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A table of contents for *Journal of the Transactions of the Victoria Institute* can be found here:

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- ” Royal Colonial Institute.
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THE PRESIDENT.—I think this Institute is to be congratulated on the large number of adhesions it has received during the recess. (Hear, hear.) I will now call upon the Rev. H. J. Clarke to read his paper.

EVOLUTION A REVELATION ; OR, THE UNIVERSE UNFOLDING IN THE PROCESS OF TIME AN ETERNAL PURPOSE AND AN ILLIMITABLE PLAN. By the Rev. H. J. CLARKE.*

THE title I have given to my paper, as will be perceived, lays me under an obligation to justify two debatable assumptions. I must endeavour, on the one hand, to show that a philosophical view of the origin and progress of differentiation necessitates the recognition of a law or principle which may with propriety be termed Evolution ; and, on the other, to render it apparent that the process thus indicated, instead of leaving in impenetrable darkness the character and properties of the mysterious Energy which it presupposes, constitutes in some measure, if duly apprehended, their Revelation.

2. Now, before attempting to establish these propositions and before entering into particulars relative to differentiation in organic structures, it may be advisable to invite attention to the full scientific import of the term in question. When one type is assumed to stand to another in the relation of lineally-direct conditioning antecedent, the latter is conceived as having been *evolved* from the former, and the evolution as having been effected by some specific determination of a persistent force, the reproduction of prior characteristics being ascribed to sameness, and deviations from them to

* Vicar of Great Barr, author of *The Fundamental Sciences*.

modifying variations, in the manifold conditions under which its continued operation has taken place. Facts, however, illustrative of the genealogy of this or that organic type, having suggested, as the most probable account that could be given of its origin, the theory I have just alluded to and briefly sketched, the perception of their significance enlarged with the progress of scientific observation and research, until the principle to which they seemed to point came to be regarded as universal, and it was believed that a scientific basis had been discovered, for the notion that the production of the countless varieties and elaborate complications of form and structure which constitute existing nature had its beginning in a movement which terminated what was imagined to be an original equilibrium of undifferentiated material, and has ever since that time proceeded in the way of continuous evolution.

3. It will, I presume, be generally conceded that the acts which have been adduced in favour of this hypothesis are neither few nor unimportant; rather that they are very numerous and profoundly suggestive. But a theory of Evolution, in which the fixing of the starting-point involves an arbitrary assumption, and a primal state of things is supposed for the existence of which no exigency of rational thought can be held to have established the necessity, is obviously wanting in philosophical completeness and stability, cannot reasonably be welcomed as the key to any of those arcana of knowledge which Nature has been reserving for disclosure in these latter days, and, indeed, if it has any significance from a theologian's point of view, and comprises such assertions or negations as he may be expected to dispute, is destitute of the slightest claim to even provisional acceptance. A hypothetical scheme of doctrine, of which the fundamental hypothesis is purely conjectural,—in other words, rests upon nothing,—is ill-adapted to interpret, or rather must needs fail to exhibit in their true aspects and relations, the facts which bear upon it, whether they seem to render it credible or not.

4. Let, then, the fundamental hypothesis of the theory of Evolution, as that theory is commonly propounded, be attentively examined. The beginning of the Cosmos having been conceived as a state of things in which differentiation has as yet no place, there is but one way in which it can present itself distinctly to the imagination: it must needs be pictured as a system of homogeneous atoms in perfect equilibrium; in other words, having room to move and fraught with tendencies to movement, which, however, so long as their assumed arrangement lasts, precisely neutralise one another.

5. A troublesome question, it is true, at once suggests itself, unless the law of gravitation may be ignored: How can it be admitted that such a balance is conceivable, except on the inadmissible supposition that the number of the atoms being absolutely infinite, the system is without a superficies, and therefore without a centre? A system, however, of atoms in equilibrium is what, it seems, we are to suppose. Indeed, what other relevant supposition is there that might commend itself to us as being at once more simple and more definite? Let the purely natural philosopher, putting out of view the embarrassing question I have just adverted to, suggest, if he can, another starting-point more suitable as such, and one which encumbers the theory with a smaller amount of arbitrary assumption, for the process of evolution. Even if, overlooking that differentiation is thereby taken for granted already, he should think he sees reason to assume the existence of some permeable material medium whose property it is to originate motion in the more substantial particles of matter, and, in so far as they agitate it, to react upon them, he will find, in the attempt to imagine what he has thus conceived, that it too resolves itself into a mobile system of atoms, and that the commencement of a course of evolution still presupposes for the entire space-occupying aggregate a perfect reciprocity of neutralising tendencies. Upon this point, however, I need not dwell, provided no equivocal assumption be introduced unawares, and it be understood that the theory we have to consider is constructed on the hypothesis of an original homogeneous equilibrium of evolutionary tendencies, wherein all developments which were in due time to appear have what may be called their *Logos*, and are, to all scientific as well as practical intents and purposes, adequately accounted for.

6. But an ideally unstable equilibrium being manifestly unattainable through the mere operation of conflicting tendencies, and as the result of movement thus generated, we cannot assume its existence without committing ourselves to one or the other of the two following suppositions:—Either (1) it has been in existence from all eternity, or (2) its constituent materials—let us call them homogeneous atoms—coming into existence at some time or other, find themselves in equilibrium. The latter supposition, if I am not mistaken, is far from likely to approve itself to persons who uphold the ordinary theory of evolution; and, indeed, in necessitating a view of origination which they repudiate, it partially nullifies itself by rendering gratuitous the hypothesis of an unstable equilibrium. As to the former, even if we should allow a *status*

quo to be without beginning and yet terminable,—in other words, both eternal and temporal,—they cannot maintain the proposition that, having lasted an eternity, it has come to an end, without binding themselves, as rational beings, to account for so marvellous an incident, or at least to offer some suggestion that may seem to throw light upon its cause. A similar obligation must, of course, be acknowledged if the other supposition be adopted. To whichever of them the preference be given, it cannot be evaded. Let the instability ascribed to the imagined equilibrium be such that less than the millionth part of the force transmitted by the impact of the tiniest mote which sunbeams ever rendered visible might suffice to overthrow it, the disturbance must arise from something; it implies, but it cannot be simply and purely due to, instability. The cause, whatever it may be, is plainly *ex hypothesi* something extraneous to the system of balanced forces. Had it, then, in this point of view an effect that might be compared to that of the kiss by which the princess in the fairy tale is released from a trance of a hundred years' duration, and wakes up, together with her court and household? Did it find entrance into a universe of sleeping atoms, which must otherwise have slumbered on through all eternity, and breaking, as it were, the mysterious spell that had kept them motionless for ages, rouse up their suspended energies to evolutionary activity? However amply, in other respects, the theory which presents in idea an unstable equilibrium might satisfy the demands of the philosophical inquirer, an indispensable requisite has clearly been omitted—there is no suscitant force.

7. An attempt will perhaps be made to meet this objection on the ground that we are under no necessity of assuming the actual existence of an original state of exact equilibrium; for it has been argued that, "whether that state with which we commence be or be not one of perfect homogeneity, the process must equally be towards a relative heterogeneity."* Is it then allowed in the words I have just quoted that the fact I suppose to have been assumed is after all uncertain, that possibly there never was an exact equilibrium? Well, but if it be true, as the writer asserts, "that not only must the homogeneous lapse into the non-homogeneous, but that the more homogeneous must tend ever to become less homogeneous,"† the concession is fatal to the theory, unless it may

* *First Principles*, by Herbert Spencer, ch. xiii. § 109.

