with molecular forces and chemical affinities. Our authors think it involves too great a scientific confusion.

Non-atomic theory.

Then there is the vortex-atom theory of Sir W. Thomson, which supposed matter to be the rotating portions of a perfect fluid filling all space. On this theory our authors see difficulties to arise; and they do not make up their minds (p. 104).

Vortex-atom theory of Sir W. Thomson.

22. They say they cannot conceal, that their ideas of what Matter is, (though unmetaphysical), “are hazy” (pp. 104 and 105). Helmholtz’s investigations rather incline them to vortex-atoms. But the “perfect fluid theory” would imply Creation to impart the rotatory motion in it; and so “may only shift the difficulty a little farther back.” And it does not account for the *inertia* of matter, any more than the other three theories;—(or it may “refine away the whole idea of matter”)—which the mind seems to require!

There is an attempt to account for inertia, and for gravitation, in the theory of Le Sage, (partly adopted with modifications by Sir Wm. Thomson), as to infinitely small corpuscles, ultra-mundane or from the unseen world, filling space (p. 164); but this theory would modify the present doctrine of kinetic and potential energy, on which we have proceeded (p. 110); as the third theory also clashed with gravitation; and the second with inertia.

Theory of Le Sage.

An effort has been made to connect gravitation with that luminiferous ether, (which is a great refinement on gross matter), which is the hypothetical

Of gravitation and luminiferous ether.

explanation of certain phenomena of electricity and magnetism (p. 109); but this has failed. For what shall we think as to the luminiferous ether itself? (p. 111). Is it perfectly transparent? or does it absorb light at all, and then redistribute it? Is it subject to gravity? Beyond the fact of its *existence*—(a fact inferred by us from the phenomena of the passage of radiant energy from one body to another),—we know nothing. These hypotheses no doubt tend in every case to suggest an invisible Universe (p. 117), into which “Matter” itself may die out; but it would be an invisible Universe not conditioned like the visible; and so we should be even driven to the Unconditioned, break with “continuity,” approach the Great First Cause, and defeat our hypothesis (p. 119).—Thus no conclusion, then, is arrived at.

From this hesitating account of Matter, as so nearly nothing, yet the vehicle of everything, we proceed to Chapter V. None of the theories as to matter account for Inertia (p. 107), nor, except hypothetically, for gravitation (p. 109).

## CHAPTER V.

23. The Visible Universe, in both Matter and Energy, has in some way (p. 65), perhaps rudely, *been Developed out of the “invisible”* (p. 120). The question is, How does it work? How further “develop,”—in Matter, Form, and even Life?

First: Heat, we observe, is a perpetual cause of change. Hence material development. The “elements,” so-called, may be dissolved (p. 123), if a high enough heat be found. Even the atomic constituents of a single molecule (p. 124) may by some heat, beyond what we possess, be separated.—(There are higher degrees of temperature, we know, in some of the stars and in the sun, than on our earth.)—And, secondly, just as high temperature drives water into steam, and steam into oxygen and hydrogen; so carbonate of lime is decomposed into lime and carbonic acid gas, and the original particles of the Universe, separate from one another, being endowed with the force of gravitation, are possessed of potential energy, which is transmuted (p. 125) into heat and motion. Thus a more complicated development arises; not only chemical, as above intimated (p. 128), but formal or massed together; and, as in Kant’s and La Place’s theories of the development of the solar system, it may be globular. It must be observed, however, that the potential energy, after being converted into heat, is ultimately

Nothing is really known of the intimate nature of Matter.

Development that may be (1) Chemical;

or, (2) Formal i.e. mass development.

dissipated into space, for a large portion of the heat never returns. But this is a remote result. Meanwhile (p. 127) the Visible Universe is thus developed by the inorganic agencies which we call "forces," (not unlike the monads of Leibnitz)—acting perhaps, on certain "instructions"? (pp. 88, 90, 148, &c.)

Lastly, life-development is different from both "chemical" and "globe" development; and this has next to be considered. Here, also (p. 128), our authors' views demand a physical development rather than any supernatural evolution out of unconditioned Power.

The world, by its organic changes, *became* fit for what is called "life" (p. 132). "Accordingly life *appears*." First in a low form; eventually in the moral, intellectual, conscious agent (pp. 129, 130).—The theory of the first process of life-development is not, however, drawn out.

The development and the gradual elevation are stated by our authors as facts.\* The atoms have "come together"; chemical substances result, the substances gather themselves "into worlds of various sizes." Beyond this, explanation is not given. Then comes rude life; this culminates in man.

24. The authors thus, in fact, possessed of the first Life-development, dwell with more detail on the development of Species; and their remarks are interesting and to the point.

They quote a well-worded passage from Professor Huxley (p. 134), showing that varieties of living beings may arise "spontaneously," or from *unknown causes*, and may be also perpetuated by artificial selection. Next, it is observed, that such varieties, when they do arise, have a power at times of more strongly producing themselves, and occasionally imply natural selection, as Darwin and Wallace show. And the "stronger" may displace the previous type (p. 135).

The sterility of hybrids is not, they remind us, to be too hastily assumed. There may be gradations from sterility to fertility. Give nature time enough, and it is suggested, that a process of transmutation may be arrived at. Even man might be developed from a pri-

(Well called "hybrids," as injurious or insults to nature, ὑβρις.)

\* How the movement all started, we do not here see; and this gap in the theory we are unable to fill. If it was meant that some latent power, as Dr. Tyndall says, might have been in "matter" (which contained it as its vehicle) and was waiting to be exerted when the kinetic and potential energy had done their work of action and re-action, this seems the place where it should have been more fully explained. Just to say that, at last, life "appeared," is puzzling. "Inorganic agencies" are hinted in p. 127; but more than hinted in p. 90, and atoms are "endowed with Force"! p. 128.

mordial germ; so at least Mr. Darwin thinks;—while Mr. Wallace, on the other hand, sees in the production of man the unquestionable intervention of an external will. Our authors say, that though a pure act of Creation is inadmissible, yet Life without a living antecedent is equally inadmissible. And it is Life that we need. They can only say however that Life “*appears*.”

## CHAPTER VI.

25. We begin afresh at Chapter VI.—Our authors’ examination of the physical or seen Universe came to the conclusion, as we saw, that it offered no sphere for Immortality. It is finite, as has been fully shown, both in the past and the future. It might have had, and seems to have had, self-developing powers or forces to some extent (p. 140), and they may be even *greater than we yet know*; but they also will and must of themselves, according to the great physical principle of the Dissipation of Energy, come to an end. Yet as that end, and the

If this Visible Universe has no place in it for immortals, yet may it not have a place for a higher Future life than we now have? in which we may be of higher intelligence.

end of the whole Visible Universe, is almost inconceivably remote, it is not without interest to inquire—whether Future Life for the existence of intelligences, (a life coming short indeed of immortality, but immensely enduring),—whether a Future of higher intelligence into which we may at death develop,—and a Future in a rank of being connected with the

Visible Universe,—may be, possibly, expected? And perhaps a prospect, after that, of a hope of transference to life in the Unseen Universe itself?

26. First then, can there be in the present Visible Universe any intelligences superior to man?

This question is approached by a series of observations showing that there are two kinds of organized machines; the action of one being *calculable*, and the action of the other not calculable; the solar system, or a watch, being an example of the former, and a rifle charged for human use being an example of the latter. The action of the latter kind of organized machines (p. 150) cannot be calculated; for it depends on delicate processes, some of which however may even be directed, not only by men, but also by intelligent agencies, such as “angels,” (as some

This Visible Universe can only have machines calculable or incalculable.

Ideas as to Heaven, Hell, and Angels.

would say), acting from beyond this visible physical Universe. If such agents exist, as they may, they evidently, however, do not *belong* to this visible\* Universe; for men, or beings analogous to man, are the

\* “Visible” seems used here in its vulgar sense?

highest order of living beings actually connected with the present world, as far as we know. Nor is the reason of this conclusion difficult to understand (p. 151). It does not depend on Darwin's hypothesis, or on any opposite hypothesis. It rests on the fact, that while there is much delicacy of construction in the cosmical processes, we cannot *identify* that organization with Life.

27. The matter of life is the same in all animals, so far as that the body of one animal is food for another. It is inharmonious to conceive of two living systems in one Visible Universe. On this ground also we dismiss the notion of a superior order of living beings to be developed *in the present physical Universe*; and we also reject the idea that such unseen intelligences direct the delicate cosmical processes around us.

If there be anything else acting on the present Universe, it is not of it.

The Scriptures seem to be in accordance with this decision of science, as to the superiority of man (Ps. viii. 3). In the Old Testament, man is said to be "made little less than divine,"—"a little while lower than the angels"; and in the New Testament, that he shall "put off mortality," and enter into "incorruption," and "life eternal"; *i.e.* the "unseen."

The Psalms.

S. Paul.

Man is at the head of the visible Universe. If angels exist, and even minister to man, they still do not belong to the physical or visible Universe. That this is no Future sphere for any higher beings than men, seems naturally to follow.

## CHAPTER VII.

28. What then, finally, have we to say of the "Unseen World" —(p. 156), having found that the present Visible Universe is good for nothing in the way of Immortality? and that it may come to an end from exhaustion (p. 155).

What is the Unseen World?

The Law of Continuity assures us that the Visible Universe had a beginning, and therefore an Unseen Universe preceded it. That Unseen Universe (we shall further note) could not have been "changed into the present." It exists now independently, and will exist when this Visible Universe reaches its inevitable end, and becomes effete as surely as will each individual.

It existed before, it exists with, and will exist after this.

"Through its means we came into existence," and it is connected with us now (p. 158). Indeed "the energy of the present system must be looked on as derived from the Unseen," and the Unseen is capable of acting on the present. It is

The luminiferous ether may be a medium between the two worlds.

quite possible that the luminiferous ether may be even a medium between the Seen and the Unseen Universe. When energy leaves its present home ("matter") it is carried from the visible into the invisible; and when from ether into matter it is born from the invisible to the visible. Ether *may be* a medium (*plus* the invisible order of things) of the passage to a Future life. But this is a speculation.

Our mental constitution connects us with both worlds. We have seen that thought affects the substance of the visible world, and produces a material organ of memory (p. 159); and thought may simultaneously communicate with the unseen Universe, while it is linked with the visible.

Swedenborg's hypothesis.

29. Suppose we thus possess even but the rudiments of a frame connecting us with the Unseen Universe—in other words a spiritual body; each thought of ours, here partly stored in our physical memory, may also be registered (and even more fully) in our "spiritual body," to take up the associations of the past.

A spiritual body is now ours.

Our active energy after death may have the materials also of former life to work on.

Things not physically remembered may be so in the spiritual body.

Dr. Young.

Dr. Young says, in a beautiful and comprehensive passage: "Immaterial substances are not contradicted by anything in physical philosophy (p. 160). Analogies even lead us towards them. The electrical fluid may be essentially *different from common matter* (in the usual sense of the term); the general medium of light and heat equally so. They seem but semi-material in any case! So also the immediate *agents* in attraction and gravitation (p. 161). Spiritual worlds, unseen for ever by human eyes, may co-exist with the physical and not touch," being unrelated to space.

30. The authors next proceed (p. 166) to reply to objections (and with much success),—both theological objections and scientific. They maintain the idea, however, of spiritual bodies as rudimentally existing now. They are not a Divine creation to take place at the Resurrection (p. 167).

Alternative: that the preceding Unseen Universe either had life, or had it *not*.

This argument extends to p. 202.

Then, finally, the objection has to be met as to the Christian assertion of the Resurrection of Christ, which assures a future life, (and so the whole miracle of our Revelation also). In considering this, they treat at length the whole problem of the Universe, viewing it from its past.

The Visible Universe must have been developed through either living or dead *præcedentia*, (for admit the Principle of

Continuity and the doctrine of pure Creation out of nothing is inadmissible). The atoms of the Visible Universe bear, when we come to examine them, all the look of "manufactured articles" (p. 168). Life proceeds only from life; and there is a uniformity of atomic structure. And so the Visible Universe being what we thus find it, we naturally conclude that it was first developed out of the living though unseen, and not from the dead.

The present bears the look of manufacture, and was developed out of the former; therefore the former had life.

For is not a dead Universe preceding the present inconceivable? Does it satisfy the *Principle of Continuity*? That principle rather demands an *endless development of the conditioned*, and never a proceeding from the conditioned to the unconditioned, for that would bring us at once to an intellectual barrier. We must think the Great Whole to be infinite in energy, and that it will last from eternity to eternity (p. 172).

The Principle of Continuity shuts out the unconditioned.

The need of the case seems then actually to demand an intelligent agency in such a Universe. This infinitely energetic developing Agency is in some sense in relation with the conditioned, and so is Himself "conditioned." And this is precisely a want met, our authors conceive, by their view of the Christian dispensation.

The Conditioned Universe is eternal.

It demands a conditioned mind.

The belief of the vast majority of Christ's followers, they imagine, has always been—not that the Godhead, Father, Son, and Spirit, is unconditioned, or in equal and perfect relation with the Absolute, but that the essence of unapproached Deity, is the Father and Absolute—"Whom no man hath seen or can see",—while "the only Begotten Son, who is in the bosom of the Father, has *always* been 'conditioned,' " and so has been able to communicate with us. All things were developed "by the only Begotten," who is of "One substance with the Father" (p. 174), "Who is the image of the Invisible God—the First-born of every creature,"—always Himself "conditioned."

The Gnostic position of Swedenborg.

31. The Christian and Jewish records, they think, all confirm this view; which science itself, on the very *Principle of Continuity*, requires. "Christ represents that conditioned, but infinitely powerful *developing* Agent, which the Universe leads up to." He is the developer of various Universes (p. 175), and Himself becomes the type and pattern of each order, and the *Representative* of Deity. He in this sense "creates," and He will judge. Possibly, other conditioned beings, as angels, *co-operated* with Him in this

The Incarnate God, the only God we shall ever know.

He represents the impersonal, created, and objective Universe.

“Creation.” He is conditioned, and only from a conditioned living thing can any conditioned living thing proceed.—This is the *Principle of Continuity*.

It is not distinctly said (though it must be implied) that the Eternal Conditioned Son *is* also Unconditioned (p. 177), or else that the Eternal Father, the Unconditioned, is also Conditioned; for how else could He communicate with the Son, or the Son with Him? (This is nearly Philo’s view).\*

They say that science forbids our passing over from the conditioned to the unconditioned.† Is there no communion between the Divine Father and the Son? The Son of God in the previous world, in some way, *became* conditioned, and (as conditioned) was “Creator of *Energy*”; energy having “the Protean power of passing from one change to another.” The Holy Ghost also must have been conditioned; and so He may be Giver of *Life*. The Son thus developed the “energy” or objective element; the Holy Ghost developed the *Life*, which is the subjective element of the Universe.

The Holy Ghost develops the subjective life of the Universe.

32. But what is the position of *Life* in the Universe? It seems an antecedent. We find that the forces and qualities of the Visible Universe cannot create life. Life always proceeds from life. It proceeds originally then from the invisible to the visible. It may denote (whatever it be in itself) “a peculiarity of material structure” (p. 180), which may be molecular (p. 182); but it must not be supposed to imply *Will* (p. 182).

Reaching the visible, it rises amidst the lowest material of the Universe (p. 180). The molecules themselves have there been already developed as vortex-rings (p. 171). The vortex-rings are from a finer and more subtle something which we “may yet agree to call the Invisible Universe.”—The visible Universe goes on into the invisible—nor can we say where the one ends and the other begins.

Life, however, when we thus possess it, does not create energy any more than energy creates life. What then does it do in the Universe?

An illustration has been suggested from mechanics, which our authors decline (p. 181). A force, acting at right angles to the direction in which a body is moving, deflects it, without exerting any power or energy. Such, *e.g.*, may be the action of man’s will. It may add nothing to the torrent, but turns circumstances to the

Illustration from mechanics.

\* See also Renan’s *Dialogues*; and Soullier’s *Logos*.

† But see St. Matthew xi. 27.

right or left. May not life be like this? But the reply is, that the supposition of *will* interfering in this way to change the direction of atoms, is scientifically unsatisfactory, and is not sufficient. Professor Huxley also thinks it quite inadmissible. And the hypothesis, if true, does not get rid of the difficulty as to the *operation* of Life.

Life, whatever its nature, has its seat in a region inaccessible to inquiry. It exists as surely as the Deity exists (p. 186); that is, we cannot rid ourselves of either, though we have driven each, as to origin and operation, as far back as possible into the Unseen.

Sir W. Thomson attempted an explanation of the origin of the material world, by "vortex-rings," and explained gravitation by introducing ultra-mundane corpuscles; we may add to this, probably his and Helmholtz's theory, that a germ of life may have been brought to our world by meteors. But even in that case the difficulty as to what Life is and *does*, remains. The "meteor," say, brought the germ of life; but whence arose the germ? (p. 186). We know not. "The mystery of life lies in the structural depths of the Universe," as the mystery of God lies in the durational depths of the same Universe.

Extension of the theory of vortex-atoms.

Sir William Thomson and Helmholtz.

33. For in the first place the Visible Universe is not eternal; and the Invisible Universe is necessarily eternal, in the past as well as in the future; and the visible always latently existed in it. Life and Matter both come from the invisible world. The Visible Universe was, in fact, in material existence, in a nebulous form, before it was fit, on the meteoric hypothesis, for the reception of life, which, therefore, was subsequent; and if so, energy and matter were "created" at one time, and life created at a later time! This implies two separate acts, both anterior to the Visible Universe as it is (p. 187). But the Principle of Continuity is only observed by maintaining life as well as matter to come from the Unseen Universe, where it was previously existing fully conditioned (p. 188).

Are Energy and Matter distinct creations?

The Principle of Continuity is thus vindicated; and by virtue of the Conservation of energy, and the law of Biogenesis, we find there must be a conditioned intelligence in the Universe, whose function is to develop energy; and another conditioned agent, whose function separately is to develop life.

Both come from the Unseen Universe, which is eternal, according to the Law of Continuity.

This is said by our authors (p. 189), to coincide with the Christian doctrine; and they allege, in further proof of it, the support of Swedenborg. In stating their views, however, of Christian doctrine, it is added, "Christians allow much liberty."

\* See also p. 89 as to the "demons" of science.

34. The principles thus enunciated enable us to deal with the difficulty of Miracles: for if the Invisible Universe could develop the visible, it may with no difficulty deal with it by additional developments from time to time. Indeed, miracles depend only for their possibility, on the existence in the Invisible of more powerful agents (p. 190). When the Invisible does not interfere, the Visible goes on as usual (p. 191).

The fact that some interference was effected by Christ, which is the next point to be thought of, is clear enough by His having for so many ages arrested the attention of the world.

If Miracles are breaks of Continuity, so was Creation, or the abrupt beginning of the material Universe. So, indeed, is the beginning of all Life. But these apparent breaks are avenues leading up to the Unseen.

And further, there may be action of the Invisible World on mind, as well as on matter, and yet no real break at all; and if so, it may be that the Unseen may so work on man's *mind* as to show him that he *should* live for the Unseen, and so attain his most perfect life (p. 192).—(But is there no *will* in such a mind?)

The Christian Scriptures recognize this influence of the invisible world on the visible, by their doctrine of angels (p. 193), and may intimate the reversibility of this influence by their doctrine of prayer. The doctrine of the Holy Spirit's influencing the souls of believers is also an example of the invisible world touching the visible (p. 194).

The doctrine of a particular Providence is stated both by Swedenborg and by Scripture, and may meet some objections as to the stern course of nature felt by Mill and others. To reconcile this with general laws may not seem easy, yet there may be some administration from the Invisible, of those general laws in reference to special ends, as hinted in a beautiful passage of Tennyson. The admission of an invisible world, structurally *connected* with the visible, thus opens the way at once to Religion; and also to a doctrine of God "*analogous* to the Trinity," and leading up to the conception of the Infinite and Eternal One,—even though He cannot be known or loved!

35. But the doctrine of Immortality, at which we have thus arrived (p. 198), is independent of all conceptions as to the Divine Essence. "In brief, we merely take the Universe as it is, and adopting the principle of Continuity insist on an endless chain of events (all fully conditioned), how-

Miracles are breaks of continuity only as Creation was.

Angels may be agents of this Invisible.

The Holy Ghost's influence.

Special Providence as influencing the Visible.

The principle of Continuity holds, if we allow an invisible essentially connected with the visible Universe.

ever far we go either backwards or forwards. This leads us at once to the conception of an invisible Universe, and to see that such immortality is possible without a break of continuity" (p. 199).

The only physical proof, however, in favour of this immortality, is that Christ rose from the dead. Now, if an intelligent agent, resident in the Invisible, could produce the Visible Universe out of the pre-existing matter of the Invisible (p. 202), why could it not accomplish also Christ's Resurrection to a future life, without break of continuity?

Christ is a physical proof to us.

Has not the human mind also some sort of presentiment as to such a future? a presentiment, a kind of glimpse, as if of memory? (p. 157). We have said that there are facts almost implying that the Universe has a memory; and sacred utterances in hymns and devout inspirations (p. 201) assure us that individual minds in an exalted state may realize things of the past, and in them shadows of a future. Nothing is really lost; the past is always present (p. 202). Not only in the Invisible may things past be seen by memory, but possibly things present, which in the Visible would be remote, may not be so elsewhere.

And we have mental glimpses.

Place and distance may be *different* in the Invisible Universe (p. 203),—(and unrelated to the vortex-rings, and perfect fluid?)

36. This has also a solemn aspect, when we think of it, *morally*. For the memories of the Universe being never lost, but all conserved in the Invisible; are they all good and pure? Far from it. And "nothing will be covered, nothing hid, nothing secret," is an awful saying of Christ's (p. 203). A terrible record of "deeds done in the body" shall be unfolded when the "books are opened." Many a man will be like a parchment written within and without. (Even the heathen, as in Plato's *Gorgias*, foresaw it.) A veil is drawn in Scripture over the fate of the lost, when the man comes forth in his spiritual body, and without "the wedding garment"! (p. 205).

Moral conservation of results in the Invisible.

Plato's *Gorgias*, p. 204.

The principle of Continuity forbids our setting all this aside, as merely figurative. The existence of evil is not limited to the present. The matter of the whole Visible Universe is of a piece with that which we recognize here (p. 206). *Accident*, pain, death, evil, we may be sure, are possible in all the Visible Universe, even in other worlds than ours. That dark thread which is known as "evil" is deeply woven into that garment of God which we call the Universe.

To sum up all: Our authors regard the whole Universe as *Eternal*; not the *very things*, but a *state of things*, even in the Invisible, like the present physical Universe; therefore also evil is *Eternal* (p. 207) (*i.e.* from everlasting to everlasting) ! They cannot imagine a Universe without a Hell—Gehenna. Still, they admit that a moral development hereafter seems possibly hinted at in the New Testament, after which “the last enemy shall be destroyed.”

(Comp. p. 205.)

Impossible physical fires.

The Law of Continuity implies the Eternity of the whole Universe.

The Law of Continuity is the great scientific principle which has guided all this inquiry (p. 209). The whole Universe is of a piece. The result is, to find no impenetrable barrier to the intellectual development of the individual. Death is no such barrier; continuity applies throughout.

The nebulous beginning of the Visible Universe and its fiery termination were known to the early Christians as truly as to us (p. 209). They also, with us, looked for immortality. Science, truly developed, is the most efficient supporter of Christianity. On physical principles, the Universal and Eternal Law of Continuity may be maintained, and we here show a ground on which Science and Religion may meet together (p. 211),—as on a luminiferous “bridge” between the so-called visible and the invisible !

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## PART II.

37. The authors of this interesting work have now spoken. It remains that we express ourselves as critics. Of course the supposition of “Continuity” has always been acted on by those who have acted at all in the Visible Universe; and it is here represented too much as a discovery. A strange surprise it would be, if at any time intelligent beings had been found going on acting, without expecting connected results—results warranted only on what has now gravely acquired the name of a “Law of Continuity.” All philosophy, all experience, and all belief in causation have always taken this for granted.

Continuity no newly discovered law.

On one point—in the *Analysis of Human Responsibility*,\*—some years ago it was shown, that the simplest idea of Being—even of the Eternal Self-existent Being—or of the absolute in Truth, Reason, or Good, contained a “Principle of Continuity” of its own.

Continuity, *in se*, is not ideally the same as sequence. The Absolute, e.g. is independent of sequence, yet it always “continues to be.” Even in our own finite sphere, our mind reckons on Reason having been *always Reason*, and the Absolute always absolute. Nor can we conceive of pure Reason as other than *Reason always*. It is not more Reason now, than when our consciousness of it began. And the Infinite and Eternally Conscious Being must thus be conceived as “continuing,” yet with no essential limitations of sequence; for then He would not be absolute. Action also, which varies, implies “continuance,” even in God, though “pure act” is not His entire essence; for that includes the conscious absolute.

38. But “Continuity,” as explained by our authors, is something more than the necessary postulate of all intelligence and all act. It is extended from the Intellectual sphere, where of course it is inevitable, to the Phenomenal, where it is partial and imperfect, and the term thus acquires ambiguity. Phenomena are taken to be internally continuous *in the same necessary sense* as conscious intelligence and its acts must be; and the *nexus* is assumed.

We must examine this somewhat further:—

The doctrine of causation is based on our perception as to a certain holding together of acts and origin, or starting-point. But do we not introduce another idea altogether when we apply to mechanical sequences the same term as we use in the case of an apparently self-acting origin or “cause”? It is quite true that there is a *kind* of continuity, or contact rather, in all physical action and re-action in the Visible Universe. But even there, there is a kind of *vis* in “continuity” beyond what “contact” implies. Still more, forces wholly acting out of the “Unseen Universe” (as, by the admission of our authors, originating causes do), have a *vis* which mere “continuity” by no means explains. Probably phenomena within the seen Universe have continuity only in the sense of apparent contact. Agencies, then, active from the Unseen, wherever we place them, or conceive them to act, (like the “monads” of Leibnitz,) are

\* See *Transactions*, vol. x.

† See the *Analysis of Human Responsibility*.

different from machines which have simple contact ; (mechanism in motion itself needs an agent).

It is pure assumption, if we at once *suppose* that there is mechanical contact in the case of agency from that unseen world of which, by the hypothesis, we *know nothing*. The Visible Universe, and the necessary inferences from it, may oblige us here to assert contiguity of some kind. But the beginnings of life and conscious action lie, it is admitted, in the *Invisible*, and no argument can possibly conduct us to the conclusion, that the Visible World, which we have ascertained, and the Invisible World, we have not ascertained, are subject to the same law of touch.

Our authors are so mechanical as to speak of "bridges" between the Invisible and the Visible ; and it is at those bridges, as they are termed, that the weak points of this "scientific" statement of Continuity will be found. Perhaps, too, in considering the transmission of force, unknown "bridges" are necessary to connect transitions, even within the phenomenal.

39. The argument of the work before us so depends on these "bridges," that the authors ultimately and logically deny, in express terms, all real distinction between the "stuff" of the world of sense, and of the worlds or universes beyond sense. This, in truth, (as making "will," which acts from the unseen, a "stuff" entirely subject to mechanical laws), would be a denial of all responsible Causation. Denying the distinction between the substance of the Seen and the Unseen, it also denies that there are really two kinds of worlds ; and the argument becomes logomachy, and is found in plain self-contradiction. "Invisible" has here no definition except the vulgar one, of that which lies beyond our actual sight. This, however, is the case of much which our authors would call the *visible* Universe. If *all* must be mechanical, there is no power of alternative action in any conscious agent or "cause," and religion ceases, instead of finding life from such an argument. Even a *wish* for immortality is nothing then but an attraction of what we must call a mechanical kind !

Thus also, the prospect itself of immortality, on any such theory of eternal and mechanical continuity, is fundamentally changed from that of a promise, a hope, an aspiration for the individual, to that of a physical, or transphysical certainty of a consecutive order of perpetual transitions, in which Personality, (which is, now supposed for all of us), need not, perhaps could not, survive. To know that after the present life we, and all other existences, necessarily pass into another and differently conditioned Uni-

See Appendix.

The Visible and Invisible world are, however, supposed to be of the same substance.

And the idea of immortality is changed.

verse, and when that also is ended, as it will end, then pass on into another, a thinner and remoter Universe, still differently conditioned, and so on, and on, and *ad infinitum*, is at least different from the personal hope and expectation, of the Christian that after this life, he personally shall be "for ever with the Lord." To call the two ideas by one name, "Immortality," is at least misleading, though necessary to our authors' scheme.

40. But to continue the examination. No chain, we know, is stronger than its weakest link. The force of our authors' argument must be tested at the junction between the visible and invisible. With their admirable power of exposition they have set lucidly before us this "Law of Continuity" pervading the Visible Universe. Rightly, the unvaried uniformity of Nature suggests to us that it is no accident. It is not simply recognized then, as a fact, or series of facts, which might be otherwise. We could not imagine the absence of continuity in this Visible Universe. But what does this mean? Simply, that if we mark any fact, we look for something previous to *account for it*.

The Principle of Continuity, as we have said, is *essential* also to what has, till lately, been known as the "Law of Causation." Now if we were asked for the distinct difference between the Law of Continuity, as viewed by science, and the Law of Causation, as regarded by philosophy, (the Principle of Continuity being common to both), we should say, that it lies in a different approach to the facts. "Continuity" is palpably seen as we look on the phenomena on this side; "Causation" is a rational view of the same facts, regarded from the stand-point of the invisible. The facts may be the same, but they are viewed from opposite directions. The vast series of visible phenomena are observed in the materialistic philosophy all trooping up from the Unseen, with "forces" behind them all hidden from sight. If looked at *from* behind by a higher philosophy, the series is just as "continuous;" but the "forces" are detected, in their independent vitality, setting all in motion with no preceding continuity to be physically discerned.

41. Each event in the phenomenal Universe is preceded by a force *in full activity*, and the materialist recognizes both, viz. the *inert* event, and the force *in activity*. But what the latent force is, prior to its action at first, and at every point, is the subject of ultimate inquiry to every thinker who aspires to be more than a mere observer, or random collector of facts. The phenomena being the same, the "Law of Continuity" may be a phrase to express "the how," but the "Law of Causation" the "why." But these are not so shown to be the same.

How Continuity is a Law.

Difference of view in Continuity and Causation.

The first action of a force precedes "visible" continuity, and may even in some sense touch the visible. It springs from *the Unseen*, no doubt, but it explains not its previous being, or latent power. The latent *potentia*, in the language of Aquinas, has escaped into act. It is as much a proof of a Universe out of which it emerges, as of the world into which it breaks, giving "no account of its matters." It then begins perhaps a continuous series of activities and phenomena which it dominates very largely; but it would deny itself, if it did not repudiate preceding mechanical "continuity."

Force precedes phenomena.  
We are ignorant of its nature.

So far as experience goes, latent, originate force from the unseen is, by its very hypothesis, something beyond mere contact. It even, at times, seems to defy it. How often, and at what points, "force" acts, whether communicating itself, or repeating intermittently its own action, or else being supplemented by inferior subtle agencies—"demons," as our authors suggest, (as Philo also),—no analysis informs us. We have but to choose between various *hypotheses*, as indeed our authors confess in their ingenuous quotation from Dr. Young.

The physical Universe is shut up within the statement that it *has* an end, and *had* a beginning. That is the sum of facts which the law of physical continuity can explain. The logical inference from that statement is, that the beginning of the physical Universe was not continuous, at least according to the phenomenal use of the term.

42. First, that the Visible Universe did not begin *from* nothing (even though it came out of nothing), is fully admitted by all; next, that it proceeded from an invisible order of things, or beings, or a Being anterior to the chain of phenomenal continuity, is affirmed even by the authors. But if such Being were *anterior* to all phenomenal continuity, he is no part of the continuous order.

Logical inferences from the facts of Science.

That continuous order "begins." We have no reason whatever suggested for supposing that at the expiry of the world's lease of present physical continuity, there will be a renewal on similar terms; nor that the old anterior Force will act again. Neither can we reason back, and say that the Law of Continuity of the present physical universe started, (with all the action of forces, and then energies), as a continuation from a previously expired Universe; for we do not know that. Nor yet that the forces of the Invisible Universe necessarily hold on parallel with this, retaining their own separate life, as well as everywhere continuing distinct *impetus* in our phenomenal direction.

Our authors disclaim metaphysics, but for all that they must not decline to think. To stretch the present Law of Continuity

pertaining to things seen, back into an unknown region of the Unseen, if not a physical contradiction, is a logical *non-sequitur* which the human mind refuses. Here is their dilemma. To deny the distinct *beginning* of the Physical Universe is to remove the alleged scientific conclusion as to its end. When science ascertains that the Physical Universe will really *end*, it unequivocally infers its real beginning. But both end and beginning must be *real*. A Universe that eternally holds on from "thin matter" into "gross matter," and at length "continues" from the gross matter back to the thin, of course had no actual beginning, and will have no end; but is, as they elsewhere are obliged to say, "Eternal."

43. A powerful and even irresistible argument for the "Unseen Universe," and a Creator, does, however, arise from the principle of present Continuity, by way analogy, as between two worlds. It reminds us of Butler's argument. The present *began*, and began out of nothing, but not The argument is one of analogy. from nothing. Some Being, or originating Power, preceding the phenomenal, is the only hypothesis possible, and that is in harmony with the experience we have of "Continuity." But if the present be physically linked to the past, there is no argument for an analogous "Continuity," as implied in Causation. Physical Continuity, if eternal, denies a beginning, denies Creation.