† *Id.*

be maintained that the degree of heterogeneity which the universe has by this time attained is perchance the outcome of a process which had no beginning. Such a notion, I presume, may be dismissed from thought without discussion: to spend words in controverting it would be a waste of time, even if, regarded simply as assuming that a series may be co-extensive with infinity, it could not be at once refuted.* It should, therefore, be sufficiently apparent now that the theory I have been criticising lacks an essential condition of stability—namely, such indisputably first principles as might constitute for it a base of adequate breadth. Vain are all efforts to make it stand: it may be compared to an isolated column with a huge capital, but without a plinth; let those who have constructed it do what they will to set it up, it topples over, if I may so express myself, this way or that, and falls of its own weight.

8. What, however, if no primordial state of matter can be imagined which satisfactorily accounts for the existence of a multiplicity of heterogeneous forms? and what if the retrogressive investigation of the phenomenal universe is perceived at last to lead to nothing? It by no means follows that the failure of every intellectual enterprise in which that route has been taken should be accepted as conclusive evidence that the origin of things is inaccessible to science—that their beginnings are buried in absolutely impenetrable obscurity. Surely in the invincible persuasion, so unmistakably characteristic of the truly scientific type of mind, that indefatigable research in the direction of origin will find its justification in fruitful discoveries—a persuasion to which the world is indebted for substantial advantages far too numerous to be ever acknowledged in full—there is something which deserves profound respect. The thorough-going student of Nature has grasped a truth, and one which, through his agency, may be destined in some measure to benefit his fellow men, even although, it may be, he fails to see distinctly what it is, and whither it ultimately tends. The heavens and the earth having revealed to his observation that changes are incessantly taking place in the direction of the increasingly manifold, that the phenomenal universe has been from the first, and still is, progressing in the way of development, he cannot allow himself to believe that science will have ever accomplished its work, so long as in any respects its elemental

* *Vide The Fundamental Assumptions of Agnosticism examined in the Court of Pure Reason, by H. J. Clarke (Trans., vol. xx., p. 180).*

doctrines and their expository applications admit of further simplification; and there is thus a possibility of making a nearer approach to some ultimate principle, which, if discovered, would account for all things. A new step thitherward may seem to have been lately taken in the theory which has necessitated the coining of the word *Protyle*,* and which, perhaps, in some modified form, may be eventually accepted as a luminous simplification of the first principles of the science of chemistry, and as still further correlating its phenomena with facts which astronomical observation has brought to light. But in the endeavour to penetrate the mystery of an ever-receding past, the increasing risk of mistaking baseless speculation for scientific progress renders continually more and more needful a clue which the explorer may discover if he looks *within*, and which, therefore, is inevitably overlooked by those who, in seeking guidance, confine their attention to such outward signs and tokens as seem to point out the way.

9. What I take to be the clue is to be found, not in the phenomena that await interpretation, but in the interpreter himself, in the resources of that *volitional* power which he possesses in association with sensibility and reason. For if the fundamental principle of evolution be sought, what is there in nature to suggest a conception of it so worthy of a rational being as that of which we seem to have an inkling if we reflect upon that evolution from within ourselves which takes place in so far as the outward world reveals us, and our own minds account for any phenomena which would be wanting but for them? In reference to this question, the products of human thought and industry have an unmistakable significance: in the conversion of masses of earthy material and of vegetable fibre into elaborate structures adapted to the manifold needs of the highest order of organic life there is a notable transition from imperfect homogeneity to a relative heterogeneity. The cropping-up of houses, and villages, and towns, and the development of those countless tangible evidences of advancing civilisation with which they become enriched and adorned, constitute a growth, running, in a measure, parallel to that which clothes the earth with verdure and breaks out into flowers and fruits, and, it may also be affirmed, crowning, so far as this planet is concerned, the ascending grades of cosmical evolution.

* "Address to the Chemical Section of the British Association" (Birmingham, 1886,) by William Crookes, p. 11.

10. Following, then, the clue which may be thus perceived, we trace up the heterogeneous, in all examples of the kind just specified, to a point at which (if for a moment we put out of view that cause which, being eternal, is *absolutely* original) our consciousness assures us we have reached its source; and here an operation of which we have immediate intuition, and which is too simple either to need or to admit interpretation, discloses to us its origination, and, as I cannot doubt, reveals, so far as in the nature of things such a revelation is possible, the fundamental principle of Evolution. An unstable equilibrium, even if it is to be assumed, still fails to account either for its own existence or for its disturbance; but in the stirring of that spontaneous energy within itself of which Mind is conscious, and which it is utterly incapable of representing to itself as separable from consciousness—in that action in which it recognises something different from a mere phase in the operation of persistent force—in that peculiar kind of movement which the verb *to will* denotes, it perceives, for a species of evolution it is intimately acquainted with, an unmistakable point of departure. The perception, it is true, takes place in a mind whose existence presupposes antecedent conditions, whose power, however exercised, is at all times dependent upon their cause, and whose products are only forms assumed by material already provided, are nothing more, in fact, than contrived situations, or, so to speak, samples of manipulation. But these considerations, it is plain, are by no means grounds for suspecting that the clue we have been following has led us astray; for nothing whatever forbids the conception of an *absolute* power of origination, a power which, instead of *finding* any of the conditions it was to fulfil in its working, *determined* them all, the contributions they were, severally to make to the complete result being all comprehended in an Eternal Idea. Our immediate consciousness of volitional action involves the ability to conceive an *ideal* freedom of origination, and thus philosophically to recognise as such an Original Cause. If in the conception thence formed any defect can be detected, let it be pointed out, and let a preferable conception be suggested and named. If this cannot be done, and if it cannot be alleged that any intellectual requirement has been left unsatisfied, then let it be acknowledged that Evolution has been tracked to its source, and discovered to be a stream of manifested thought issuing from the hidden spring of an Eternal Mind, revealing ever more and more the riches of a manifold wisdom in association with adequate prolative power, and still widening and deepening as it flows.

11. This being granted, it will easily be seen that the phenomena of Evolution are no less philosophically accounted for, if for that scientific term, so applicable when rightly understood, we should substitute a word which has become consecrated by its theological use, and which is commonly taken to be antithetical to the other—I mean Creation. The supposed opposition between them is purely imaginary; the compatibility of their applications is real and fundamental. Any undisputed product of Mind, contemplated simply as such,—for example, a picture or a statue,—it is permissible to regard as being, relatively to the artificer, a creation; and this term, if it has any meaning at all, is unquestionably in such a case applied with strict propriety, while, relatively to a poetically-conceived store of hidden resource and potential development which has yielded the visible production, the latter may with equal propriety be represented as having been evolved from the former, or, to use a virtually equivalent metaphor, spun out of it; and the work, as it grows under the producing hand, may be termed a continuous evolution. In short, to evolve is to create, and to create is to evolve. Rival philosophies are alike superficial, if they drag these two concordant words into the arena of religious polemics for the purpose of pitting them against one another.