Now, the "Principle of Continuity," (as we actually see it working itself out, and never left quite to itself), asks for "Causation" always, at every point; it even suggests it, as lying at the beginning of every movement, while remaining beyond analysis.

The argument lies deep in human thought, and is there secure. We have seen that it is the *need of causation*, and not the fact of sequence, which obliged the faith in Continuity as a *principle* of origination. From being a principle it became as a law,—but a phenomenal law within the *termini* of the phenomena, à *parte ante* and *ad partem post*. It is a "*principle*" before the phenomenal, and a law within the phenomenal. That law may suggest much, as probable in the realm of thought; but it has no phenomenal holding on the pre-phenomenal. Life's first secret is *admitted* to be beyond the phenomenal and its known laws.

44. The logical conclusion, then, of our authors' argument is almost the reverse of what they deduce. The Law of Continuity does not throw the least light on life, or on "Forces." It does not show that the Unseen Universe is conditioned; nor its "Creator" conditioned. These scientific and theological inferences of our authors, we, therefore, are quite unable to adopt: they are illogical. They appear to be Swedenborg's in the main;

they avowedly proceed on his theory, and may seek to carry out his principles. The unconditioned and unknowable God, our authors say, holds the place as of the Divine Father in the Christian Trinity. The "conditioned" God, who alone communicates with the Universe, is to them a Christ, who always must have been conditioned "Energy," or He could not, as Philo said, have made the worlds. He, it is said, was eternally "conditioned!"

45. But, completing the outline of this supposed orthodoxy, they continue: "Life" and "Energy" are not the same; "Life can never create energy, nor energy life"; so they say there must be another Being, viz. the Holy all-pervading Spirit, the "Giver of Life"; and thus they obtain a "Trinity," partly resembling Swedenborg's perhaps, but not that known to the Christian Church.

The Eternal Father, "Whom to know," we think, is "life eternal," (and Whom we do "know by faith," even now), is placed, as they observe, "as far off as possible," at the remote end of an "illimitable avenue" of duly conditioned Universes. Unto Him the Son, as conditioned, seems to have no access. But the Son, the real Creator, was *always* God "conditioned" as an "Energy" forming the worlds. The Spirit is the "Life-giving" conditioned Being, Who co-operates with the Creator of matter, or Son;—unless, possibly, "matter" be eternal, and only "energy" were created, or developed.

Few Christians—believers that the Incarnation began at the "Conception by the Holy Ghost"—will accept this account of their faith, if nakedly put before them.

46. The foundation of the position of these gifted and respected writers, and, from our Christian point of view, their fundamental error, is their ignoring the "unconditioned." They fail to see that "the conditioned," *ex vi termini*, implies the unconditioned, and that some relation between them is demanded by the fact of rationality. Rationality, limited by the phenomenal, is inconceivable. Various beings are variously conditioned, no doubt; and conscious finite beings are aware of this, and compare these varieties and their differentiations. The conditioned finite conscious being is always comparing what he thinks, says, and does, with some exterior standard, which ultimately is absolute and unconditioned; and that, whether in physics, or morals, or thought.

Finite rationality, and finite moral agency, cannot be even imagined apart from the "true always," that is the absolute, or unconditioned. To stop short, as our authors, on approaching the "unconditioned," and regard it as an impassable

“barrier” instead of a necessity, seems to us, we say not irrational, but actually impossible. For, (as Anselm or Descartes would teach), we conceive of the Unconditioned even when we perversely refuse true relation to it, or communion with it. Or, (as Herbert Spencer says, when affirming consciousness of the Absolute), “Strike out the term *unconditioned* and the argument becomes nonsense,”—“an elaborate suicide.” Our authors “strike it out.”

H. Spencer.  
First Principles, p. 88.

Not having given their great logical powers to any, the least, consideration of the *à priori*, our authors not only establish nothing, but do not even suggest possibilities.

47. The Reasonable, the Right, the absolute Good,—they have avoided as “metaphysical”—and yet religion is their object! Even their so-called “immortality” is (by their physical exposition of the “Law of Continuity,”) really chained to the phenomenal, and dissociated, as far as appears, from personal life, and from all prephenomenal “forces,” as well as from essential Reality.

Neglect of  
the *a priori*.

Immortality, interpreted as a mere law of physical continuance, would, according to our authors, be a holding on from the past, into existence in the present, and hereafter in the future. We are even told of Universes distinct from each other, often keeping parallel at times, or at least co-existing, and so admitted to be not dependent throughout on one rule of Continuity. They have “luminiferous bridges” from world to world, but the connexion partly goes over the “bridges,” and partly runs on side by side. Contiguous Universes,—“continuous” here and there, *per accidens*, but essentially holding apart, except at the semi-invisible “bridges” thus existed as we look backward and backward in eternity, and will exist forward and forward for ever! Thus, instead of teaching us man’s desired Personal Immortality, this evades it altogether, ties us to such conditioned Universes before and behind, terminable and yet not terminable, at least thinning out till we lose the identity of self, which is to reappear, if at all, after the “crash of worlds,”—having worked to some ether-bridge;—or else we lose our real self, our “Ego,” hopelessly, in world after world for ever!

Really to rest on such a Future would need a fanaticism of “Science” (!) as well as a singular “Faith,” at which we pause to take breath.

48. The “Heaven” and “Hell,” however, of these writers come on us with surprise, clashing as they do with their previous theories of thinner matter. Nor do they less strangely stand in contrast also with the solemn realities contemplated by our faith as Christians. (Here, con-

Of Heaven  
and Hell.

fusedly, they again believe, however, they are using the principle of Continuity.) Heaven is, to them, what the Emperor Hadrian's verses represent. But we ask, does that represent the Christian hope? Hell to them, is the Gehenna of "Eternal evil." But the former is very constantly attenuated, the latter very fearfully palpable; the former evanescent, the latter essential.—Is that the Christian belief?—Is "Eternal evil" *thinkable*,—*i.e. ab eterno*?

49. But this subject of Heaven and Hell is scarcely suitable, we must own, to be here fully entered on. It is sure, indeed, to occupy the mind of the next generation to an extent hitherto unknown, and that, (together with our authors having dwelt on it), may justify this brief notice, though it may be but brief. It is to be feared the mental and ethical feebleness of a physical-science age just beginning to feel after first principles of thought and being, will but gradually be aroused to a knowledge of subjects of higher reality, as pre-supposed by the phenomenal, and giving it all the reality it has.\* But we must not delay, or altogether hold back on that account.

What Christianity means by the future, of which it gives warning and threatening, cannot remain always as indefinite as now. What, according to our Religion, is Salvation? and what Perdition? will surely be inquired; and that before long. Christian doctrine on this subject cannot be passed by in silence in an argument for Immortality. If physical science had to delineate an immortality, it ought to have even gone further than our authors into the Personal significance of the Future to which we are physically, if not morally, tending.

The weight and solemnity of the reference to heaven and hell are enhanced by the popular theory as to eternal physical pleasures for the "saved," and torture in reserve for all failures in Probation. A terrible passage involving this teaching, in an article in the *Fortnightly Review*, by a writer so clear-headed as Professor Clifford, simply shows that he has identified Christianity with a thoughtless and uneducated Predestinarianism, and has not learnt our Theology at all. He only knows of a theory which has perverted every article of our faith which it has touched, and furnished rough-and-ready grounds for popular infidelity, in classes of people learning but the alphabet of thought, and stumbling over its first letters.†

\* See extracts from *The Church of All Ages*. Hayes : London.

† See extracts as to Eternal Punishment in Mr. White's *Life in Christ*, pp. 63—73. See also *The Bible and its Interpreters*, pp. 96—107.

50. Christians will (after long forbearance) have in the coming generation to refute superstitions, which yet linger (not in Œcumenical Councils, but) in the indistinct conceptions and justly aroused fears of the Œcumenical *conscience* of the populace, in Christendom and Heathendom alike. The Beatific vision of true saints must yet fill our hearts, and stir our longings for the true heaven. The "Continuity of vengeance" on each soul of man by eternal physical torture, "visions of hell"—(taught whether by Luis of Granada or by John Bunyan), must be openly and finally shown to be, at least beyond the definite teaching of our Revelation, both under the Old Testament and the New.

What God will do with the moral failures of His Creation is a moral inquiry deeply overshadowed by clouds which stir all our anxieties. The thought of it must be preceded by a view of *what a Moral world is?* And forgetfulness of what a moral world is. and what Probation must be? even if we would as much as know our own meaning.

As our authors have no ethical decisions very clearly announced, we must be content at present to muse as to the possible connection between Responsibility and a thinly physical hereafter which is inevitable for all. We wait for their further views in the realm of thought and morals. We point out, that their theology is even more "hazy" than their theory of matter. But while in science they speak as masters, in theology they have yet to become learners. Their theories, at all events, as to Heaven and its Beatitudes, or as to the world of the lost, are not such as Christianity has taught us. Simply in reply, we say, that we think we know that God is our Father—that He is "not far from every one of us," and that "in His presence is fulness of joy" to all who "draw nigh to Him." If we "arise and go to our Father," it is our view that He receives us, clothed in our immortality, to His mansions of joy hereafter. No Physical continuity here will ultimately hold us back from Him. It is God that man's "heart thirsts for," as St. Augustine, echoing the Psalmist, expresses it. It would change our whole religion to put God for ever "afar off." The longing for immortality itself would be gone. It would be a shock, that (to use an expressive phrase), "would break the heart" of the world, to never "know the Father." It would change everything to the Christian, were it to be discovered that Heaven would not be the "Vision of God" for the "pure in heart."

51. Heaven, as Christ taught it, is nearer than our authors

would put it. And, on the other hand, as to the final lot of the *lost*, we plainly affirm (and we know no more) that Retribution will be *morally* complete. The bodily details of demoralizing infliction, which some delight to dwell on, are, we affirm, no part of the Revelation as such.

The "Perdition," and the "Eternal Punishment," are facts—moral facts; but not physically set forth to us by authority. Conscience, after all, is the darkest Revealer of the certainty of the irreparable future of a Probation that has finally failed. The rise and close—the origin and the end of evil, belong to the fact of Moral Agency.

In making a moral world, God had the possibility of its failures as well as triumphs to deal with. But "Eternal evil," as professed by our authors, is, thank God, no necessary part of our faith as children of immortality. As moral philosophers, and as professing the Christianity of 1800 years, we are compelled to reject our authors' view of the essential eternity of evil, when they say—with fearful consistency,—that evil is woven into the *essential* texture of the garments with which the Eternal God, (our Father,) has clothed Himself. On *their* theory it is!

52. There are four doctrines, we may state, variously held, as to the Punishment of sin hereafter. First, that the sinner will be destroyed, *i.e.* annihilated; secondly, that there will, after a time of vengeance, be "Restitution of all things"; thirdly, that there will be eternal, physical or sensible torture; and lastly, Everlasting Punishment of a *final* kind, but adjusted to Moral Agency. —On these theories this is not the place to enlarge. The conclusions expressed by our authors seem distinct from all these. We are free to accept the last of the four.

Nor need we speculate on the modes and conditions of Immortality; for it is probably useless. Certainly the immortality which our authors truly say was longed for always by all men, was not what they describe. No one, we may safely say, ever longed to be an eternal molecule in a luminiferous ether more and more refined. "We," according to His promise, "look for new Heavens and a new earth, wherein dwelleth righteousness,"—seems an entirely different idea. Such a future at any time contemplated by us has an elevating influence on both mind and heart. It recognizes our Personality, but provides for it a real sphere in the life to come. It sets before us the vision of changes which even Physical Science must own may contain a sought-for solution; and yet it has a Moral

Four theories of Future Punishment.

and Intellectual "Continuity," altogether in contrast with what we call physical. Not that we, (any more than the ante-Nicene fathers), argue immortality from the intellectual nature of the "soul." That is far too precarious; but immortality certainly follows from man's having a *moral* nature in essential relation with the Absolute and Right—his having real probation in that nature—to be morally and fully accomplished. Men must, we repeat, think out a *Moral world*, and all it means.

53. Every form and degree of Necessitarianism (even mechanical continuity if it were universal) logically denies moral probation, and reduces it to a name. In the same way (to refer to the four theories above named) "Annihilation" denies a moral world; it is a mechanical end of an ethical creation. So does "Restitution." So does mere "Physical torture." "Eternal punishment," *morally* divided "to every man of what sort he is," is truth, and it is both philosophical and Christian. Of these four theories: the first is Gnostic; the second "Origenistic"; the third Mahometan; the fourth is Christian.

Probation is not conceivable throughout, except on the basis of a *permanent* future to be dealt with. It would demoralize almost all men to put them on a supposed moral trial, with "annihilation" as an alternative. If, again, according to some, (like our authors), the belief of the migration of souls to other conditioned existence, <sup>How the three theories clash.</sup> might assist the thought of a penal future and its uses; yet the notion of "restitution," (so often mingled with this idea of migration), would clash with the entire conception of purely moral, that is, real Personal Probation.

Nor could the argument either for or against the *natural* immortality of the soul, or the resurrection of the body, interfere with the expectation of a Personal future. It could not avert the conclusion that our Self is indestructible, a conclusion deducible from Moral grounds, even if there were no other. The recognition of the future of man is wholly moral in the Christian teaching. And with this we may now dismiss our authors' dreary theory of Physical Immortality, or Mechanical Continuity; on which we may, however, add something in our Appendix.

54. In contrast with all our authors' Eschatology, I may be permitted to refer to the 21st and 22nd chapters of the Book of the Revelation of St. John. The idea of the new "Creation" is to be best found in that imagery. In that transcendental picture, as we look on it, we are set thinking, wondering, and longing. It tells of the "Tabernacle of God with man," whom

He loves; the "New Jerusalem" with its "walls and gates"; the "nations of the saved"; "the kings of the earth bringing homage and offerings thither"; the "Tree of Life in the midst," whose leaves of perpetual freshness shall be for the "healing of the nations."

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APPENDIX TO AN EXAMINATION OF THE BOOK  
ENTITLED "THE UNSEEN UNIVERSE."

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55. PROFESSOR CLIFFORD (*Fortnightly Review*, June 1, 1875) concedes, that the writers of *The Unseen Universe*, with whom he severely remonstrates, "speak from the standpoint of a wide and accurate knowledge of physical science, accurately and clearly expounded, as far as it was wanted" (p. 777), but he proceeds both jocosely and seriously to criticise them and their science. He says:—

"The Unseen Universe, which they defend, lies within the limits of those physical doctrines of continuity and conservation of energy which are regarded as the established truths of science." It is something which is to the luminiferous ether, what the luminiferous ether is to molecules. "It is of finer structure, and receives the energy which the ether loses by friction"—(just as the luminiferous ether receives the energy which the molecules lose).

As we notice the course of Professor Clifford's scientific objections to this work and its authors, we at once learn, perhaps, something as to the value of the religious inferences from the premisses when estimated by a physical science critic.

56. We linger not on the Professor's preliminary objection to the interpretation given in this book of the Immortality desired by man. If, as he supposes, it would satisfy all the historical facts of our immortal longings to say that man simply "shrinks from

Professor Clifford's criticisms.

His minimizing the desire of immortality is an oversight.

death," yet even that would imply that present existence is felt to be a good. But the Professor overlooks the fact, that there is in us a desire for the Future itself which would gladly reach *beyond* the present, even ignoring the present. This we pass at present, for we are free to acknowledge, and have already shown, that the immortality longed for by man is not that which is the outcome of physical speculations as to the "Unseen Universe." No one ever longed for that Hereafter which the book before us delineates. The survival of our Self in a quasi-perfect fluid (hitherto not met with) amidst vortex-rings, by means of a spiritual body (which we always have without knowing it),—an "*alter Ego*" of the present natural body,—is a breach of the law of physical continuity at once, in favour (as we understand it) of the Swedenborgian law of "correspondences."

The authors of this work are open much more painfully to a charge brought against them, that they "make their chief deity impersonal." Certainly, with them, God seems only personal so far as He is "conditioned," which the Eternal Father is not. Professor Clifford rather welcomes this position; and, indeed, we can hardly wonder at it, since he identifies the Christian Theology with the "awful wickedness which the popular legend ascribes to its deity," described by the Professor in terms too uneducated and revolting to be worth quoting. His views of theology uninformed. (See ante, p. 38, § 49.)

57. But now as to the "science." For the sake of reference, we will here keep as nearly as possible to Professor Clifford's order of criticism in his article.

Everything would seem to depend on the particular theory as to the "*loss of energy* in the luminiferous ether" adopted by the writers criticised. (Sir W. R. Grove, we remember disbelieves altogether both the "fluid" and "ether.") Even the "fact" itself, though "proved" by Struve, has been subsequently disproved" by Argelander. Even if we accept the "probable" account of the "fact" of ethereal friction preferred by our authors, there are two other accounts deemed by Professor Clifford "equally probable," which would interfere with the inferences so doubtfully drawn (p. 776, first paragraph, and p. 778, third paragraph). His exposing the various and insecure conclusions as to the "Loss of Energy."