12. Lest, however, the objection should be raised that, in conceiving the Original Cause to be an emittent source, we embarrass the conception of its immutability, and virtually comprehend with it in the same category of being the things to which it gives existence, making its effects to be self-developed modifications of its own substance, allotropic reproductions of some single all-involving element, we shall now do well to observe that the products of Mind, so far as we have any immediate perception of them as such, are essentially distinct from the conscious subject. A clear intuition assures us that they constitute no portion of the producing substance, and that in springing from it (I ignore, of course, all purely organic waste) they become no loss to the individual, imply no drain upon the resources of his personality, no deduction from himself. The causal relations we evidently bear, although in limited degrees and respects, to forms of objective existence direct our attention to a definite subjective property. This, when distinguished as a specific force, is named *volitional*; when its efficacy is characterised it is known as *creative*; while if, in contemplation of its effects, regard be had to a hidden fund of corresponding resources, the adjective which suggests itself is *evolutional*. The proceeds of evolution may be numerous and endlessly

diversified, but the process takes place in conjunction with the consciousness of an indivisible unity and simplicity of being, and, moreover, of a rank so exalted as to forbid the classification of the producer with the things produced, otherwise, of course, than relatively to a higher and a common origin. Absolute immutability, indeed, is by no means, as a matter of course, to be inferred from the indiscerptibility of a personal unit. Action, if it involves a new experience, may be admitted to imply a change in the condition of the agent; only, however, in relation to that experience, and to its necessary subjective effects, if such there be. But to the source of all other things besides itself that have been, are, or shall be, nothing can at any time be new; for whatsoever it has within itself it must have always had. When, therefore, lifting up our minds to a First Cause, we direct our attention to the process of origination, what we have to conceive is a *modus operandi* which, instead of being determined, whether by successive modifications of thought and feeling, or by any of the restrictions to which volitional action in created agents may be forced to submit, presupposes a pure, simple, and ideal ability to effect things that shall have their place in subjection to the conditions under which the existence of the finite is possible. How, then, is the immensely comprehensive evolution exhibited in that system of interrelated and continuously developing forms of being which we call the universe to be accounted for? We have found, I believe, the answer to this question, having, as I now venture to assert, arrived at it by a synthesis of unmistakably trustworthy intellectual intuitions; for they authorise and necessitate the conclusion that **AN IMMUTABLE SOVEREIGN WILL IS GIVING, IN ABSOLUTE FREEDOM OF ACTION, UNCEASINGLY PROGRESSIVE EXPRESSION TO AN ETERNALLY FIXED IDEA.**

13. This conclusion reached, it falls in my way to notice in passing two ancient notions respectively characteristic of rival systems of philosophy, but both profoundly suggestive, and historically important as regards the influence they have severally exercised in determining modern developments of philosophical thought. Each, as it appears to me, betokens a certain philosophical kind of insight fundamentally sound, bearing witness, as it does, to an experience of the difficulty of firmly grasping those restlessly-shifting indications of being which are ever playing upon the senses, producing impressions that vary from moment to moment; and to a conviction that the interpretation of these impressions is not to be found otherwise than in stable intellectual perceptions. Plato, contemplating nature with the steady gaze of an

inward eye that strove hard to escape being dazed and abused by the fleeting images of a phantasmal scene, fancied that he saw in them adumbrations of archetypal forms; and these forms, which he called *ideas* (*ιδέαι*), were in his view true, substantial, and enduring. Aristotle's imagination, while his inquisitive and discriminating intellect sought to penetrate the secrets of nature, likewise created for each subjective concept a sort of objective counterpart. This, the distinctive *εἶδος* of the object contemplated (he did not name it *ιδέα*), was its constitutive form, something which the conception of it implied, and which must therefore be considered indispensable to its essence (John iii. 10 R.V.) or being (*οὐσία*), but which, apart from the supposed nondescript material (*ἕλη*), wherein alone specific characters could find expression, had no substantial existence. Of these two notions the later shows doubtless some advance in the spirit of scientific caution which facilitates the avoidance of error, but it was not, like the earlier, conceived in that elevation of soul which involves a superior aptitude for the apprehension of truth. In the efforts, however, thus made to discover the stable and real by looking through the sensible into the sphere of the intellectual, it was overlooked that the concepts thereby assumed to have their counterparts in the nature of things had not been formed out of pure intuitions, either intellectual or moral, materials in respect to which philosophers might be permitted to say, "We bear witness of that we have seen,"* but were products of tentative thought, as it were distinctive labels of provisional value at best, appended to aggregates of properties, observed and classified from variable points of limited view, results of an empirical and unfinished process, arrived at in the exercise of limited powers of perception and a fallible judgment, and leaving indefinite room for increasingly profound, accurate, and comprehensive knowledge. No portion of the universe, no single phase, or observed association of phases, of the ever-moving system of the manifold, can have an adequate intellectual counterpart otherwise than in each and all of its interrelations with the rest, not simply the interrelations of mere coexistence in an arbitrarily-assumed present, but those of a past which dates from a mysterious beginning inscrutably remote, and those of a future yet to be disclosed, which shall have no end. The eternal purpose of summing up (Eph. i. 10.) the universe in the

* In *εἶδος* we perceive a purely metaphysical conception; it is that which makes the thing just *what it is*. Relatively, therefore, to this term *essence* (*οὐσία*) must be distinguished from *existence*.

perfect Image of the invisible God, namely, in the archetypal Man, a purpose recognised in the Christian verity, evidently presupposes that the Idea of Him in its entirety, its length, and breadth, and depth, and height, and of the universe as it was from the beginning, and will be through eternity, are one. In short, one comprehensive, fixed, unchangeable Idea suffices, as the so-called formal cause, to account for everything, although the manifold conceptions in which it is destined to be apprehended will continue growing and expanding as the ages roll for evermore.

14. "Classifications," it is asserted by the eminent evolutionist whom I have already quoted, "are subjective conceptions, which have no absolute demarcations in Nature corresponding to them."* Now, in declining to claim for our definitions a complete and absolute character, we do not therefore deny that the objects manufactured by the Power which is at work in Nature exhibit real and significant varieties of type; nor do we leave it to be inferred that, in evolving finite existence, the mysterious Artificer, in so far as, having established distinctions in the products of His hands, He opens up to our view distinctive marks, has not allowed them to become for philosophical purposes distinguishable. Before, however, we hold ourselves entitled to form an opinion as to whether He has wholly or in part separated specific characteristics by lines of demarcation sharply drawn, or has connected them all by insensible gradations, it behoves us to supplement steady introspection with a close inspection of objective facts, to observe both the existing works of His hands and whatever traces are still visible of His operations in past times, and to take note of such laws and principles as may be empirically discovered by attending to the process of differentiation. An attempted exposition of Evolution, which left these facts and laws and principles out of view, and gave no further account of the genesis of the manifold and complex than is implied in simply setting it forth as the expression of the Eternal Idea, would be manifestly and inexcusably incomplete.

15. Our next step, then, it is plain, involves the consideration of a much-agitated question, and one which cannot be either profitably, or even honestly, evaded. As it necessitates attention both to the characteristics of Life and to the so-called Persistence of Force, it may be conveniently introduced by a few preliminary remarks in reference to these weighty matters. I would first of all submit that Mr. Herbert Spencer's definition of Life, which accurately describes, indeed, the only

* *The Principles of Biology*, by Herbert Spencer, Part I. ch. iv. § 24.

distinctive symptom observable in every case in which the term is held to be applicable, but takes account of nothing more, cannot properly be accepted as a *definition of the thing signified*; and that, accordingly, we ought to say, not that life is, but that it is *known by*, "the continuous adjustment of internal relations to external relations."* Further, I would suggest that persistence should be predicated of Effect rather than of Force. If a body, once set in motion, continue moving, it is an effect which visibly persists, whether in the simple, undeviating motion thus originated, or in the resultant of a multiplicity of effects. It may be eventually transmuted from sensible movement into molecular tremors, or may be lurking in situations of relative and apparent repose; but, howsoever this be, it is the effect which lasts, and which, if we suppose a final balance of conflicting effects, or, we may say, their absolute neutralisation, must in this form, but must in any case in some form or other, last for ever. The action of true force, so long as it persists, must needs be, as is evident in a falling body, *cumulative*. There is, I do not for a moment doubt, a persistence, or ceaseless conservation, of all tendencies observable in matter; and, for scientific purposes, every such tendency may be conveniently represented, relatively to the amount of *resistance* it can overcome, as *force*, and relatively to its equivalent in *work* (ἔργον), as *energy* (ἐνέργεια). To credit atoms and molecules, however, with the possession of forces and energies is, I cannot but think, to encumber science with gratuitously-conceived metaphysical entities, and thus to fall into the very snare against which scientists so emphatically caution us. Of Force we have no truly scientific knowledge, except in so far as, aided by the immediate experience of spontaneity, we conceive of a Necessary Force whence all movement and change originate. The philosophical conception of force assumes that the elementary particles from whose complex movements and combinations diversities of structure arise, execute with faultless regularity preordained manœuvres, and assume, without fail, appointed places under the control of an all-compelling Will, and thereby constitute the ever-growing expression of an Eternal Idea.

16. The question we have now to consider I formulate accordingly, as follows:—Are the various types which have been modelled to serve as vehicles and instruments of corresponding varieties of that specific determination of the Divine

* *The Principles of Biology*, by Herbert Spencer, Part I. ch. v. § 30.

energy which we call Life unrelated to one another, save as having their issue from the same unoriginated source? or are they developed forms, which, through the operation of dissimilar external conditions, have all alike insensibly acquired their several characteristics in the course of a continuous evolution of immense duration from some initial rudimentary type? Two opposite views in respect to the mode of the original genesis of organisms are respectively indicated in the alternative hypotheses just stated, and it is between them that we have to choose.

17. Whether or not the question at issue admits of an answer which may be accepted as conclusive, it behoves us to observe that, as regards certain points of paramount importance, these two hypotheses I now submit to you have equal claims; indeed, it does not matter in the least to which of them the preference be given. They both agree in representing different types to be distinct creations, and also in accounting for their existence teleologically: whereas, however, in the former the notion of origination is comparatively simple, leaving out of view all else but cause and plan and purpose, the latter resolves the process, separating the commencement from the state at present reached by an immense interval of gradual development, and thereby modifying and enlarging the first-formed conception of inter-relations. What, then, we desire to be assured of is, whether the phenomena which have suggested the development hypothesis find in it their true interpretation. For my own part, assuming, as I do, that a primitive conception of origination, although inbreathed from above, would in the nature of things obtain for its medium of imaginative thought the simplest notions through which it could be symbolically grasped, retained, and rendered fruitful, and that its literary expression would, as a matter of course, receive from these a characteristic shape and colour, I am not aware of any argument in favour of the earlier hypothesis grounded on rightly-venerated authority, nor can I see any reason for hesitating to regard it as a mere alternative to which science must necessarily revert in the event of its failing to establish the doctrine of a gradual development of organic types.

18. The arguments, however, which have been submitted to thoughtful readers in support of this doctrine I pass by; they are to be found fully and elaborately set forth in works of distinguished ability, and no summary could I hope to produce that would give an adequate impression of their amplitude and weight. But as even its strenuous advocates, if serious and candid, will assuredly confess, the objections

that may be raised against it are entitled to grave consideration; and, certainly, it is no genuine spirit of scientific caution that will forbid us to doubt whether they have all been satisfactorily answered. To instance one of the most obvious objections—although, it may be, not the strongest—given in the pedigree of the original man a species of anthropoid ape, equal in rank to the highest type now extant; given, therefore, two organic types which were related to one another, but separated by an interval of time which, without a moment's hesitation, we may assume to be no small multiple of a thousand years, have we not a right to ask, "Where are the modern analogues, where are any of the fossilised specimens, of the innumerable intermediate stages of development?" If, in respect to its being both continuous and imperceptible, Nature's progress from the homogeneous to the heterogeneous may be imagined to resemble the movement of a glacier, how are we to account for so enormously wide a crevasse, which, be it observed, shows the split to have been complete, alike from top to bottom and from side to side? It is not one connecting link that we miss between the brute and the man, namely, between the most advanced of the lower races of animals now existing and that race which towers and rules over all—it is not two or three, but thousands or myriads or millions. On the insensible development hypothesis, we might reasonably expect to find, at any rate, some transitional species of creature, of which it would be impossible to say to which of the two classes it belonged. In fact, it is not easy to imagine how this hypothesis can be adopted without theoretically expunging from organic nature all those boundary-lines, and pulling up all those landmarks, which now render classification feasible. The breaches of continuity which suffice to frustrate any attempt that might be made to track in any direction the supposed course of development are too numerous, and for the most part too wide, and in too many instances intervene between diversities of structure and function remote from similarity, and between peculiarities which have no appearance of standing in necessary relation to external conditions, to admit of being adequately accounted for by these conditions, and thus of finding the places they require in a definite and full-blown scheme of physiological evolution. Passing from this objection, I might proceed to ask what should induce Nature, in making choice of individuals with a view to their survival, to look with a friendly eye upon such budding organs, incipient wings for example, as in their undeveloped forms can have no more than a prospective value, and may, without stretch of imagination, be conceived likely

to prove an embarrassing possession. But it does not fall within the scope of this dissertation that the hypothesis under notice should be thoroughly sifted, and the arduous task of balancing the arguments for and against it performed with such care and delicacy as to do it justice, or rather that a point of view should be sought whence all the seemingly conflicting facts it has brought under notice may be seen to harmonise. Philosophy may rest content to leave it for the present, if not for an indefinite time, *sub judice*, insisting only that, if an immediate verdict be delivered, it shall be "Not proven."

19. Yet, let us suppose it has been established that, simply in virtue of properties inherent in matter, certain molecular combinations, which, in the maintenance of a moving equilibrium, had previously constituted non-sentient organisms, underwent, in consequence of some change in external conditions, such a modification as the transition to sentient life involves, can we allow it to be conceivable that the mere physiological alteration which thus took place gave rise to *sensation*? Assuredly, such an origin for such an affection is absolutely unthinkable. Whether or not a space-occupying atom may be conceived capable of feeling is a question which, although there might be a difficulty in making it more edifying than amusing, I would, if necessary, discuss. But there is no necessity. The question is, can the subject of sensation be an arrangement in respect to positions and motions? Or, let us ask—to put the question in a more comprehensive form—can it be a set of relations and nothing more? In short, can it be a nonentity? Has it come to this, that if I am to think scientifically I must begin by giving my consciousness of sensation the lie—must say within myself (namely, what I have hitherto fondly imagined to be myself) that it has been deceiving me, or rather, that something which, under the notion that I am, I call my consciousness, has all along been uttering a falsehood, which, did I exist, would have deceived me, but has not after all, inasmuch as I, who seem to myself to have been deceived, am absolutely nothing? Is *self*—I leave out of view for the moment all such knowledge of it as presupposes further internal witness than sensation—to be accounted simply a moving molecular counterpoise of a particular kind? According to the doctrine of Evolution, as commonly taught and understood, things are felt but nothing feels. The experience is recognised; not so one of the obviously essential conditions of its possibility. Of this, through some strange inadvertency, or for reasons yet to be divulged, no account is taken.

20. But if there is really something which feels, one of its relations to the organised aggregate of molecules with which, wheresoever discovered, it is found in close association, must needs be that of tenant. Whether it comes into existence before there is even a single room to receive it, and, if so, whether it has unconsciously a hand in building the house it is destined to occupy—these are questions which it might be interesting to ventilate, but which, so far as my purpose is concerned, may be left unanswered. Thus far, moreover, it is immaterial whether or not we can determine the grade of life at which the sort of susceptibility to outward changes that is evinced by appropriate movements becomes associated with actual sensation—in other words, with the most fundamental kind of psychical affection of which we have experience; and we may allow it to remain an open question whether the cases in which, in organisms supposed to be animal, apparent individuality, instead of being destroyed, is multiplied by mechanical division, exhibit the production of new individuals really sentient, or whether the kind of sensibility of which they furnish evidence may be ranked with that of the so-called sensitive plant, and may be regarded as having, in the functional susceptibility of the efferent portion of a developed nervous system, its analogue in the higher types of life. I still hold myself at liberty to distinguish from the organs or instruments of sensation the things which feel, and to contemplate the latter, relatively to non-sentient matter, as an evolution of something previously latent in the resources of Originative Power, as an advance in the revelation of the Eternal Idea.