58. Our authors do not quite adopt Thomson's theory of the vortex-rings in a *perfect* fluid; they find that they cannot proceed without an imperfect fluid, how slight soever the imperfection may be. And for this reason, viz., the supposed perfect fluid is, of course, absolutely incapable of friction; and our authors' theory

His criticisms as to the imperfect fluid.

needs, at all events, a little friction. It is probable that molecules and ether are "of the same stuff." Molecules are coagulated ether; but Sir William Thomson's perfect fluid is not made of molecules at all. It is something which does not exist. How slight soever be the friction in the imperfect fluid, we are wholly unacquainted with the precise law of the action of molecules in it, so that we are not advanced one step. But probably wherever there is an atom there is an electric current. This hypothesis, if admitted, may at least explain many of the properties of atoms; and if we find that it will not ultimately explain all, we may yet say that an atom is a small electric current,—and something else besides. But after this, Professor Clifford admits (with a boldness worthy of imitation) that "these questions of physical speculation about a metaphysical question" (p. 778). We were beginning to think so. He even ventures to ask whether there is any object external to our minds, corresponding to what we call "molecules" and "ether"? Any how he has shown that the foundation of much of our authors' theory is but faintly probable "science" in too many respects to bear the weight of their theological conclusions.

59. The fact that matter, as a phenomenon, is not "to be increased or diminished," the Professor continues, "has nothing at all to say to the question about the existence of something which is not matter." This surely is honestly and bravely said (p. 778); and he adds that there is nothing to assure us, that the laws of motion and Conservation of Energy are "always and everywhere true." Surely the wonderful thing after this is, that Professor Clifford envies the writers of *The Unseen Universe* such foundations as they have chosen for their theology. "The right statement," he says, might be, that the Conservation of Energy was only a very near approximation to the fact. The doctrine of Dissipation surely shows this (p. 779).

60. But Professor Clifford does not allow the "Second Ether" of our authors to escape so well. A molecule travelling through the ether vibrates. Its energy of translation becomes energy of vibration. This molecular disturbance agitates the ether. This transfers part of the energy to a second ether, and so on. As there is no reason why vibratory motion should not be transferred into other kinds of ethereal motion; and no reason why it should not go to the making of atoms, (and of course, no reason why it should), the Professor "presents this speculation to anybody who wants the Universe to go

Question as to the existence of something which is not matter.

His criticism as to "Second Ether" and its contents, "Human Consciousness."

on for ever." But, it is rightly asked, are we really to *build* on this supposition the theory that in ether beyond ether there exists that "spiritual body" which receives our consciousness, when our natural body is dissolved, and links our past with an ethereal future, and so secures to us a Personal Immortality? The practical conclusion surely is large for such shadowy premisses to sustain (p. 790).

61. In this passage the Professor treats our Consciousness as a term expressing the unity and *simplicity* of what we call the Personal "Ego." In the next, he affirms its *complexity*; and thus at least contradicts our experience, if he does not destroy also the force of his previous *argumentum ad absurdum* as to the Spiritual body making its appearance in the "second ether." His reason for asserting this complexity is that consciousness accompanies its various organs. But that would seem (especially as consciousness actually outlives many of its instruments) to be rather a reason for its *unity*. His doubts as to the unity of consciousness. The individual has not many consciousnesses; but consciousness to each of us is one Self—it is our very own.

After this, however, the Professor leaves reason, and has nothing to do but to go off into banter; in which few would be so unwise as to follow him. He even suggests, with Von Hartmann, that while consciousness "cannot be left out in a fair estimate of the world, it may be the great mistake of the Universe, and not unsuitably left to the care of the *devil*!"—Is this sincere? Is this earnest writing?—Professor Clifford would not wish to be here judged as a scientific thinker. He can do better than that. Perhaps he would prefer our referring to his eloquent description of the course of life as unconscious,—which seems to be his *ultimatum*.

We will give him all the advantage of quoting his picture of what may be called the poetry of existence without consciousness.—"Consider a mountain rill. It runs down in the sunshine, and its water evaporates; yet it is fed by thousands of tiny tributaries, and the stream flows on. The water may be changed again and again, yet still there is the same stream, but at last even the weariest river

Winds somewhere safe to sea.

When that happens, no drop of the water is lost, but the stream is dead" (p. 791).

62. In a note at the close of Professor Clifford's criticism, which we must not omit, it is admitted (and endorsed apparently by the Editor) "that there was some initial distribution of Heat which *could not* His doubts as to the final agency of heat.

*have resulted*, according to known laws of the conduction of heat, from any previous distribution." According to this, Professor Clifford's science has no alternative theory to propose to that of the "Creation" of all things from nothing. And as to the "conclusion of all things" he is not prepared, on other grounds, to say whether it will come from heat at all? It may be, he says, from cold. The earth may fall into the sun, *after* it has cooled. (p. 793).

63. We accept much of Professor Clifford's criticism as just; but we must not therefore conclude that the work of the authors of *The Unseen Universe* is written in vain, even though so many links in their argument are in themselves weak, and gaps between some of them destroy all its continuity. The work itself gives a kind of landing, where we may take breath in the controversy as to "Life," which physical science has often carried on with philosophy and religion, with so much pretension. It has, not unfrequently, been difficult to fix the popular-science lecturer to anything but experiments and "imagination." But the undisputed confession of these clear and competent writers, and no less of their clear and competent critic, at least disposes for the present of "Abiogenesis." Life and force and energy are at last *admitted* to be (as theologians have always said) beyond physical science, and all its analysis. The sceptic must rehabilitate his old materialism as an instrument for rejecting Causation; and the fatalist must no more rely on "necessity," or on predestination, as at all accounting for the phenomena of Life or Responsibility. We are told, beyond dispute even among men of science, how far the physical Law of Continuity can go. It is a great gain. We have turned a corner in a tiresome controversial by-way, and are now in the open road. Our authors have set up a true landmark. For all hesitating and troubled minds tempted to mere Materialism, there is a real advance of position in the pages before us. Their open and unreserved rejection of Abiogenesis,—their feeling after an Ontology and Theology, as a kind of need of all ultimate thought,—their detection of the material boundary, and the *look beyond*: all these constitute this work as a definite gain to truth. Henceforth, the philosopher, and possibly the theologian, has facts to deal with and work to do, as to which Materialism is confessedly powerless. When the Materialist becomes anything more than mechanical he enters another region, a region where he meets

Points are made by Professor Clifford.

But important work has been done by the writers of *The Unseen Universe*.

with previous explorers and fellow-travellers—children of faith and thought, from whom he must own he may have something to learn. We now part, however, with Professor Clifford.

64. It is not to be disguised that there is much that is unsatisfactory in some vital parts of the Scientific statement given us.

That "Matter" may, according to one hypothesis, be *nothing*—the stuff of the whole Universe being all "matter" and energy,—is "hazy" indeed; (while by others we are told that matter contains the "potency of all things.") Then, as to Continuity. It is properly enough expressed as the natural expectation of all Rationality. But this implies much more, of course, than continuity of *form*. Our Rationality expects a continuity, including the idea of *Means and End*. This is too little noticed, by far; indeed not directly so at all in this controversy: it is slurred over. Take this away, and our Rationality is as much "confounded" as it would be by the denial of Continuity altogether.

But the Law of Continuity is imperfectly stated by the authors.

If the very confident tone of later science has, as our authors intimate, been unworthy, surely the acknowledgment should have been accompanied, in such an argument as theirs, by a little more hesitation as to conclusions deduced from such very indefinite premisses. Again, when physical law has been admitted entirely to fail to account for the production of life, is it at all right to resolve that physical Continuity *shall* be assumed as the condition of life? To resolve that physical, though attenuated, matter is the basis of the Invisible or Unseen Universe, which yet lies beyond all physical experience, is at least, we once more say, gratuitous.

Again, if all we know of the constituents of the Visible Universe be called molecules and ether; and if molecules be but coagulated atoms, and matter nothing, as Faraday inclined to say, but an imaginary centre of "relations," then (even though Professor Clifford's question be wholly set aside, "whether molecules and ether represent any object external to our minds"?) this ought to be some check to the very knowing-seeming way in which the motion of molecules is constantly talked of, as if men of "Science" understood all about it.

65. Or again: If "Ether" is thought to be coagulated "molecules," molecules to be coagulated "atoms," atoms (if anything) to be "electric currents," or to convey them; if "Perfect Fluid" is not made of molecules at all; (and so may be hard for the mind to distinguish from a perfect void); how are "matter" and the "fluid" related at all?

And the scientific theories are at least incomplete.

If space "were full of the perfect fluid," and if there were "vortex-rings," and if they once got into "the perfect fluid," some of the phenomena of matter, it is said, might be produced; (and if some, why not all?)—Can we say that all these closely-arranged hypotheses are true and solid science?

The theory of the "Conservation of Energy" is, we see, an "approximation to the facts." For there is also, a "Dissipation of Energy." A place then must be found for the "dissipated energy"; something of the kind is needed—give it a name, call it "luminiferous ether." Possibly then a luminiferous ether receives the lost energy of the molecules? But does the luminiferous ether, being material, lose its *own* energy by friction? Where then does its so lost energy go? Perhaps at length to another ether, and then another, and finally to an "Unseen Universe"?—Shall we add, "*Therefore it is so*"?

Surely reasonable people will think that conclusions, scientific or theological, from these disjunctive syllogisms, or, perhaps, sorites, should be modestly suggested at all events.

And inadequate for the conclusion.

In the Theological inferences of our authors we have found a hopeless confusion of the Phenomenal and the Absolute, such as leads to a doctrine of the "Eternally-conditioned Divine Sonship,"—a theory of Philo and of the Gnostics, which led Arius afterwards, not unnaturally, to assert that the Son was a Created Being. But this is a small part of the misconception of our Religion displayed by our authors; and this, I shall be reminded, is not the place to examine religious theories—theories I say, for they have many. Let us notice but one more; their view of Miracles and Power.

66. Our authors' half-avowed primary *conception* of a Miracle (as "an exception," p. 190), really seems to be that it is, on purely physical principles, a breach of Continuity. The modern view generally, indeed, is this, that a Miracle is something *unaccountable* on the ground of natural law; and that it takes place in consequence of a super-natural or extra-natural interference from the Unseen. In this way Paley uses it, when he takes a miracle as a proof of a Revelation. It is something from which we may infer the existence of a Higher Power at work in the invisible. Reason, he thinks, must be distrusted if it rejects "Revelation" as unreasonable; because reason infers a cause for a given miracle, said to be wrought as a proof of the Revelation. Such an argument has in reality little coherence; for it appeals to our inferential faculty, after it has refused and confounded it. It asks us to transfer our Rationality to a second

Theory of miracles.

sphere, when already baffled in its first. It also contains an assumption of fixed law in a phenomenal sense, (the sense of sequence), as a necessity in another order of being. It is, perhaps, a latent denial of a real and *distinct* Causation, under the semblance of asserting it. If "law" were a sufficient account of "agency," the argument might be good; but law does not account for agency at all. Law is nothing but an abstraction which represents "sequence"; until we superadd "agency," which is a different idea from law altogether, and introduces a cause.

67. Dr. Mozley is in the same snare as to the idea of a miracle; and so is Dr. Mansell. They assume, and so does Hume, (and so all the Scotch school), that our inferential power can be appealed to, after our Rationality has been set aside, and inference denied; which seems absurd. Now Divine Revelation, regarded as a "light from heaven above the brightness of the sun," is intelligible. But the idea that God first makes a communication "confounding the intellect," and then does something else that we cannot account for, in order to "prove" to our intellect that that communication is true,—is somewhat hard. Indeed, for God to work a miracle to prove something to us, or for God to act, and then to prove, *not by the act itself* but by something else, that He has acted, is at the least circuitous.

Miracles prove themselves; Revelation must prove itself; and Christ, in saying, "Except ye see signs and wonders ye will not believe," rebukes the thought that a high faith, as an inference, must come from seeing miracles; much less from proving historically that other people saw them 1800 years ago. Our Religion, says Origen, speaks for itself. Divine Authority addresses conscience. Our authors imagine that all except certain later theologians (p. 60) regard miracles as violations of the order of nature; if they will examine somewhat further, they will find a higher idea in St. Augustine, and in St. Thomas Aquinas, to whom I refer in another place. (*Bible and its Interpreters*, pp. 182 and 239., &c.)

68. A higher conception of Miracles than our authors' would lead to the much-dreaded "metaphysics," and border on a discussion as to the Absolute and the Phenomenal, and the Cause, conscious or not. Not that our authors can really escape metaphysics at last—(as Professor Clifford intimates, and they themselves half own). The innocent observer, who had always "spoken prose" without knowing it, may fairly represent the fact that every man is a metaphysician, if he only

*tries* to direct his thought *rightly*. His choice only lies between being a good metaphysician and a bad.

As to the more theological *discursus* of our authors we may now spare them, as they do not wish to be thought "theologians of any school whatever"—a wish which they perhaps succeed in gratifying. But we ask, what would they think of men who wrote about Science, and did not wish to be "Physicists of any school whatever"? Metaphysicians, however, they really are, directly they enunciate the simplest of their propositions. Would that they would continue their metaphysics, and think on!

69. Finally; the proposition connected with every view of miracles and causation, that every phenomenon implies a "power" (p. 47), seems to concede all that theology demands. But the proposition that every finite intelligence must have material "embodiment" (p. 47) equally concedes all that pure materialism needs. It is wonderful that the two propositions can be found in one page; for a finite intelligence we suppose is a "power," of which phenomena may be results, or to which phenomena may be known. To say that every finite intelligence connected with this universe has material embodiment is to assume at once the theory of Materialism, as that which alone is "conceivable" (p. 48). But our authors say they conceive of this "material embodiment" as essential for a finite intelligence, though they afterwards own, that they have no conception of matter itself—except of the most "hazy kind." According to one fairly accredited theory, it may be nothing but a point between relations, (p. 102), and in another view it must "probably come to an end"! In analyzing the embodiment of finite consciousness however, they admirably confute the materialists' theory of consciousness,—distinguishing between phosphorus in its common state, where it may be examined, and phosphorus in the brain, where it cannot be examined. Yet here also they are to us quite inconsistent, if they say that potential or latent consciousness requires "material embodiment"; and this is what their argument needs, unless that consciousness may exist in the unembodied, or (as they say) unconditioned finite intelligence. (Compare p. 52.)

The paralogsms which abound in our author's pages cannot be unfelt by themselves, when they contemplate and compare "powers," "forces," "energies," "*vis viva*," and "inorganic agencies" (p. 127), all so closely bordering on each other, and so imperfectly distinguished. This may of itself account for the quick instinct with which they avoid "metaphysics,"—in other words, persevering and exact *thinking*. Their entire miscon-

ception, too, as to the "absolute," as if without existence, though it must needs be at the foundation of all being, is remarkable.

70. They speak, for example, of no events taking place which would "finally, and for ever, put to confusion the *intelligent beings* who regard them" (p. 60);—not noticing the previous "absolute," thus implied. They rightly deprecate such *intellectual confusion* that "an *intelligent being* will for ever continue baffled in any attempt to explain phenomena, because they have no physical relation to anything that went before, or that followed after"—(p. 61); thus again assuming the absolute. They "have perfect trust that God will work in such a way as not to put *us* to permanent intellectual confusion" (p. 62). In all such expressions, which indeed give us their fundamental reason for the Law of Continuity, and are of constant occurrence, our authors do not seem to observe that they are admitting "intelligence," "intellectual" beings, "us,"—who are powers lying beyond the "material," powers who cannot with impunity be disregarded, but must be treated as having a voice in the expectation or order of things, and so are in relation with the absolute. These intelligences they say, have "the duty and privilege of grasping the meaning of all events that come before them"; (p. 63), and, they ask, "do not all terrestrial occurrences of whatever nature, form that material upon which *the intellect of man* is intended to work—that earth which man is commanded to subdue?—a command," they finely add, "equivalent to victory?"

Well then, why do our authors turn away so often from this more than material being, this power, force, (which Sir W. R. Grove says, "cannot be annihilated" (p. 16)—or, this intelligence, that *must* be respected, and is apparently ever watching, in permanence, the whole physical order of things, as a Superior? Why do they seem to assign to this distinct being, no more than, after all, a "conditioned," or semi-material continuity of being?—Is it that useful "dread of metaphysics?"

Whenever scientific men, or commercial men, or any men, turn away from what they call "metaphysics,"—or thinking out conclusions to their end,—they in truth are imagining, that "God has put us to permanent intellectual confusion."

*The Fourth Edition, Revised and Enlarged, of "THE UNSEEN  
UNIVERSE."*

This Edition has just come to our hands ; and it is a duty to examine any points of difference, and place it side by side with "Edition III.," which we have hitherto used.