21. The next step in advance is the commencement of *psychical differentiation*. In view of the possibility that variations of type may have arisen in the way of progressive development, it will here occur to us to ask whether limits determined by the capacity of its soul have been assigned to the developments which a sentient organism may undergo in correspondence with modifications of its environment, or whether the soul is, so to speak, illimitably elastic and indefinitely expansible in all directions. If (to illustrate my meaning by a further use of metaphors I employed just now) some considerable improvement of the house should so change its character as to necessitate on the part of the tenant a superior style of living, must he make way for another tenant? or will he, if he does not possess already, be supplied with, as a matter of course, the means of adapting his *ménage* and his scale of expenditure to the situation in which he will find himself, on the supposition that he is allowed to remain? One

thing I venture to assert without the slightest hesitation: I am at a loss even to conceive of a transition from the psychological condition of a lower animal to that of man having been effected otherwise than by what might be called a *new birth* or a *new creation*. He has certain distinctive mental characteristics which are surely traceable to the seed of some intellect of a peculiarly God-like order such as shows him to be of nobler lineage than the creatures over which he exercises sway. It is no mere difference of degree that we observe in comparing the brute soul, even in those specimens which exhibit exquisitely-developed sensibilities and perceptive powers, with the soul which manifests a capacity for thinking of an Author of all things finite and temporal, and of a life independent of all changes and chances. Yearnings and anxieties unutterable, in thoughts directed towards One who is perceived to have had no beginning, and to be the same yesterday, to-day, and for ever, are assuredly conceived through no faculty which owes its origin to nothing more than growing complexity in the inter-relations of appetency with a physical environment. An ellipse may be imagined to have its major axis lengthened out continuously *ad infinitum*, while the minor axis remains unchanged; but can imagination ever by this process expunge it from thought and fill its place with a parabola? Is there a possibility of blending the conception of the one with that of the other—in other words, of conceiving curves which are intermediate between the ellipse and the parabola, and do not admit of being sharply defined by either term? When this can be done, when the former can be represented as having by continuous modification of its axial relations evolved the latter, then may we allow it to be possible that the human soul has grown imperceptibly out of that which once belonged to some inferior animal.

22. To those whose psychological philosophy is but the interior projection and indispensable complement of their physiological scheme, I am quite prepared to concede that a fallacy must be lurking somewhere in my reasonings, if ever the brain, in any of the abnormal states to which it is liable, gives evidence of a break-up of personality. But is such evidence forthcoming? A lunatic, it may be, is under the impression that he is two individuals. Let us suppose them to be historical celebrities, whose characters present points of contrast. If his mental aberration involves corresponding alternations of character, there may be reason to suspect that the two hemispheres of his brain are in different states, and that they have been rendered by disease incapable of normal concerted action. For character, as manifested in the flesh,

cannot simply be the stamp which the soul bears: it must be in a considerable degree dependent upon the state of its instrument and medium of manifestation. Assume, however, the impression of a duplex, or of a multiplex, personality, and let it induce the bewildered man to hunt at times after some imaginary illusive self. We must needs postulate a subject to which it may be ascribed. What, then, should the subject of this impression be but a conscious self, a soul whose individuality cerebral confusion has left intact? If, from a conscious subject, some portion, not recognised while there as constituting a wedded, but distinct consciousness, were detached, how should its severance leave the impression of a *divided* consciousness? We may see plainly that what is really missed is some desirable habit of mind, faintly remembered, and the comparatively pleasing experiences associated with it; a multiplex personality, if the attempt be made to attach a meaning to the phrase, is absolutely unthinkable.

23. Nothing, therefore, now remains that might seem to forbid the conclusion towards which my argument has been tending. Evolution is more than the mere complication of molecular relations: it brought into view being of a kind which shows itself distinct from the material in which those relations find place; and, still differentiating and distinguishing, it opened up those superior attributes of which we find ourselves possessed, and by the aid of which we are enabled to conceive the existence of, and to ascribe a character to, an Eternal Author of the whole, an original and all-compelling energy.* Evolution has been raising that curtain of night and emptiness without beginning, which before all worlds had veiled His glory; and, in a type of creature exhibited on this planet at a comparatively recent date, it has disclosed what may be called an image of the invisible God. But Man, considered simply as an individual, fails to disclose fully what he is, and comes very far short of revealing, as he appears to have been destined to reveal, his Author. His social attributes have need to be duly developed, and to be brought into action in a social state, which shall afford adequate scope for their exercise. As regards the ultimate prospects of the human race, if any physiological progress can be now detected, the bounds which seem to have been established in the fixity of natural laws, render it of comparatively little moment. But the sort of facts which, about eighteen centuries ago, first made it evident to a chosen few that the

* 1 Cor. xii. 6 (Θεός ὁ ἑνεργῶν).

manifold wisdom of God was being made known by the Church to the principalities and the powers in the heavenly places (Eph. iii. 10), are still observable and conducive to the expectation of a state of existence in which the Eternal Idea will have its outcome in the absence of sin, decay, and death, and the invisible God thus revealed will be all in all.

THE PRESIDENT.—After a communication from one of the members has been read, we shall be happy to hear any remarks upon this paper, which displays a great amount of thoughtful treatment, and seems to require an equally careful consideration.

CAPTAIN F. PETRIE then read the following communication from Surgeon-General C. A. Gordon, M.D., C.B. :—

“ . . . With regard to sections 21, 22, and 23 of Mr. Clarke's paper, it seems to me that so far is man from being ‘evolved’ towards a higher condition than that occupied by him in his early history—he is mentally and physically now in process of retrogression or devolution. I think, also, that this theory accords with analogy as presented to us in the process of *decay* which we see pervades all things, whether animate or inanimate.

“I further think that as with the early Aryan poet-philosophers mentioned in my essay ‘On Medicine in Ancient India,’ so with the early Semitic and other ‘prophets,’ there existed in them a more intimate relation between the corporeal and *psychic elements* in their nature, than is now to be found in humanity as it at present exists. . . .”

Mr. W. GRIFFITH.—I rise with a certain amount of diffidence to offer a few remarks on a paper which exhibits a great amount of intellectual power and considerable skill in the use made by the author of philosophical terms, together with a knowledge of antique philosophy which we do not often meet with. If by “Evolution a Revelation” is meant that Evolution adopted as a truth would explain many facts, this, no doubt, may be the case; but the word “Revelation” does appear to me to be too transcendental for application to a system of natural and physical philosophy. Passing from the proposition which has thus been laid down, I would venture to make a few remarks on the reasons that have been adduced in support of it. The first argument is that, “the beginning of the Cosmos, having been conceived as a state of things in which differentiation had as yet no place, there is but one way in which it can present itself distinctly to the imagination: it must be pictured as a system of homogeneous atoms in perfect equilibrium.” Now those who are acquainted with the Greek philosophy know that the Cosmos is usually taken by the Greek philosophers to signify a uniform order in creation: not as a system of molecules thrown together indiscriminately, but rather that development of system in the universe in which there was order and beauty, and everything was harmonised and consistent. I think, therefore, that the use which is here made of the word “Cosmos” is entirely inappropriate. But, passing from mere criticism of the use made of

the word "Cosmos," I would call attention to the statement made in this passage, that all things were in a state of homogeneity, and I would ask, "Is not this assuming a great deal too much?" If we turn to the classics we find Ovid telling us:

Ante mare, et terras, et, quod tegit omnia, cælum,
Unus erat toto Naturæ vultus in orbe,
Quem dixere Chaos; rudis indigestaque moles:
Hanc Deus, et melior litem Natura diremit.

Surely we can imagine a state of chaotic existence before the beautiful and harmonious Cosmos came into being, and are not compelled to the conclusion that all the atoms were homogeneous. I think that such a supposition as this is quite as consistent with fact or reason as the supposition that all things, at that time, must have consisted of homogeneous atoms in perfect equilibrium. It would take too long to follow the very able development of the author's argument, and trace, step by step, the superstructure he has erected on, what I conceive to be, a fallacious foundation, till we come to the point as to Evolution. We are told that, if we assume all these things, there need be no great difficulty in substituting the word "Creation" for "Evolution." But this is the very point in debate. To my mind, it is simpler to take the first chapter of Genesis as we find it, and say, there may be difficulty in it which is hard to explain, but that it does explain the existing state of creation in a way which neither Herbert Spencer nor any of our more extreme modern philosophers seem to have done. As to the creation of matter, a question not taken up in this paper. How did matter come into existence? That it was created by the Almighty and that certain qualities may have been attached to it which evolved themselves in particular forms of physical existence, may have been the case; but I do not stand nor lean on that. We have what is supposed to be really a revelation—inspired—which does explain the difficulties of creation. These remarks of mine have necessarily been somewhat fragmentary. The subject is so vast and grand, and the points brought forward so comprehensive and sublime, that it is difficult to tie them down to the basis of calm fact and ordinary logic; but still, I think that what is put before us tends to show that we need something further to explain what is in existence.

A VISITOR.—May I ask whether the author will explain this passage, which appears in section 23: "Evolution has been raising that curtain of night and emptiness without beginning, which before all worlds had veiled His glory; and in a type of creature exhibited on this planet at a comparatively recent date it has disclosed what may be called an image of the invisible God." Are we to understand by this that the author regards the Saviour as a product of Evolution? I have heard such things before stated by some few men of learning and authority; but I should be very sorry to hear it asserted in this room. Again, may I ask whether I am right in supposing that the author wishes us to regard the term "Creation" as synonymous

with the term "Evolution"? Is it his opinion that they are one and the same thing? If so, I must certainly say I shall have to give up all thoughts of Evolution as I have previously held them. If I understand it rightly, Evolution, roughly speaking, would be the evolving of one animal from another, throughout the whole series, from those of the most simple origin up to the most complex types. If I am right, Creation is the production of beings by a definite act of the Creator. Of course, I may have misunderstood both the terms themselves and the view taken by the author of the paper; but I should like him to say whether I am to take for granted or how I am to construe the passage in section 12, where he says:—"This, when distinguished as a specific force, is named *volitional*; when its efficacy is characterised it is known as *creative*; while if, in contemplation of its effects, regard be had to a hidden fund of corresponding resources, the adjective which suggests itself is *evolutional*." Beyond this, may I ask one more question? As I understand Evolution, it professes to give a reasonable explanation of the different forms of life upon earth. In section 18 we are told that there is an absence of evidence connecting the highest being on earth—man—with the highest type of the lower animals, and in this the author is not in any way abstruse. He says:—"It is not one connecting link that we miss between the brute and the man, namely between the most advanced of the lower races of animals now existing and that race which towers and rules over all,—it is not two or three, but thousands, or myriads, or millions." If that be the case, I hope the author will pardon me if I say that in the absence of any proof, and in the presence of so complete a breach between two of what are usually termed allied forms, I cannot accept Evolution in the same sense as Creation, nor can I accept Evolution as in any way proved.

Mr. J. HASSELL.—I desire to ask one question. I shall not attempt to go into the whole paper, as I have not had time to read it before coming here to-night, and it is one requiring deep consideration. But after what has been said by others I may say that I am one of those who do not in any way believe in Evolution, as it is popularly put before us; and I should like to point out to those who reject the view that man is a separate creation, and hold that he is evolved out of a lower form of animal life, that the inevitable result of accepting such a theory is already claimed by some well-known Evolutionists themselves to involve the rejection of Christianity, if not of Theism altogether. For instance, one of their number, Mr. Grant Allen, speaks thus:—"While men believed in the special and separate creation of their own species, they could also believe that the Creator had endowed each human being with an immortal soul; but when the ascending line from the Amœba to man is seen to be unbroken * it is difficult to concede immortality to ourselves without conceding it also to every plant and every animal. . . . A consistent and logical acceptance of

* The "links" have not yet been found.—Ed.

the Darwinian principle, therefore, would almost inevitably lead us to confine our horizon to the existing life, and to concentrate our efforts upon making this world as habitable and endurable an abode as possible for ourselves and others. . . . Such persons ask no reward, and fear no punishment." I would commend these plain words to the consideration of all. For my own part I agree with those who regard the extreme doctrine of Evolution which some hold, as unscientific, and consider it as based on wrong premises, and in this there are not a few able men that agree with me.

THE AUTHOR.—In replying to the observations made by the different speakers, I ought to say, at the outset, that I have not used the word "Evolution" in its ordinary sense, or rather I have not made the ordinary application of that term. I have represented it as the evolution of an Eternal Idea. I think it will be generally admitted that differentiation has taken place from the beginning—so far as we have any knowledge of the beginning; that there has been what may be called progressive differentiation. Evolution, as it seems to me, has been an evolution from the Mind which created phenomena, and in successive manifestations has brought them to their present state. I do not regard man as the evolution of a lower animal, and I think I have made this evident in my paper. I have not committed myself to the ordinary theory of Evolution, and do not regard man in any other light than as a distinct creation, although in reference to the Mind—the Eternal Mind from which he has proceeded—he may still be said to be an evolution. I think, therefore, that, in saying this, I have sufficiently disposed of the difficulty to which attention has been called in regard to the words used in section 23. I think I have shown that my views are perfectly consistent with the account of the creation of man which is to be found in the Book of Genesis. I was not at all conscious at the time I was writing this paper that I was deviating in the slightest degree from the Biblical account. I have taken what appeared to me to be the only possible philosophic view of Evolution. I have read certain masterly treatises on the doctrine of Evolution as it is commonly understood; and it has always appeared to me that, however ably the subject is treated in these works, they all fall short of being philosophical. I will make one remark with reference to the use I have made of the word "Cosmos." I have spoken of "The beginning of the Cosmos." Of course I do not mean that the Cosmos itself, or what might with propriety be called the Cosmos, was then in actual existence. What I meant by "The beginning of the Cosmos" was, that beginning from which the Cosmos proceeded; and if my words be taken in that sense, I imagine that my statement will be accepted as unobjectionable. I am not aware whether my attention has been called to any other point.

Mr. GRIFFITH.—Will you explain your view of the origin of matter on the Evolution theory?