P.S.—71. We have read this new edition with considerable satisfaction. The course of the argument is exactly the same, but the sense of responsibility under which the writers (no longer anonymous) announce their views has given a maturity to some of their expressions, which anticipates objection, in some cases (p. 16), and imparts precision throughout. The anonymous editions take up far more the position of outsiders ; the present, with the more courageous and distinct moral avowals of its new "Introduction," throws a purer and clearer light on the meaning and intention of the work, as a check on the over-weening materialism of the day. A real check it certainly is ; nor—which is important—do its authors wish to insist on its theological inferences very rigidly, but, rather, acknowledging unfamiliarity with exact theological science, only indicate certain *directions* of Religious thought as not impossible, without speaking definitely. This was mentioned in the preface to the second edition, but it becomes felt in the fourth.

72. The more noticeable portions added to the argument in this fourth edition are those connected with the atomic theory. In the former editions we had such assertions as these, without anything sufficiently to relieve them : "The Visible Universe, after its production, is supposed to be left to . . . certain inorganic agencies, which we call forces, in virtue of which its development took place."—"As the various atoms approached each other, in virtue of the forces with which they were endowed, other and more complicated structures took the place of the perfectly simple primordial stuff" (pp. 127 and 128). This might seem to point too favourably to the theory of matter being alive. In the fourth edition, the authors distinctly attack that theory with vigour and success. Still we have to complain of obscurity in all this part of their statement (p. 104).

They mention, for example, Le Sage's theory, as if it might be not impossible, that forces which set in motion the

molecules of visible matter are derived from the Unseen Universe (p. 146), and yet they refer to Clerk-Maxwell's demons as "essentially finite intelligences," who, without spending work, could restore energy in the Visible Universe. These hypotheses seem to be quite incoherent. Our authors tell us that matter and life are both "developed from the unseen, in which they existed from eternity" (pp. 159 and 188, ed. 3); and then they think there is an intelligent agent who develops energy, and a similar intelligent agent who develops life; and, we suppose (though we are not precisely told), that, being eternal, they act simultaneously? (or, is "life" antecedent to "energy"?).—And as to "forces," which give rise to transmutations of energy (*edit.* 4, p. 199), they also "come from the unseen." Yet we are quite unable to reconcile with this the assertion that we "have no proof that force proper has objective existence"; and probably there is "no such thing as force, any more than there is any such thing as sound and light" (p. 104, *edit.* 4).

If this means that force is only a result of certain molecular conditions, there would seem to be the same objection to it that lies against the materialists' view of the rise of consciousness (p. 75). They say that there is no evidence for identifying life with organization; but is there any to identify original force, as such, with organization?

73. There is something, however, almost intolerable in the repeated assertions, in the last edition especially (clashing with Newton's second interpretation of the third Law of Motion) (p. 77, 3rd *edit.*), "that force is nothing," and yet may be represented as "an endowment" of something else, which may exist, and yet "without *doing anything*." Why suppose these "brute forces" at all—these "inorganic forces," or, these "endowments," or "demons"—whether Clerk-Maxwell's or Sir W. Thomson's, or Malebranche's, or Le Sage's, or Herbert Spencer's "power," or the old-fashioned imaginings reminding us of Celsus, or the Gnostics, as to similar *δυνάμεις* and *δαμόνια*. Herbert Spencer's are, we observe, tacitly withdrawn from the "fourth edition";—but why? (p. 72) There ought to have been a full explanation of the suppression of the statement that "every phenomenon implies a power"; and of some other suppressions (as p. 158).

Nor is the rough saying, that to speak of the "Persistency or Indestructibility of Force is unscientific," at all satisfactory or sufficient. Sir W. R. Groves, in the work referred to by our authors (*The Correlation of Forces*, p. 16), says that "force cannot be annihilated." Groves uses this term Force now partly inhibited and partly and capriciously used by our

authors), as meaning "an active principle, inseparable from *matter*, and supposed to induce its various changes" (p. 10). He speaks, not quite consistently indeed, of an "*ultimate generating power*" of such forces as belong to light, heat, electricity, magnetism, motion, and chemical affinity" (p. xiv). This however was not only his language when we heard him some ten years ago at Nottingham; but in his recent edition of his work. It did not pass as "unscientific" then. We were, and are, of course, far from adopting it.

74. The objective element of the Universe, according to our authors, is Energy (p. 176, *edit.* 3); and intelligence, and life, and force, are apparently regarded as non-objective. Whether matter be objective—though it is the vehicle of the energy, it is really hard to say. It becomes difficult too, to ascertain whether there are forms or energy which exist unassociated with matter. The universe of atoms, it is admitted, "certainly cannot have existed from eternity" (p. 9, *edit.* 4), for the atom has the look of a manufactured article; but the "primordial stuff" from which atoms are manufactured is eternal; and thus atoms are developments from the Unseen. What the molecular constitution of the Unseen Universe may be our authors do not say, beyond this—that the "same stuff" goes to the making of the "unseen and seen Universe" (p. xv, *edit.* 4, and § 262). To which section of the universes, Energy, or Life, may belong, must seem comparatively unimportant, if nothing exists but the same stuff.

75. One admission of our authors in this last edition is remarkable, and we wonder that they do not see how far it reaches, as a disturbing element. It is this. "In former editions we have given undue prominence to the argument for the Unseen, derived from the future degradation of the energy of the present visible universe." If the doctrine of the Dissipation of Energy be hesitatingly relied on, a startling number of our authors' inferences are seriously affected. On the other hand, if it be logically admitted, the doctrine of the Conservation of Energy must be re-stated. Our authors, however, are so much more capable of dealing with this matter than we are, that we will not dwell on it, in the present state of physical problems.

76. We will now conclude, by turning to the Theological suggestions of this work, which in the fourth edition are but little alleviated. Our interest in the whole volume has been a religious one, and must remain so. Its great value is, that it has driven Science to Philosophy, and will compel physicists to be thinkers, or to be shut up as hitherto, to "intellectual confusion."

The fundamental question for our authors to consider in

theology is—whether the Christian conscience has ever accepted their view, or Swedenborg's, as to the Eternal Father; viz that He is neither "known nor loved?"\* Whether the passages quoted by them, as to "the Eternal" being unseen and unapproachable, have been ever understood as shutting out the vision of God from His saints?—The Christian schools no doubt affirm that God is not "*per se notum*"; but that "to know Thee the only true God," and "Jesus Christ Whom He sent" is eternal life; and that to "love God, whom we have not seen," is our future hope and joy. The Christian Church has never doubted this.—"The Spirit searcheth all things—yea, the deeps of God."

And now that such minds as those of these authors are seriously turned to religious philosophy and theology, we cannot but augur a clearness of eventual conclusions, of which, indeed, the present volume gives no sign; (simply because the authors have not hitherto been "theologians of any kind.") Our Lord's "Our Father which art in heaven" leads us at once to the Father. And does not our Lord's last action, which we are to continue "till He comes again," "show forth His death," to the Father in heaven, as well as to us on earth?

77. In true "access to the Father" by the Spirit (without which there is no "Grace of Christ, no Love of God, no Communion of the Holy Ghost," in the sense made known by the Incarnate), there is even direct knowledge of God by faith; and our authors seem to catch sight of this truth in a

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\* The idea is so ingeniously relied on by our authors, that the generality of Christians accept a mysterious Trinity in the Godhead, so as to make way for the hypothesis (based on a few texts), that the Divine FATHER can never be known, approached, or loved by us, that it seems right to point out the completeness of this misapprehension. In this country, probably, there is no sect or party of Christians to whom such a thought would be tolerable, except the Swedenborgians. In the Church of Rome it would be condemned as contrary to the foundations of the faith, the highest worship being always offered to the Father through the Son. In the Church of England, nearly every Collect in her Prayer-book, (and scarcely less her whole Litany,) and without doubt her Eucharist, is directed to the Almighty Father. Even the most isolated and independent of "Evangelical" followers of Scripture would aspire to be led into "the knowledge of God," and "the love of the Father"; while among those who are termed "broader" believers, the "Fatherhood of God," and our love towards the Father, are taught with emphasis. Indeed, Christ's rebuke of the unbelieving Jews that the "love of God was not in them," is apparently regarded by the Apostle who recorded the words, as equivalent to the "love of the FATHER is not in them." (Comp. St. John v. 37—42, and St. John iii. 1, and iv. 8—14.)

beautiful passage, in which they speak of some Christians, in devotional conditions, having at last actual glimpses of the Unseen (p. 255, &c.).

But the sections of this volume which call for most recognition are some in which the Law of Continuity is by means of memory carried on unto the moral future. This moral continuity implies so much more than is said of the identity of "the Ego" (referred to so unequivocally in the new Introduction), that it ought to be fully acknowledged. But it is here most specially that we should hope that our authors will hereafter fully think out the only logical conclusions, as to conscious intelligence, and a moral world.

79. Minds, indeed, too exclusively occupied in scientific pursuits are not only apt (as Sir William Hamilton said) to be disinclined to logical exertion, and to content themselves with symbols, but may even acquire an incapacity for philosophical ideas, and can persuade themselves to turn aside from all investigations of the grounds of thought which precede the conditioned; and they become involved in "hopeless intellectual confusion." They cannot conceive of a Contingency; although without such a conception not only the universe, but God Himself, must be regarded as necessarily and eternally fixed, as to every detail of act and being. If sometimes they seem to leave a space for the free action of an originating agent, they do so illogically; not seeing that one single contingency, really such, is sufficient to vindicate the conception of any number of contingencies, *i.e.* possible events which may or may not be, and cannot be known beforehand in *any of the modes of finite knowledge*, though included in the Infinite. To introduce the element of certainty into the knowledge of the future, is at once, *quoad hoc*, to make the knowledge finite, and affirm the thing known to be no real contingency. To say "that the choice of one being is not affected by the knowledge of another, is true; but it is an evasion, because both the knowledge and the choice are in *every detail*, from moment to moment, for ever fixed, if the hypothesis be admitted that there is no real contingency. No real "contingency" means materialistic necessity, *i.e.* no real *agency*; every seeming-agency being but a form of the latent energy of the whole necessary Universe. Now physical science itself is not satisfied with this. It asks for agency, it asks for "Life from the Unseen."

80. Since then, the Law of Continuity, as already pointed out, becomes mechanical, without the admission of something *more*, why should not that something have a name? Clearly it lies beyond the visible; but it has existence, and is not only

real, but is the most essential being, the *sine-quâ-non* of the universe. It precedes the conditioned,—it has no embodiment, any more than the Absolute has.

So, again, Consciousness may be, and often is, conditioned ; but it must be previously conceived of as unconditioned ; or else there is intellectual confusion again ; and that too in the case of finite consciousness. For the term “finite” cannot be said to “condition” the consciousness, in any other sense than that in which every act of the Eternal Himself is distinct as an act. And the same is to be said of Life, Force, and some kinds of Energy also, without some of which the Law of Continuity would describe mere sequences, and be a chain of sand ;—which, indeed, some of the recent arguments for Miracles would make it.

81. If indeed the “general belief of Christians,” which is somewhat relied on by our authors, be fairly consulted, it will be found that a true Law of Continuity, both morally and spiritually, is vital to us. According to the usual interpretations of Christendom, there is a law of corporate continuity pervading all the “new creation in Christ” ; and whatever may be said of Life, Forces, or Energies, or the transmutations of energies, or even “luminiferous bridges,” in the Natural order of things, may have its parallel (as P. Ventura says) in the order of Grace, and in the Hierarchy of the “Kingdom that cannot be moved.”

It will be an auspicious day for Theological Science in England, when such minds as our authors’ are vigorously turned to this whole subject, with the resolute conviction that we are not to be shut up to “hopeless intellectual confusion,” as to the highest problems of thought and being.—It is to this they now are challenged.\*

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The CHAIRMAN.—I am sure our thanks are due to Dr. Irons for his exceedingly interesting paper. After the reading of a communication from the authors of “The Unseen Universe,” it will be open for those present to offer remarks.

The HON. SECRETARY then read the following communication :—

“As the subject of discussion is one in which we take a great interest, we may be allowed to say that we are not quite sure the point of view of the authors of “The Unseen Universe” has been rendered sufficiently clear.

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\* On these subjects “Life,” “Power,” and “Force,” I would refer to Vol. VI. of the *Transactions of the Victoria Institute*, p. 304, and Vol. IX. p. 366 (in which Crystallization also is noticed). And I may further add, Vol. VII. p. 145,—where what is said on the human brain, and on the muscular and nervous systems, may be compared with our authors’ views of Physical Memory.

"It appears to us that scientific logic points to an unseen universe, and scientific analogy to the spirituality of the unseen.

"We have great difficulty in believing that science can do more, and think that with regard to any further knowledge of the spiritual side of the unseen we must rely upon the testimony that has reached us from this region—or in other words—Revelation.

"There is thus a species of testimony which is entirely above science, using the word in its usual acceptation. The only question is whether along with this testimony we have not certain references to a region of things which perhaps scientific thought can approach to, and whether the two statements are consistent with each other. This possibly is a point on which different minds will always differ—to our minds there is a strong consistency between what may be called these two accounts."\*

MR. W. E. W. MORRISON.—I have read the book entitled "The Unseen Universe" with very great care; and I have also read Professor Clifford's article upon it in the *Fortnightly Review*. In the first place, with reference to Dr. Irons' analysis of the book, there was one point which he did not appear to me quite to grasp. In reference to a breach of continuity in the creation of matter from a perfect fluid, he accuses the author of adopting the theory of Sir William Thomson—the theory of vortex rings in a perfect fluid.

DR. IRONS.—No. I said they hesitated to adopt it.

MR. MORRISON.—Yes; but you say they do nearly adopt it, whereas they do not adopt it, but put it aside for a theory of their own. They say that we were developed out of an imperfect fluid which forms the unseen universe around us, and that that unseen universe is generated from another, still more refined, and so on, until we are led up finally to the Creator. But Dr. Irons does not lay sufficient stress upon one important fact, namely, that however far these writers go, their theory leaves a breach of continuity at the point where the highest universe in the ascending scale connects itself with the Creator, although they say that such a breach is unscientific. If, they say, the unseen universe is conditioned, the Creator cannot have formed it directly, because He is unconditioned, and such a thing would be a breach of continuity. Dr. Irons denies that the principle of continuity holds for ever, and that is really the vital question. If the believers in the scientific principle of continuity maintain that it is infinite, they never will find any position in which they can meet those who take the religious side. No one taking the religious side can accept any theory which denies the possibility of a breach of continuity. In treating of the miracles worked by Christ upon earth, the authors try to get over the fact that they are breaches of continuity, and they get hold of something like Malebranche's occasional

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\* "The authors of 'The Unseen Universe' do not homologate Dr. Irons statement of their purpose."

theory of the interposition of God. The Creator is able to anticipate certain points at which there will be apparent breaches, and in the form of the Second Person of the Trinity, He comes in and performs acts which are not really breaches of continuity, but which appear to be so. I do not know if I have grasped the meaning of the authors, but that is the only explanation I can arrive at as to their theory, when applied to miracles. It appears to me that there is another attempt to join the three Persons of the Trinity in their action, which results in bringing in things which are totally incongruous, namely, where the several functions of the Trinity are made to represent different phenomena of matter and energy. There is one point which I should particularly like to bring before the attention of the meeting, and that is with reference to the disposition of energy. The theory of the book is, that the whole visible universe, matter, æther, and all, must come to an end. There is a constant change from one kind of energy to another—kinetic and potential—but there is also a loss of energy which is laid on the shelf and cannot be used again. Now the writers of "The Unseen Universe" have taken up some experiments by Clark Maxwell, and they suggest the possibility of energy being renewed after it is apparently dead. I should liked to have had this discussed from a scientific point of view, because they do not appear to me to have proved their case. They represent Clark Maxwell, with reference to energy in atoms, setting to work by means of imaginary "demons" opening and shutting little doors in a firm partition whereby the atoms are compelled to work. But I object that these "demons" are actual external forces, for I maintain that the authors of the book, so far as their own theory leads them, must arrive at absolute deadness of energy, and I think the immortality they promise is nothing but annihilation. There was one point on which Dr. Irons was not altogether satisfactory to me. He objected to the Creator being put off for so many universes, on the sentimental ground that the Christian would never know his Father. Now, if you arrive at an unconditioned universe you arrive at intellectual deadness. To say that a Christian is to arrive at that, and is to go no further, is to offer him nothing better than Buddha's annihilation, but the authors of "The Unseen Universe" do offer at least a perpetual eternity of conditioned universes one above another, and I cannot myself imagine a more entire fulfilment of all the desires of Christians than that of perpetual growth from one state or condition to another and higher state. (Cheers.)