THE AUTHOR.—I believe matter to be a creation, and, at the same time, I conceive that it may be regarded as an evolution, from the Eternal Mind—that Mind in which there can be no change. I regard it as the evolution of

an eternally fixed idea, as far as we can form a notion of the subject from our investigation of astronomical facts. The first things created would seem to have been the material atoms, the mere matter out of which the universe was formed. Then, by progressive differentiation, the worlds thus produced came at last into the form in which they might be termed the Cosmos, which Cosmos might still, in some respects, become more and more elaborated. Differentiation is still making progress ; but I believe that matter itself was created by the Eternal Will. I take the words of the Book of Genesis in their simple and unmistakable sense, and without the least wish to put any qualification on the meaning they at once suggest. "In the beginning God created the heavens and the earth." All I contend for is, that creation may be regarded from a certain point of view,—that is to say, from my point of view,—as an evolution. So far from having adopted the commonly-accepted Evolution theory, I think I have shown that theory to be untenable. I have said that, if we are to adopt it, we must begin by imagining a condition of matter which was perfectly homogeneous. We can only do that by picturing to ourselves homogeneous atoms, so distributed that there must have been a perfect reciprocity between their tendencies, or the forces by which they would be at one time or another actuated. That I take to be the only possible way in which we can present to our minds the ordinary doctrine of Evolution ; and that doctrine, as will be seen from my paper, I have not adopted : I have merely stated it in order to confute it. I have by no means committed myself to the theory that matter came into existence in a state of perfect homogeneity. It may, or it may not ; but, at any rate, we have no proof that it was so produced. Finally, I think, from what I have said, that it must be quite apparent that my views are in entire accord with what is commonly believed to be the teaching of the Bible on the subject of creation.

The meeting was then adjourned.

REMARKS UPON THE FOREGOING PAPER
BY SIR J. WILLIAM DAWSON, K.C.M.G., F.R.S.

January 8, 1888.

The title of the paper is not a very attractive one to a person whose studies have led him to regard the modern doctrine of Evolution, as expounded by its more enthusiastic advocates, as savouring more of superstition than of either Revelation or Science. There is, however, much valuable thought and suggestion in the paper, and it tends to clearing up the fallacies which encompass the word "Evolution" as used to include the distinct ideas of causation and development, and to confound them in the popular mind.

When men shall see clearly that under this misused word they are including in a most uncritical manner the ideas of causation both primary and secondary, and of development both direct and indirect, we may hope for some rational philosophical views as to the origins of things and the changes they may undergo. Until this mental confusion shall be dispelled, we shall have little progress in the discussion of these great subjects.

FURTHER REPLY BY THE AUTHOR.

In his communication touching my paper, SURGEON-GENERAL GORDON has drawn attention to a profoundly interesting question, and one that ought not to be overlooked in a treatise on Evolution. But it does not arise within the scope of my argument; for the theory of physical evolution by no means involves the assumption that man, considered as an animal, must have been improving from the time of his first appearance on earth. His environment has doubtless been modified, partly by astronomical and geological changes, and partly also by the manifold effects of advancing culture and civilisation; but no historical evidences of retrogression, supposing them to be forthcoming, may reasonably be adduced in refutation of the theory in question, unless, on a comparison of the conflicting influences to which the various races of men have been thus exposed in their struggle for existence it can be proved that there is no-adverse balance

to account for retrogression. It must be admitted to be conceivable that in the Cosmos as a whole, there may be a continuous advance in heterogeneity, yet such as, so far from being uniformly favourable to every species of development, necessitates, to some extent, organic deterioration. Nevertheless, in the human physique, even if it could be clearly shown to have improved, there is nothing whatever to countenance the notion that the interpretation of man's spiritual history should be sought in atomic tendencies to complex molecular arrangement.

The sort of philosophy which, having discovered these tendencies, finds itself at the limits of its field of investigation, and can distinguish nothing beyond, could not be expected to introduce into its nomenclature the term Evolution without misusing it, and—to adopt Sir William Dawson's words—including under it “in a most uncritical manner the ideas of causation both primary and secondary, and of development both direct and indirect.” For, although the conception of a cause may easily become entangled in metaphysical confusion with that of its operation or its effect, to banish it altogether from the elaboration of first principles in any system of philosophy is impossible. My endeavour has been to vindicate for the true philosophy its rightful claim to a much-abused word, and, by a legitimate application of that word, to bring into view the Fundamental Cause, to which, along with every other name, and with every indication of existence or of change, it is always pointing.

In my impromptu reply to the critical, but candid and friendly, remarks which the reading of my paper elicited, I have already given such explanations as will, I trust, satisfy Mr. Griffith and the speakers who followed him that my views virtually coincide with those they expressed on all the momentous questions that came under discussion. In order, however, to obviate all possible misapprehension of the drift of my argument, I beg leave to call attention to paragraph 4. Having undertaken to examine the fundamental hypothesis of the theory of Evolution as commonly propounded, I there commence my argument by supposing for the process of differentiation a point of departure; I start with what I thus conceive to be a necessary assumption respecting the origin of the Cosmos. But, as will be observed, the assumption is made in the way of temporary concession, and with a view to a *reductio ad absurdum*, my object being to expose the fallacy which I see lurking in the phrase “unstable equilibrium.”

As soon as I have so far accomplished my purpose, I go on to point out how, as I believe, it is possible to arrive, by a strictly scientific process of investigation, at a distinct conception of the real origin of things. I indicate what seems to me to be a demonstrably trustworthy clue to that by which all finite existence is accounted for. But what I assert to be thus discoverable is not an aggregate consisting, on the one hand, of conceptual abstractions, self-subsisting and possessed, of the power of self-evolution into concrete forms, and, on the other hand, of a suitable, but absolutely nondescript, vehicle for these forms, likewise self-subsisting, but conditioned as to its mode of existence by time and space; it is a personal Creator

and Upholder of whatsoever is subject to these conditions—an original and fundamental Cause, whose effects are at once the revelation of a Mind and the operation of a Will.

My philosophy, therefore, is no development of the speculations of Plato, except in so far as they approximate to a worthy conception of that eternal essence of goodness and truth towards which his mental energy was assiduously directed, but which it had not been given him truly to apprehend. It is simply, as I believe, the Biblical philosophy, although in my exposition of it I may have been giving evidence of habits of mind determined in some measure by familiarity with thoughts which owe their stamp and currency to his deep and fertile intellect. A reference to paragraph 10 will make it apparent that I hold matter to be a *creation*; for, as will be seen, I contrast man, in respect to the subordination of his will and to his inability to originate in any sense—except in the use of material already provided for him—with that Being to whom I ascribe an *absolute* power and an *ideal* freedom of origination.

If the title I have given to my paper should seem to need a more explicit apology than will be found in the foregoing remarks, I would request attention to the meaning of the word "Evolution." To *evolve* is to *roll out* or *unfold*; and therefore, as it seems to me, the disclosure of an idea, plan, or purpose, may with strict propriety be termed an *evolution*. In choosing this word, I was determined by the consideration that the universe, regarded as a creation, should be conceived as not merely *emanating*, that is to say *flowing forth*, from the source of all finite existence, but opening out a scheme latent in the mind of Him with whom (James i. 17, R. v.) can be no variation, nor shadow that is cast by turning.

APPENDIX A.

ON THE PAPER ON "KRISHNA."

As regards Non-Christian Religious Systems, vol. xviii. contains a paper, upon Buddhism, in which the talented author gives the results both of his own studies during a quarter of a century in India, and of the most careful researches yet made by others, into the history of the times when Buddhism took its rise; and the position taken up in that paper is supported by several whose studies enable them to claim a right to speak upon the subject.

The present volume contains a paper on Krishna, by the same author, followed by a discussion, in which some of the best known authorities upon the subject give their opinions.

As it adds to the completeness with which the subject has been brought before the Members, it seems not undesirable to add, as an appendix to this volume, the opinion of one of the leading authorities in England, upon the subject of the Sacred Books of the East.

REMARKS BY SIR MONIER MONIER-WILLIAMS, K.C.S.I.

(Boden Professor of Sanskrit at Oxford University).