Rev. Dr. Rigg.—I have listened with great pleasure and satisfaction to the remarks made by the gentleman who addressed us last. One cannot help feeling, in reading the book entitled "The Unseen Universe," that we have in it a singular reproduction of very ancient theories and terms—that, in fact, it is a form of Platonism reproduced. You have the ideal world invisible, but from which the whole visible world has come forth into concrete form and existence, and that ideal world is the abode of the originals of all things—is the fountain and cause of all things—is the kingdom and realm of all that is good and beautiful—and holy and eternal. Therefore, I say, we

have here a singular reproduction of ancient Platonism, though no doubt with a certain Swedenborgian light and colouring. Positivism is but a confession—an ignominious, ignoble confession of incapacity in the direction of all the nobler and higher attributes of our being. We cannot be content with simply acknowledging and cataloguing and classifying the facts. If we are to go into the world of causation, we cannot help going more or less into the spheres which these speculations bring before our view; because we have to collate our conceptions of that invisible world of causation with the world of phenomena and of effects, with all the varied wealth of scientific fact which scientific discovery has brought before our view. That wherever science meanders we must more or less have around us a margin of the invisible causal region, which must correspond with the meanderings, infinite and everlasting, of that scientific world. I myself hold that there must be a sphere with which this invisible sphere is implicated and intermingled—that there must be an unseen universe essentially related to this visible universe, anterior to it, at least in our conception, and transcending it; and which belongs also to the everlasting existences which lie around it: and I cannot help thinking that in this invisible region—this unseen universe—there must be continually dwelling and living, powers and forces, which are more or less involved in the great drama of this life which we have to live, and those events that have here to be worked out. This is not unscientific, as I believe, but perfectly scientific, and if this be borne in mind, it leaves a sufficient margin for the solution—no, I will not say for the solution, but for the harmonizing with all else that we know of those great and difficult questions which are perpetually perplexing us.

The further discussion of Dr. Irons' paper was postponed, and the meeting was then adjourned.

## ORDINARY MEETING, 3rd JULY, 1876.

THE REV. R. THORNTON, D.D., V.P., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following elections were announced :—

MEMBERS :—Rev. C. Bannatyne, M.A. ; J. Sime, Esq., M.A., F.R.S.L. ;  
D. V. Steuart, Esq. ; Rev. Professor H. Wace, M.A.

ASSOCIATES :—The Right Rev. the Lord Bishop of Adelaide ; Rev. C. Churchill ; Rev. S. T. Gibson, B.D. ; Rev. R. Linton, B.A. ; A. D. Robertson, Esq. ; Rev. W. M. Sinclair, M.A. (life) ; Rev. W. H. B. Stocker, M.A. ; Rev. I. P. Thompson, D.D. (Berlin).

Also the presentation of the following Works for the Library ;

- “ Proceedings of the Royal Society,” No. 168. *From the Society.*  
 “ Proceedings of the Royal Geographical Society,” Part IV. *Ditto.*  
 “ Proceedings of the Geological Society,” Part 36. *Ditto.*  
 “ Proceedings of the Society of Biblical Archæology,” Vol. IV. *Ditto.*  
 “ Complete Catalogue of South Kensington Museum.” *From the Museum.*  
 “ On the History of the Bible.” *From the Author.*  
 “ Professor Tyndall and his Opponents.” By Dr. J. M. Winn. *Ditto.*  
 “ La Terre de Basçan.” By A. Lombard. *Ditto.*

The CHAIRMAN then announced that the discussion on Dr. Irons' paper would be resumed.

Rev. Prebendary IRONS, D.D.—I am most anxious that, before this paper is finally entered on the Transactions of the Society, every word should be fairly and fully examined. When one is expressing the opinions of other men, it is very difficult to be always quite exact, and I shall be indebted to any one who will show that I am mistaken in any of the positions I have attributed to the authors, or if I have in any degree erred as to details. What I have to suggest is this,—that the matter has required some care. I have done my best to put before you an exact statement of the meaning of the book, and I took the more interest in doing so, because, from my own religious point of view, the conclusions arrived at were too serious for me to be silent respecting them ; and if they had really been deducible from the premises, then I should have had greatly to revise many of my own previous thoughts. I have, however, in expressing myself

upon the purely religious points, endeavoured to avoid to the best of my power anything that would unduly trench upon special opinions of others ; and yet I hope that I have succeeded in making known and in helping you to think out the problems of the book. (Hear, hear.) The subject itself is, no doubt, the principle and, ultimately, the law of Continuity. That continuity holds clearly in the visible universe no one doubts. I am not aware that any one has ever doubted whether there is a real connection in the unseen universe both before or after the existence of this visible world, as stated in the work now before us. These authors from, as Professor Clifford said, the standpoint of a very high scientific reputation, declare that there is reason for supposing that before this universe began, we had some previous universe, physically considered, made of the same stuff, although in a more attenuated form ; and that the passage from the one universe to the other was effected at certain points by what are called luminiferous bridges of æther. At this point you find that Professor Clifford, in the *Fortnightly Review*, takes up the matter.

Rev. J. J. COXHEAD.—I rise for the purpose of making some remarks upon this subject, for without doubt the book entitled "The Unseen Universe" expresses opinions of a special character, which probably many members of an Institute of this kind would not hold. As regards the general purpose of the book, others more able than myself may be desirous of expressing an opinion ; hence my remarks shall be brief. The first thing that struck me on reading the book was that it was one of those works of which we have great need in these days, if we do not wish our opinions on the most important subjects to exist in our minds in a very confused form. Most of us are believers in revelation and in the traditional creeds of Christianity. Most of us are believers in the immortality of the soul and in the reality of an unseen spiritual universe replete with life. But of late days a school of philosophers has sprung up of great importance as to their intellectual acquirements and the amount of knowledge they possess. I will not say that this school has thrown considerable doubt on these old traditions and beliefs, but it has nevertheless advanced facts which, unless they are to be refuted, will certainly throw considerable hesitation and diffidence into that sort of certitude which we have hitherto possessed. When we hear a man like the late Mr. Fowell Buxton, in the interesting thoughts he has left behind him, stating that there can be no doubt whatever that the souls and bodies of men are to be regarded as one whole, and that in our thoughts, the soul and the mind and the intellect of man cannot be distinguished from his physical constitution, it seems to me that if we are to preserve intact our own belief, such a position needs to be met and confuted. Of course you are all aware of those theories to which I allude, namely, that there is not a single thought that passes through the human mind, not a single emotion of our soul, not a single act of our will, in fact, no phenomenon whatever, by which we can relate our consciousness to ourselves, which does not de-

pend, as the propounders of these theories have advanced, on physiological conclusions—upon some action taking place in that physical organ which we call the brain. Therefore the obvious conclusion to be derived from this is, that all the phenomena of life and of the soul, all the highest emotions of our nature, all our greatest thoughts, are nothing more nor less than mere modifications of the structure of the brain, and that when the brain and the corresponding nervous structure have passed away, then, according to this school of philosophers, all that we have or are, will have ceased to be for ever. Now, I believe such opinions as these are held by a very important school of physiologists ; it seems to me to have been the purpose and the object of the writers of this book to show, not on moral or on religious grounds, but on physical grounds, by an appeal to the laws of nature, that there is not that reason which some have thought for supposing that the phenomena of life depend on anything to which we have been in the habit of attributing the name of “matter.” The writers of this book have, therefore, taken up this notion of matter ; and as far as they have been able to throw light on what “matter” is, they have endeavoured to show that there is nothing in that which we call “matter,” in consequence of which, through any change that may take place in the aggregations of matter which we term “the brain,” to lead us to conclude that the phenomena of life will necessarily cease. I do not think, that in an argument of this character, we are to expect accuracy or demonstration. If the writers of the book have succeeded in throwing the slightest possible doubt on the theory that the facts of the phenomena of life alone depend on the physiological action of the brain, they have gone very far indeed to establish the truth of those principles to which they refer, namely, the existence of a soul, and the existence of an unseen world. The fact is, as Bishop Butler has said, that we are not to expect demonstrative or mathematical accuracy in speculations of this sort ; and Butler has himself set us the example in his famous book, the “Analogy,” by bringing forth arguments which, no doubt in his day were thought very sound, as to what we may call the physical character of the soul, and the living element that exists within us. We are all aware that Bishop Butler, in one of the chapters of his book, which is now passed over in all examinations, speaks of the bulk of the living being ; and he shows, that unless we have reason to suppose that the bulk of the living being is greater than the elementary particles of matter of which the universe consists, then we have no ground for thinking that the event, which we call death, will result in the destruction of the living powers. Now, if Bishop Butler could use an argument of that sort, we ought to be grateful to physicists of the eminence of the writers of “The Unseen Universe,” if, in appealing to recognized principles of science, or, at all events, to the principles of science that are recognized by the highest authorities, they think that they are able to show that there is nothing in what we know concerning the powers of life and of conscience, why in the event of death, they should cease to exist. Therefore we should understand

how the writers of the book argue on the nature of atoms. No doubt it is a most abstruse subject upon which to argue. No doubt it is very easy to joke concerning the nature of atoms, and the primordial elements of which the universe consists ; but the fact is, that the whole force of the argument on the other side depends on certain preconceived notions as to the nature of atoms. Those who believe that the phenomena of life are simply physiological in their character, argue on preconceived notions as to the necessary nature of atoms. They contend that the powers of life reside in the atomic structure of the body, and that when the atomic structure of the body is broken, and when the atoms are scattered to the winds—or at all events those atoms which we think we can see, and which we believe are scattered to the winds—and have ceased to exist, then the soul, and the man, and the individual also cease to exist. But the writers of the book go deeper than this. They ask, what do we know about atoms ? and they go on to prove that, as far as we can tell, and as far as the highest authorities on these subjects lead us to believe, these atoms are not the primitive and primordial elements of which the universe consists, but that there is every reason to believe, that before the atoms there was another substance, out of which the atoms, through the aggregation of which the universe consists, were made to exist. If this be the case, the arguments of those philosophers who base their theory on the existence of atoms, is at once met. The fact of death taking place does not prove that the powers of life will cease to exist, because, by the very constitution of atoms there may be something in them which when the body ceases to exist causes to reside in them certain forces, which can never decay, and which will endure when the grosser and more palpable atoms have ceased to exist. Whether we consider that the universe has been developed out of vortices in an imperfect fluid, or from vortices in a perfect fluid, the argument remains the same : for if the vortices should cease, yet the fluid out of which the vortices have been generated, will still exist, so that if the visible universe cease to exist, yet the invisible universe will remain. And it seems to me that if this is shown, if any possible surmise is left in our minds that this may be the case, the argument of the materialists has received a great blow ; and we may be thankful to the writers of this book for bringing before us the only true method on which any true thought on this subject is possible. (Hear, hear.) It is impossible to hold in our minds propositions diametrically opposed to one another. We must have some bridge over which we can project these two ranges of our thoughts, namely, the ranges of our scientific thought, and of our religious thought ; and although I do not doubt that the writers of the book will be the first to acknowledge that they have not completely done that which they attempted to do, we may be thankful to them that they have done as much as they can, to show to us a method by which all the branches and spheres of thought on this subject may be brought into that complete unity, of which we know all truth consists. (Hear, hear.)

Rev. F. N. OXENHAM.—I suppose we shall all agree in thinking that the question now before us is one with which we ought to have the highest sympathy. The book we are considering endeavours to supply an additional ground for a reasonable faith in immortality, to those persons who feel that the grounds they at present possess are insufficient to their minds. I suppose we shall all of us have the heartiest sympathy with any effort that has this object in view. At the same time, it seems to me that we owe a great debt to Dr. Irons for having pointed out to us, that, with this admirable object in view, the writers of the book have not merely gone about their purpose in a wrong way, in which it is very difficult for us to follow with any satisfaction; but that, further than this, admitting their premises and arguments, they land us in conclusions which, after all, fail to fulfil the object they have in view. I hope I may take this resumé of the book, which I understand Dr. Irons has submitted to the authors.

Dr. IRONS.—Allow me to explain. Professor Tait has written to me, and I have written to him in reply. He objects to certain phrases; he finds no fault as far as I perceive with the current of my argument—none whatever, and I have written to assure him that every phrase that can be objected to, or that seems in any way not to represent his book, so far as it can be represented in so short a compass, shall be carefully revised before the paper is placed on the records of this Institute; as it would not be worthy of this society to put upon record an unfair representation of a great book coming from such men. I am anxious that, now or hereafter, any person who will kindly suggest to me anything that will make the paper more exact will do so by communicating directly with me. My paper was written when the third edition of "The Unseen Universe" was just published. I bought the first and the third editions, but I am told that the book has gone through four or five editions. I am not aware that these contain anything new, but Professor Tait assures me that several points are modified in the later editions, especially with reference to the manner in which Christ's miraculous appearance in this world took place. He thinks I shall alter what I have said on that point, and if so, and any one lends me the latest edition of the book, I shall be glad to see it; but it is too much to expect that one should buy every edition of an author's works. I assume that the different editions put forth are substantially the same in point of principle, and that, so far as the main argument is concerned, there can be no difference. Of course, I wish to be entirely exact as to the subject and the most revised thoughts of the authors, nor would I use one syllable which they do not acknowledge to be entirely just, as far as I can help it. Professor Tait objects to my prefatory outline of the argument, and wishes me to substitute for it his own table of contents. I have therefore placed the two side by side, for comparison: the notes are thus put together.

Mr. OXENHAM.—My only object in eliciting this explanation from Dr. Irons was, that as I had not read the last edition I was not sure whether

it might not be unfair to the authors to quote the earlier edition. I ventured to say just now that I thought we were indebted to Dr. Irons for pointing out, not merely the unsatisfactory method which these writers have adopted with an admirable purpose in view, but also the unsatisfactory conclusions to which they have led us. I was much struck, a little time ago, when talking about this book with a well-known very clear-headed scientific man ; he said that it was an hypothesis on an hypothesis ; the first hypothesis being, that the law of continuity observed in the existing universe stretched back to before the beginning of the existing universe, and the second being, that there must have been a previous universe in which that law could have prevailed ; and from these two hypotheses it was most reasonable to conclude that in the next change that takes place in this universe, the same law of continuity will reach on into the then succeeding universe. It seems to me, if I may venture to say so, having but small pretensions to scientific knowledge, that the writers of this book have fallen into this fundamental error,—that they have applied the principles of material science to a subject to which those principles are not really applicable, and having done so, they are not merely unsatisfactory in their method of proceeding, but they are also unsatisfactory in their conclusions. I was reminded, as I read page after page of what I may call an argument for material immateriality, of a somewhat grotesque objection, which I remember seeing some time ago—a mediæval one, of the time of Queen Elizabeth—an objection to the extreme irreligiousness of leaden coffins. It was said : suppose a person were accidentally buried alive ; if he were in a wooden coffin it would not be absolutely close, but if the coffin were of lead there would not be the smallest aperture, so closely would it be soldered together, through which the soul of the buried person could escape. Of course the supposition was that there would be a chink in a wooden coffin to allow the soul to pass out. This does not seem to me going further in principle than the argument used in “The Unseen Universe” as to material immortality. I think, in looking carefully at this book, that the writers in proceeding by this mode of argument, applying the laws of material science to the unseen universe, land us in these two conclusions (it would be unjust to the authors to say they do so intentionally), one being a belief in a material pantheism, and the second a belief in a mechanical immortality. Now, it seems to me that, even supposing their course of argument had been convincing, these are not the conclusions to which we wish to be brought. Therefore it is very satisfactory to find that the mode of argument by which we arrive at these conclusions is a mode of argument which *per se* we cannot adopt. I should like to point out one or two defects, which *primâ facie* occur in the earlier part of the book, and which are referred to in this paper. I allude to the fundamental error which, as I conceive, the authors make in trying to apply mechanical laws to the unseen universe. Dr. Irons says in the beginning of his paper, “Is there anything in science, or its admitted conclusions, which

leads to a denial of human immortality? Our authors think not." Now, of course, I am quite at one with them in not denying human immortality, but I say that, as far as science is concerned, the immortality of the soul affords no opportunity for investigation or experiment, properly so called, therefore *à priori*, it is impossible that the laws of science can either prove or disprove the immortality of the soul: and if this be so, we ought freely to admit that on scientific grounds we cannot deny the immortality of the soul, that being a matter to which the laws of science not only do not, but cannot apply. Therefore, instead of hailing this admission of the scientific possibility of the soul's immortality as a present given by scientific men to religious people, I for one say that I do not like the present; it leads us wrong. That is the first defect; then there comes another. I will not call it a defect, but a wrong argument, calculated to lead us astray. Our authors give us an interesting *resumé* of old opinions as to immortality, and Dr. Irons represents them as saying—and as far as my memory goes he is quite correct—"As to some 'Unseen Universe' there has been almost a *consensus* of belief"; but that almost universal "consensus" has never, with one exception, been grounded on principles of physical science. In the case of Plato it was merely a philosophic guess, grounded on the probabilities of observation and philosophical research, and we all know that the highest conclusion Plato came to was that, after all, he was not quite certain whether there was immortality or not. In his case it was, as I have said, a mere philosophic guess. But in other cases it may have been a religious conviction, as it was in the case of Job, not grounded on investigation, but grounded either on intuition, or inspired perception. But these writers have not told us, and they could not do so, that in any one single instance in ancient times the belief in immortality was grounded on the application of the principles of science to the unseen world. The one exception, which I do not wish to dwell upon, is to be found in the philosophy of Swedenborg; but I do not profess to understand that learned but obscure writer: as far however, as I do understand him, it seems to me that he reasons on material principles for a belief in immortality. I only mention this because in fairness I did not wish to say that there was no writer who grounded the hope of immortality on physical principles, for I think that Swedenborg did. I will here call attention to one more point. These writers take certain scientific terms, having certain technical meanings, and apply them to the unseen world and to the highest object in it, and then we are led to one of two alternatives, either God is not what we believe Him to be, or He has not done what He says He has done—I refer here to the arguments derived from the use of the words "infinite," "absolute," and "unconditioned," which many apply to God. If you apply these terms in their strict technical meaning, you exclude God from the universe, from creation, from all relation to ourselves. If it were not that I am now dealing with a very grave subject, I should almost call it an *argumentum absurdum*. If it be true that God

is "The Absolute," He cannot stand in relation to this world as its Creator ; for "The Absolute" has no relation towards anything. And so with regard to the term "unconditioned." If God is literally "The Unconditioned"—that is to say, is not limited in any way by any condition of relationship to others, He cannot be related to them as their Creator—He cannot be limited in any way. These words are applied again and again to God and creation, and we are led to the conclusion which Dr. Irons quotes :—"The statement is made afterwards that 'the conditioned cannot proceed from the unconditioned,' therefore, since all creation is "conditioned," and since God is "unconditioned," creation cannot have proceeded from God, *i.e.* God is not the Creator. Now, I do not for a moment suppose that the writers of this book really wish to land their readers in the conclusion that Almighty God is not the Creator,—indeed they deny this conclusion in one passage, p. 72, 4th ed. ; but if you take their technical philosophical terms and press them to their necessary results, you cannot escape the conclusion I have pointed out. There is another point where we come to the question about the "reality" of mind or matter. The writers ask whether the necessity of conceiving some "embodiment" does not show that there is a "reality about matter which there is not about mind." Now, here again we have the material scientific conception carried into the immaterial world and producing a difficulty. What do they mean by the word "reality" ? If by "real" you mean something capable of being investigated and analyzed, something of which the senses are cognizant, something the existence of which you can prove by scientific means, then no doubt mind is not "real" : but if you mean by "real" something which has an active and positive existence, then all the argument goes to show that mind is "real." What I wish to show is that, all along the course of this argument, we are not only led towards many unsatisfactory conclusions, but we are landed in immense difficulties. At sec. 14 of the paper it is asserted that a continuity of necessity, not of causation, is implied. Of course it is ; the moment you have got material laws there is "necessity," as those laws will be invariable. As soon as you impress the laws of material science on a subject, you get the material "necessity" directly. You cannot escape from that. Then, there is one word which rather puzzled me, and I want to know whether it is not possible that the word "rationality" is a misprint. It says at the end of sec. 15, "Till the universe itself comes to an end ;—though, we suppose, even then the law would remain the condition of all possible rationality." I suppose Dr. Irons meant "the condition of all possible material existence."

Dr. IRONS.—My intention in that parenthetical remark was, that we could not be rational unless there was continuity as the condition of all possible rationality. We could not go on without it. We could not think unless there were some continuity as the condition of thought itself.

Mr. OXENHAM.—There are other places in which defects are alluded to, but I will only point to two cases, which appear to establish the truth of

what I said just now, that this course of argument is unsatisfactory in itself. I ventured to say that we were led to these conclusions ; on the one hand material pantheism, and on the other mechanical immortality. In sec. 30 of the paper, I think the argument justifies this statement, but do not wish to be unjust. It is there stated—"We must think the great whole to be infinite in energy, and that it will last from eternity to eternity." Now this excludes the Creator from eternity to eternity. It gathers up in itself a self-moving energy which began *ab initio*, and continues by an unvarying law from eternity to eternity. What is this but material pantheism ? But the writers go on to say that they believe in God ; but God the Father is a remote sort of being with whom we have no kind of fellowship ; from Him there have been derived two developing agencies—the Second Person in the Blessed Trinity and the Holy Ghost. And here I may say that I wish to speak with all reverence on so grave a subject, and that, in what I am stating, I am only trying to repeat the conclusions to which this book leads us. You have first the Eternal Father, unconditioned and unapproachable in act, or conception by any of His creatures : next, God the Son, who is "a developing agency," having proceeded from the Father.

Dr. IRONS.—Such a Being is represented in the following paragraph in the book :—

"What means this mysterious, infinitely energetic, intelligent, developing agency residing *in* the universe and therefore in some sense conditioned ? In endeavouring to reply to this question we cannot do better than consult the Christian records."

Mr. OXENHAM.—An intelligent developing agency residing in the universe ?

Dr. IRONS.—They explain:—It is, they believe, a prevalent idea among theologians that the passages which they have been quoting from Scripture "indicate, in the first place, the existence of an unapproachable Creator, the unconditioned One who is spoken of as God the Father, and that they also indicate the existence of another being of the same substance as the Father, but different in person, and who has agreed to develop the will of the Father, and thus in some mysterious way to submit to conditions and to enter into the universe. The relation of this Being to the Father is expressed in Hebrews, in the words of the Psalmist, 'Then, said I, Lo, I come ; in the volume of the book it is written of me, I delight to do thy will, O my God ; yea, thy law is within my heart.' In fine, such a Being would represent that conditioned yet infinitely powerful developing agent to which the universe objectively considered would appear to lead up."—That passage, I think, is a fair justification of the passage in my paper.

Mr. OXENHAM.—There is a considerable difference whether you say an "agent" or an "agency" ; but it is quite clear, from my recollection of the book and of the passage you have read, that the distinction between "an agency," which is a mere abstract force, and "an agent," who is an individual

person, is not carefully observed. But this is only a subsidiary point. I want to remark that the God, here put before us, is the God of a Trinity, the First Person of whom is absolutely unapproachable and has no connection with us, so that it is untrue to say that "our fellowship is with the Father and with His Son Jesus Christ." And with regard to the Third Person, I could not see, when I was reading the book, why there should be any third person at all as an eternal developing "agency of life." The first principle is that of an eternal developing "agency of energy," and then we have an eternal developing "agency of life." I could not gather why, on scientific principles, there should have been these two developing agencies,—why the one developing agency should not have developed life as well as energy; and it appears to me that the second agency was only supposed, and given a distinct work, in order to meet what is conceived to be the notion of Christianity. I cannot say that I can see from the book any reason, on scientific principles, why there should have been two of these emanations in order to carry on the work.

Dr. IRONS.—The reason is that energy and life evidently did not come into being at the same time. That is the writers' theory—that the two things were distinct creations—that the Second Person in the Trinity is the Founder and Creator of energy, and that the Third Person in the Trinity is "the Lord and Giver of Life,"—a phrase which they skilfully adopt.

Mr. OXENHAM.—You are landed in a speculative difficulty as to whether life can exist without energy. This appears to me to be a very unsatisfactory notion of God. Let me next observe as to the second conclusion to which our authors bring us, that is to say, the description of immortality in which they are landed, that it is an immortality which is the necessary result of the material development of atoms. Of course it is needless to say that if immortality is a necessary result of the material development of atoms, we can have nothing whatever to do with any "hope" of immortality. Where you bring mere physical laws of cause and effect into the question, nobody thinks of moral causes. In sec. 39 of the paper, Dr. Irons says:—

"Thus also, the prospect itself of immortality, on any such theory of eternal and mechanical continuity, is fundamentally changed from that of a promise, a hope, an aspiration for the individual, to that of a physical, or transphysical certainty of a consecutive order of perpetual transitions, in which Personality (which is now supposed for all of us), need not, perhaps could not survive. To know that after the present life we, and all other existences, necessarily pass into another and differently conditioned Universe, and when that also is ended, as it will end, then pass on into another, a thinner and remoter Universe, still differently conditioned, and so on, and on, and *ad infinitum*, is at least different from the personal hope and expectation, of the Christian, that after this life, he personally shall be 'for ever with the Lord.'"

And Dr. Irons adds, with great force, and without going in the least degree beyond the truth, that "To call the two ideas by one name, 'Immortality,' is at least misleading, though necessary to our authors' scheme." I am quite

sure that all of us here welcome the investigations of science, and any help that science has certainly to give in rectifying mistaken religious notions ; but I do think we ought to be very careful indeed when we move, or help others to move, off the old ground of a belief in God's Revelation, in order to show that there is other ground on which a belief in immortality may rest,—viz. the laws of material science taken to support those hopes for the future, which, in reality, must rest, if they rest at all firmly, on totally different grounds. Let me say that I have the greatest possible sympathy with any effort to increase the grounds of our hope of a world beyond the grave, but I do think we are doing those, to whom we address ourselves, the greatest injury and unkindness in coming to them with arguments in which we invite them to rest their hopes of a future on grounds, which must be found perfectly worthless when the testing time comes. Therefore I, for one, am most heartily thankful to Dr. Irons for having pointed out to this Institute, as I hope he has done to a much wider circle of thoughtful people, that these authors have, with the very best intentions, gone the wrong way to prove their conclusions ; and that in the end they only land us in conclusions in which we do not wish to be landed. They offer us a hope of "immortality," such as we do not want to have ; they offer us a proof of the existence of such a "God" as we would rather not believe in. (Hear, hear.)

Rev. MALCOLM MACCOLL.—I have read Dr. Irons' essay—I cannot say with very great care, because I only got it very recently ; but the book it deals with I have read in all its editions, and I think I know the general drift of the argument pretty well. I am bound to say I think that Dr. Irons, as far as he has analyzed the book, has done the authors the fullest justice. Where I disagree with him is, not in his representations of the arguments of the book, but in much of his criticism upon it. I do not wish to weary you, but as I take the opposite side, I should like to meet some of the objections raised by Dr. Irons. Some remarks have been made as to the use of the phrase "unconditioned," which is used throughout the book. The same phrase is used by Dr. Mansel in the Bampton Lectures, and what is his object there ? Why, to show that the revelation God has made to us of Himself is not absolute knowledge but relative knowledge. It is quite true that our notion of a God who is eternal and absolute, is technically inconsistent with our conception of God the Creator ; but it is equally inconsistent with our notion of God the Eternal and Absolute, to call Him the Father. The condition of sonship you can reduce to absurdity also. There is hardly a phrase taken by itself, apart from history and technical use, that is not open to criticism ; and the way to regard this book is from the point of view taken by the authors, first, as to the purpose they had in their mind in writing it, and, secondly, as to the sense in which they use the language employed. Take what they say in the preface to the second edition :—

"Many of our critics seem to fancy that we presume to attempt such an absurdity as a demonstration of Christian truth from a mere physical basis !

We simply confute those who (in the outraged name of science) have asserted that science is incompatible with religion. Surely it is not *we* who are dogmatists, but those who assert that the principles and well-ascertained conclusions of science are antagonistic to Christianity and immortality. If in the course of our discussion we are to some extent constructors, and find analogies in nature which seem to us to throw light upon the doctrines of Christianity; yet in the main our object has rather been to break down unfounded objections than to construct apologetic arguments. These we leave to the theologian. The Bishop of Manchester has very clearly described our position by stating that (*from a purely physical point of view*) we 'contend for the possibility of immortality and of a personal God.'

The authors compose a book, not as Mr. Oxenham urged, to prove by physical argument the immortality of the soul; they do not attempt anything so absurd; but a great many people do argue that the soul does not exist after death, and the book is written to convince them that it may. A number of persons, Professor Clifford among them, argue that the notion of immortality is absurd. Those men say, "We are physical science philosophers, we take up your point and we demonstrate that there is no absurdity. We do not undertake to demonstrate that Christianity is true, but that the attacks on it are false." This is the way to look at the book. I will now read what I object to, if I may use the expression, in Dr. Irons' criticism. He says in sec. 42:—

"Here is their dilemma. To deny the distinct *beginning* of the Physical Universe is to remove the alleged scientific conclusion as to its end. When science ascertains that the Physical Universe will really *end*, it unequivocally infers its real beginning. But both end and beginning must be *real*. A Universe that eternally holds on from 'thin matter' into 'gross matter,' and at length 'continues' from the gross matter back to the thin, of course had no actual beginning, and will have no end; but is, as they elsewhere are obliged to say, 'Eternal.'"

I do not think that the authors' views of mechanical continuity are applied to the unseen universe; they are used with regard to this universe.

Dr. IRONS.—They say there is the same stuff—a thinner material, but the same physical material.

Mr. MACCOLL.—But they do not use the word mechanical as applied to the unseen universe.

Dr. IRONS.—I do not say that they did.

Mr. MACCOLL.—With respect to the authors' view with regard to eternity, the authors assert, as strongly as they can, their belief in an eternal God—the eternity of three persons, three living persons of one substance. And as to God the Father being unconditioned, there is St. Paul's saying, "Who only hath immortality, dwelling in the light which no man can approach unto; whom no man hath seen, nor can see." These are the words of inspiration in the Scriptures; the words of the authors do not go beyond this. We all believe that God dwells in eternal light, as St. Paul tells us. We must all admit some light, some luminiferous ether as existing co-

eternally with God, and the authors contend for nothing beyond. They say, how can you argue from the doctrine of continuity, that there is no God behind the visible framework of creation? They say the world has come into being somehow. How? Science can tell you nothing about it. Again, they say that science can tell you nothing about the origin of life. The doctrine of biogenesis is discarded by many of the greatest scientific men, including Huxley and others. Life is not to be accounted for by any scientific theory. But these writers say, Here are old records wonderfully in agreement with the conclusions of physical science. They tell us the time is coming when the stars shall fall from Heaven. That is now considered probable as one of the conclusions of astronomical science. It is conjectured that the sun and the attendant planets may fall into each other, and then into other suns, and that then the universe may be resolved into luminiferous ether. They do not call it physical immortality from beginning to end. They say the atoms are developed by an infinitely powerful Being out of an unseen substance. We must recollect that great liberty is claimed by the great Doctors of the Church. I might refer some of those who are here to-night to St. Augustine, who said :—"If God is Lord, He always had creatures obeying His dominion. He was before His creation, though at no time without it; preceding it, not in point of time, but by an abiding perpetuity." I admit that there are things in the book that I do not quite agree with. In sec. 36, in reference to the question of moral evil, Dr. Irons quoted the authors as saying, that "Evil is woven into the *essential* texture of the garments with which the Eternal God, our Father, has clothed Himself." But what do the authors say?—"We are thus drawn, if not absolutely forced, to surmise that the dark thread known as evil, is one which is very deeply woven into that garment of God which is called the Universe." This is not the same thing as saying, "Evil is woven into the essential texture of the garments with which the Eternal God, our Father, has clothed Himself." From the sense in which they use the phrase "eternity of evil," I cannot understand whether they apply it to the commencement as well as to the future: the paragraph on the subject does not clearly show this. I rather think it means the eternity of evil in the period that is to come, and not as applicable to the past from the beginning, though they say, in a parenthesis, that the New Testament points to a time when evil will come to an end; but they do not say this themselves. With regard to the statement, as to God being unconditioned, I should like to make one remark. Both Dr. Irons and Mr. Oxenham lay great stress on the authors calling God unconditioned, and incapable of being approached by His creatures; but theologians have asserted at all times, that we shall never know the Father, except through the Incarnation of the Son, and the Bible asserts the same thing. Now, I do not take the authors to mean what Dr. Irons seems to suppose in this passage, sec. 45 of his paper :—

"The Eternal Father, 'Whom to know,' we think, is 'life eternal,' (and Whom we do 'know by faith,' even now,) is placed, as they observe, 'as far

off as possible,' at the remote end of an 'illimitable avenue' of duly conditioned Universes. Unto Him the Son, as conditioned, seems to have no access."

I do not gather this from the book. It says He came out from the bosom of the Father; and the writers quote the passage, "Lo, I come; in the volume of the book it is written of me, I delight to do thy will, O my God." Then Dr. Irons says:—

"But the Son, the real Creator, was *always* God 'conditioned' as an 'Energy' forming the worlds. The Spirit is the 'Life-giving' conditioned Being, Who co-operates with the Creator of matter, or Son;—unless, possibly, 'matter' be eternal, and only 'energy' were created.

"Few Christians—believers that the Incarnation began at the Nativity—will accept this account of their faith, if nakedly put before them."

But the authors are not referring to the Incarnation at all in this place, but to the theological distinction between the Logos Endiathetos and the Logos Prophorikos—a distinction insisted on by Dr. Newman, when he says, "Endiathetos stands for the word as hid from everlasting in the bosom of the Father, while the Prophorikos is the Son sent forth into the world in apparent separation from God." It seems to me that the authors are in strict harmony with Newman's book on *the Arians* and with Mill's book on the Apostles' Creed, and that the objections vanish when the book is read in connection with the point of view taken by the authors themselves, after making allowance for certain points here and there.

Dr. IRONS.—I will only detain you a very short time, as I am not physically able to say much to-night. Almost every speech that has been made has contained valuable matter, and I must thank all the speakers, certainly not excepting the last. I think, however, that Mr. MacColl surprised me the most. He said I had made a statement that did not correspond with the book.

Mr. MACCOLL.—I said so of Dr. Irons' inferences, not of his statement.

Dr. IRONS.—Mr. MacColl quoted the statement as a quotation from the book that "Evil is woven into the *essential* texture of the garments with which the Eternal God, our Father, has clothed Himself." That passage seems to have appeared in inverted commas by some unobserved accident, and how it so came into the paper I do not know. But what I am most concerned in is, whether it is a true representation of the authors' meaning? whether they did not affirm that evil is not an accident, but that it is woven into the essential "texture of the garment."

Mr. MACCOLL.—There must be some mistake in my copy, because the passage is here given in inverted commas.

Dr. IRONS.—It is an accident which has occurred in this rough copy of the paper: a mere printer's accident which had escaped me. Evidently those quotation marks must come out; but the question is, whether the statement itself is a fair representation of the book? The point is, whether

the statement is a true one and fairly represents the authors' meaning? Hear what they say:—

“Just as the fire”—in the Gehenna—“was always kept up, and the worm ever active in the one, so are we forced to contemplate an enduring process in the other. For we cannot easily agree with those who would limit the existence of evil to the present world. We know that the matter of the whole of the visible universe is of a piece with that which we recognize here, and the beings of other worlds must be subject to accidental occurrences from their relation with the outer universe, in the same way as we are. But if there be accident, must there not be pain and death? Now, these are naturally associated in our minds with the presence of moral evil. We are thus drawn, if not absolutely forced, to surmise that the dark thread known as evil, is one which is very deeply woven into that garment of God which is called the universe. In fine, just as the arguments of this chapter lead us to regard the whole universe as eternal, . . . and therefore we cannot easily imagine the universe without its Gehenna.”

I have but summarized all this very briefly, using almost the very words, saying that “Evil is woven into the essential texture of the garment with which the Eternal God, our Father, has clothed Himself.”

Mr. MACCOLL.—There is however an essential difference.

Dr. IRONS.—I think not. I represent the actual meaning. I do not quote all the words, but I represent the meaning, and use the very words too.

Mr. MACCOLL.—What I wanted to put before you was that, as I understand them, the authors assert that life began outside the Trinity through the operation of the Third Person in the Trinity.

Dr. IRONS.—Energy, not life, according to our authors.

Mr. MACCOLL.—What I understand the passage to mean is that evil has existed since the creation of moral energy, and will probably exist always.

Dr. IRONS.—It is not for me to explain for our authors beyond saying that we are led by them to regard evil as eternal.

Mr. MACCOLL.—Eternal in the prospective.

Dr. IRONS.—No, in the past also. But I have a much more grave statement to make with regard to Mr. MacColl's own position. He actually supposes the theological doctrine of the Logos endiathetos to mean in fact a conditioned being, whereas the Catholic doctrine is that the Logos which existed eternally with the Father as endiathetos, became prophorikos or put out from God, at the time of the Incarnation.

Mr. MACCOLL.—Not at the time of the Incarnation.

Dr. IRONS.—I am stating what I believe to be the Catholic doctrine: you understand it to be something different. You think that the Logos endiathetos was the conditioned being.

Mr. MACCOLL.—Dr. Newman takes the view I have put forward.

Dr. IRONS.—Not that the Logos endiathetos is a conditioned being?—We have travelled to-day more over the theological peculiarities than the scientific difficulties, on which I had hoped some other persons would have

given us the benefit of their experience and wisdom. Probably the third chapter of the book is the best. There we have brought before us, in a most interesting and clear way, the fact that energy is an objective reality, existing in this visible universe; that it does not, although invisible, belong of necessity to the invisible universe. Energy is said to be contained in matter as its vehicle: matter, then, being the vehicle of energy, is declared to be both potential and kinetic, and there is a third form in which it is called heat. These facts however are put together so as to leave out entirely the idea of the origin of force; and it would not be too much to say that the existence of force is practically denied in the third chapter of this book; and I do not suppose the writers of the book would question this. Of course it is a subject of the most intense importance, and I did intend to have prepared something fit for you to listen to upon this subject to-night, but I have already stated why, during the last few days, this has been impossible. I think it would best become me now to thank you for giving so much attention to my paper, and to assure you that it still shall have all the care I can give it to make it worthy of this Institute; and when you receive it in your own homes, I hope you will study it with the knowledge that it has the approval of the writers of "The Unseen Universe," in so far that there is nothing in it misrepresenting the sentiments given in their book. The point I shall elaborate more fully is that which I have just glanced at—the doctrine of force. Allow me to point out one instance in which I have made a mistake, at all events in my judgment, of Professor Tait. I have said in sec. 66,—“Our authors’ half-avowed primary conception of a miracle really seems to be, that it is on purely physical principles a breach of continuity.” The word “conception” ought to have been in italics; what I meant was that it was the latent conception. Although they believed that the cause of a miracle was in the unseen universe, the force coming from without, yet in their idea it was the same kind of interruption which is assumed by almost all the modern writers on miracles; namely, that a miracle is something unaccountable on the ground of natural law. I think the writers would say, if they read the whole passage, that it is a full representation of the conception which underlies their whole treatment of the question of miracles; but if they prefer that I should express it differently, it shall certainly be done. I have to thank you very much for your attention. (Hear, hear.)

Rev. T. M. GORMAN.—\*

The CHAIRMAN.—I have only one or two words to say. I think that all present must be glad that this discussion has taken place. The impression

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\* This speaker's remarks have not been returned to me; they were to the effect that in three instances at least, the authors of "The Unseen Universe," having relied upon a work by one of his biographers, had been betrayed into imputing views to Swedenborg, which were not to be found in his own writings.—Ed.

left on my mind from hearing the speeches is, that whilst many differ from Dr. Irons on one or two of the details, all, upon the whole, agree with him that the writers of the work are too materialistic, and ought to have brought in more of the spiritual.

The meeting was then adjourned.

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REMARKS ON THE FOREGOING PAPER. By H. CADMAN  
JONES, M.A., late Fellow of Trinity College, Cambridge.

At a time when objections brought in the name of science against the doctrines of revelation have obtained such currency, it might be expected that (to use the words of the authors of "The Unseen Universe") "those who have a profound belief that the true principles of science will be found in accordance with revelation," would "welcome any work whose object is to endeavour to reconcile the two fields of thought" occupied respectively by those who have faith in revelation, but not in the methods according to which men of science interpret the laws of nature, and by those who have faith in the latter but not in the former.

The work examined in Dr. Irons' paper was written with the above-mentioned object. The Victoria Institute is a body whose bond of union is a belief that the true principles of science will be found in accordance with revelation; but if that paper is to be taken as expressing the views of the Institute, their reception of the work is rather hostile than friendly. Does it deserve such a reception at their hands?

I venture to think that it does not, and without attempting a full discussion of the subject, I proceed to mention some material points in which the paper appears to me to do injustice to the work under review.

In the first place, it seems to be assumed throughout the paper that the object of the authors of "The Unseen Universe" was to work out a system of theology quite independently of the evidences, whether external or internal, on which Christian faith has hitherto been rested. This assumption pervades the whole of Part II. of the paper, and appears distinctly in sec. 47, where it is said of the authors, "The reasonable, the right, the absolute good, they have avoided as 'metaphysical,' and yet religion is their object"; by which the writer evidently means that their object is to establish the truth of religion.

Now it certainly was not the object of the authors to work out a system of theology, or even in any way to prove affirmatively the truth of religion. In the preface to the second edition they say—"Many of our critics seem to fancy that we presume to attempt such an absurdity as a demonstration of

Christian truth from a mere physical basis. We simply confute those who (in the outraged name of science) have asserted that science is incompatible with religion." Their work, as stated in sec. 51, is addressed to those who feel the force of the objections urged by some men of science against the immortality of man, and the existence of an invisible world, and do not see how to surmount them. Its object is to remove these objections, not to place religious belief on a new foundation. Thus, in sec. 245, the authors, after referring to the principle of continuity, say, "This leads us at once to the conception of an invisible universe, and to see that immortality is possible without a break of continuity. We have, however, no physical proof of it, unless we allow that Christ rose from the dead." Can there be a clearer proof than this that the authors never thought of placing Christian doctrines on any other than their old foundations?

The above misconception has naturally led the reviewer to place himself in an attitude of hostility to the work, as if the intention of the authors had been to abandon the old fortifications and erect new ones, whereas their aim is simply to silence a hostile battery.

It is difficult to examine satisfactorily many of the strictures contained in the paper, as the reviewer seldom gives a distinct reference to the passages which he considers to contain the propositions he impugns. Many of them are propositions which I cannot find in the work, and which, it appears to me, the authors would disavow. It requires to be shown in each instance that the proposition is either contained in the work or necessarily deducible from something contained in it.

Thus it should be shown that the work contains something to support the statement (paper, sec. 39) that the authors make "will, which acts from the unseen, a 'stuff' entirely subject to mechanical laws." The authors say, par. 93, "that there is something besides matter or stuff in the physical universe which has at least as much claim as matter to recognition as an objective reality"; and I have been unable to find anything in the work from which it can be deduced that "there is no power of alternative action in any conscious agent or cause."

Again—the views of immortality attributed to the authors are such as I apprehend they would emphatically repudiate. On what ground is it said (paper, sec. 48) that "Heaven is to them what the Emperor Hadrian's verses represent"? Does the statement (*ib.* sec. 39), "that after the present life we, and all other existences, necessarily pass into another and differently-conditioned universe, and when that also is ended, as it will end, then pass into another, a thinner and remoter universe, still differently conditioned, and so on and on, and *ad infinitum*," in any degree represent their views? I have been unable to find, in the only edition of the work which I have been able to examine, anything in favour of this infinite series. As regards the kind of happiness to be expected hereafter, it is true that the authors do not in terms state what is their own personal belief, and their work, being a scientific and not a religious one, such a confession of faith was

not called for; since science throws no light upon the subject; but few persons who have read sec. 247 will fail to infer that their conception of future happiness is something very different from that of "being an eternal molecule in a luminiferous ether" (paper, sec. 52).

The most startling proposition attributed to the authors is to be found in the Appendix, sec. 66. "Our authors' conception of a miracle, for instance, is that it is an unaccountable breach of continuity." Now the authors say distinctly, that a miracle is not a breach of continuity at all. "If," say they (sec. 237), "the invisible was able to produce the present visible universe with all its energy, it could, of course, *à priori*, very easily produce such transmutations of energy from the one universe into the other, as would account for the events which took place in Judea. Those events are therefore no longer to be regarded as absolute breaks of continuity, a thing which we have agreed to consider impossible, but only as the result of a peculiar action of the invisible upon the visible universe. When we dig up an ant-hill, we perform an operation which, to the inhabitants of the hill, is mysteriously perplexing, far transcending their experience; but we know very well that the whole affair happens without any breach of the continuity of the laws of the universe. In like manner the scientific difficulty, with regard to miracles, will, we think, entirely disappear if our view of the invisible universe be accepted; or, indeed, if any view be accepted that implies the presence in it of living beings much more powerful than ourselves."

Whether the views of the principle of continuity, which the paper attributes to the authors, are what they would indorse may well be questioned; and many more points might be mentioned in which the reviewer appears not to have rightly understood their positions. I cannot but think that if he had taken a more correct view of the scope of the work, he would have treated it in a different spirit.

The charge that the authors make the Deity impersonal, and place Him as far off as possible, is of more weight, as it appears to be supported by some expressions in the work which naturally tend to that conclusion. If, however, we take the book as a whole, I think that such is not the view to be derived from it. The authors consider (sec. 240) that there is no sufficient ground for denying the objective efficacy of prayer. Now, the objective efficacy of prayer addressed to an impersonal god appears simply inconceivable, and if it be admitted that God can hear and answer prayer, it can hardly be said that for any purpose material to Christian faith He is placed "as far off as possible" (sec. 85), or at the end of "an illimitable avenue" (sec. 86). These expressions, when taken in their context, seem to express in substance little more than the principle which leads us to such conclusions as (to take an instance given by the authors) that fossiliferous deposits came into their place through the operation of natural forces, and were not created at once as they are.

It is most important, in considering a treatise of this nature, to distinguish

between what is essential to the authors' view and what is merely accessory. The leading position of the authors I take to be this—that, proceeding solely on scientific grounds, we have reason to think that there is an unseen universe related to and acting upon that which is visible, and that there is no objection to supposing, but rather reason for believing, this unseen universe and its connection with the visible to be such as would remove the objections which have been urged on scientific grounds against the leading doctrines of revelation. Whether the writers have correct theological ideas as to the Trinity, whether the spiritual bodies with which we are to be clothed at the resurrection are now in course of formation or are to be created then, whether evil is eternal, are questions to which the principles of the authors give no certain answer, and their discussions on these points do not seem to affect the main object of the work. Probably the authors would admit that the remark which they have indorsed as to the world of spirits applies here,—that of these subjects “we cannot possibly know anything save by direct revelation.”

Though I belong to one of those classes for which, as the authors tell us, their book was not written, I still, however unworthy the reviewer (sec. 2) may consider such a feeling, profess myself grateful for it, not on my own account, but for the sake of the cause of truth. That so able an attempt to remove objections urged in the name of science against the resurrection of the dead, miracles, and the objective efficacy of prayer, should be met by believers in revelation with such strong censure and faint praise as are found in this paper, does not tend to lessen the distance between the two opposing schools of thought.

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#### DR. IRONS' REPLY TO MR. H. CADMAN JONES'S REMARKS.

I am much obliged by Mr. Cadman Jones's courtesy in sending me a copy of his “remarks.” The difference of view between us is very great. I have tried to distinguish between the “theological conclusions” and the “scientific views” of these able writers. To the former I have tried to do justice, to the latter I have really done it. At least the reputed writers have not questioned it. If I had mistaken them in the least degree, I was ready, as they were informed, even to the last moment, to correct what I said. If my inferences are not the same as Mr. Cadman Jones's, it must be assigned to the difference of our logical ideas, and must be left to the general judgment of those who read my analysis, and *compare it carefully* with the work. The real service which “The Unseen Universe” has done I have amply acknowledged (secs. 63 and 64, &c.). I have taken pains to be fair, and I can,

with all my admiration of Professor Tait and Balfour Stewart, only repeat, with earnestness and sincerity, to Mr. Cadman Jones, or to any one else, "read *all* I have said—read it *again*—and you will agree with me." The rational faculty is not, after all, so very divergent in those who have it at all, but that I confidently cast myself on it.

As to the theological part of the subject, let me frankly say that I value truth above all things; but would not defend even truth with asperity. Yet I would not in theology, any more than in science, accept a false principle, on the chance of its doing good. The doctrine plainly avowed, of the "Eternal Father being wholly unknown and unloved," is to me utterly unchristian, and was formally repudiated, among other delusions of the Gnostics, in the Primitive Church, with a strength of language which I have abstained from using. Every word, every hint of a religious kind in my paper I submit to the catholic reason of the Christian Church. And as to Mr. Jones's defence of these able writers, it seems to me an appeal *ad misericordiam*.

I think I differ from my respected opponent Mr. Cadman Jones, also in the view he seems to entertain of the position and functions of our Institute. I do not think we are established to coax men into *any* kind of Christianity (such, *e. g.*, as may just arise from the doctrine of "Physical Continuity"). I must be logical. It is a necessity of my being; and I am sure that a species of religion which will not bear to be carried out logically (and I attempt nothing more in my paper) must relapse into scepticism. Not less than science, religion refuses to be illogical. I can no more flatter men on attaining half-truths in theology, than I could in astronomy or chemistry.

I wish distinctly to recognize Mr. Cadman Jones's view as a very natural one, and in my first sections I partly recognize it. But I think my way of treating such a work as that which is before us is more respectful by far than his, though he has so justly distinguished an authority as the *Church Quarterly Review* on his side; and I regret it. Scientific men, as a rule, like thoroughness. I am "thorough"; I cannot help it. I treat these men as great men—(which they are). Mr. Cadman Jones's method (and the strikingly able Review referred to also) would say, practically,—"What a fine thing it is for us followers of the Gospel of Christ to have such men even partly on our side! Don't scrutinize them too closely then; they mean well; as far as they go with us, let us accept them, and let them off easy, for the sake of the 'cause,' which they are looking hopefully to support!"—Now I think these eminent Professors would prefer my treatment to Mr. Cadman Jones's, and to the *Church Quarterly's*—much as I respect that able journal.

W. J. I.