"Unusual facilities for the study of non-Christian religious systems are now at our disposal; for the University of Oxford has this year, 1887, completed the publication of about thirty stately volumes of the so-called Sacred Books of the East, comprising the Veda, the Zend-Avesta of the Zoroastrians, the Confucian Texts, the Buddhist Tripitaka, and the Muhammadan Kuran,—all translated by well-known translators. Our missionaries are already convinced of the necessity of studying these works, and of making themselves conversant with the false creeds they have to fight. How could an army of invaders have any chance of success in an enemy's country without a knowledge of the position of its fortress, and without knowing how to turn the batteries they may capture against the foe? Instead of dwelling on so manifest a duty, I venture a few words of warning as to the subtle danger that lurks beneath the duty.

"In my youth I had been accustomed to hear all non-Christian

religions described as 'inventions of the devil.' And when I began investigating Hinduism and Buddhism, some well-meaning Christian friends expressed their surprise that I should waste my time by grubbing in the dirty gutters of heathendom. After a little examination I found many beautiful gems glittering there; nay, I met with bright coruscations of true light flashing here and there amid the surrounding darkness. Now, fairness in fighting one's opponents is ingrained in every Englishman's nature, and as I prosecuted my researches into these non-Christian systems I began to foster a fancy that they had been unjustly treated. I began to observe and trace out curious coincidences and comparisons with our own Sacred Book of the East. I began, in short, to be a believer in what is called the evolution and growth of religious thought. 'These imperfect systems,' I said to myself, 'are clearly steps in the development of man's religious instincts and aspirations,—interesting efforts of the human mind struggling up towards Christianity. Nay, it is probable that they were all intended to lead up to the one true religion, and that Christianity is, after all, merely the climax, the complement, the fulfilment of them all.'

"Now, there is unquestionably a delightful fascination about such a theory, and, what is more, there are really elements of truth in it. But I am glad of the opportunity of stating publicly that I am persuaded I was misled by its attractiveness, and that its main idea is quite erroneous. The charm and danger of it, I think, lie in its apparent liberality, breadth of view, and toleration. In the *Times* of October 14th, 1887, you will find recorded a remarkable conversation between a Lama priest and a Christian traveller, in the course of which the Lama says that 'Christians describe their religion as the best of all religions; whereas, among the nine rules of conduct for the Buddhist, there is one that directs him never either to think or to say that his own religion is the best, considering that sincere men of other religions are deeply attached to them.' Now, to express sympathy with this kind of liberality is sure to win applause among a certain class of thinkers in these days of universal toleration and religious free trade. We must not forget, too, that our Bible tells us that God has not left himself without witness, and that in every nation he that feareth God and worketh righteousness is accepted with him. Yet I contend, notwithstanding, that this flabby, jelly-fish kind of tolerance is utterly incompatible with the nerve, fibre, and backbone that ought to characterise a manly Christian. A Christian's character ought to

be exactly what the Christian's Bible intends it to be. Take that sacred book of ours; handle reverently the whole volume; search it through and through, from the first chapter to the last, and mark well the spirit that pervades the whole. You will find no limpness, no flabbiness about its utterances. Even sceptics who dispute its divinity are ready to admit that it is a thoroughly manly book. Vigour and manhood breathe in every page. It is downright and straightforward, bold and fearless, rigid and uncompromising. It tells you and me to be either hot or cold. If God be God, serve him. If Baal be God serve him. We cannot serve both. We cannot love both. Only one name is given among men whereby we may be saved. No other name, no other Saviour, more suited to India, to Persia, to China, to Arabia, is ever mentioned,—is ever hinted at.

“‘What!’ says the enthusiastic student of the science of religion, ‘do you seriously mean to sweep away as so much worthless waste paper all these thirty stately volumes of Sacred Books of the East just published by the University of Oxford?’

“No—not at all—nothing of the kind. On the contrary, we welcome these books. We ask every missionary to study their contents and thankfully lay hold of whatsoever things are true and of good report in them. But we warn him that there can be no greater mistake than to force these non-Christian Bibles into conformity with some scientific theory of development, and then point to the Christian's Holy Bible as the crowning product of religious evolution. So far from this, these non-Christian Bibles are all developments in the wrong direction. They all begin with some flashes of true light and end in utter darkness. Pile them, if you will, on the left side of your study table, but place your own Holy Bible on the right side—all by itself—all alone—and with a wide gap between.

“And now, I crave permission at least to give two good reasons for venturing to contravene, in so plain-spoken a manner, the favourite philosophy of the day. Listen to me, ye youthful students of the so-called Sacred Books of the East, search them through and through, and tell me, do they affirm of Vyasa, of Zoroaster, of Confucius, of Buddha, of Mohammed, what our Bible affirms of the Founder of Christianity—that *He, a sinless Man, was made Sin*? Not merely that He is the eradicator of sin, but that He, the sinless Son of man, was Himself made sin. Vyasa and the other founders of Hinduism enjoined severe penances, end-

less lustral washings, incessant purifications, infinite repetitions of prayer, painful pilgrimages, arduous ritual, and sacrificial observances, all with the one idea of getting rid of sin. All their books say so. But do they say that the very men who exhausted every invention for the eradication of sin were themselves *sinless men made sin*? Zoroaster, too, and Confucius, and Buddha, and Mohammed, one and all, bade men strain every nerve to get rid of sin, or at least of the misery of sin, but do their sacred books say that they themselves were *sinless men made sin*? I do not presume, as a layman, to interpret the apparently contradictory proposition put forth in our Bible that *a sinless Man was made Sin*. All I now contend for is that it stands alone; that it is wholly unparalleled; that it is not to be matched by the shade of a shadow of a similar declaration in any other book claiming to be the exponent of the doctrine of any other religion in the world.

“Once again, ye youthful students of the so-called Sacred Books of the East, search them through and through, and tell me, do they affirm of Vyasa, of Zoroaster, of Confucius, of Buddha, of Mohammed, what our Bible affirms of the Founder of Christianity—that He, a dead and buried Man, was made life?—not merely that He is the Giver of life, but that he, the dead and buried Man, *is Life*? ‘*I am the Life.*’ ‘When Christ, who *is* our Life, shall appear.’ ‘He that hath the Son, hath Life.’ Let me remind you, too, that the blood is the Life, and that our Sacred Book adds this matchless, this unparalleled, this astounding assertion: ‘Except ye eat the flesh of the Son of man and drink his blood, ye have no life in you.’ Again, I say, I am not now presuming to interpret so marvellous, so stupendous a statement. All I contend for is that it is absolutely unique; and I defy you to produce the shade of the shadow of a similar declaration in any other sacred book of the world. And bear in mind that these two matchless, these two unparalleled declarations, are closely, are intimately, are indissolubly connected with the great central facts and doctrines of our religion: the incarnation, the crucifixion, the resurrection, the ascension of Christ. Vyasa, Zoroaster, Confucius, Buddha, Mohammed, are all dead and buried; and mark this—their flesh is dissolved; their bones have crumbled into dust; their bodies are extinct. Even their followers admit this. Christianity alone commemorates the passing into the heavens of its divine Founder, not merely in the spirit, but in the body, and ‘with flesh, bones, and all things apper-

taining to the perfection of man's nature,' to be the eternal source of life and holiness to his people.

"The two unparalleled declarations quoted by me from our Holy Bible make a gulf between it and the so-called Sacred Books of the East which sever the one from the other utterly, hopelessly, and for ever,—not a mere rift which may be easily closed up, not a mere rift across which the Christian and the non-Christian may shake hands and interchange similar ideas in regard to essential truths, but a veritable gulf which cannot be bridged over by any science of religious thought; yes, a bridgeless chasm which no theory of evolution can ever span. Go forth, then, ye missionaries, in your Master's name; go forth into all the world, and, after studying all its false religions and philosophies, go forth and fearlessly proclaim to suffering humanity the plain, the unchangeable, the eternal facts of the gospel,—nay, I might almost say, the stubborn, the unyielding, the inexorable facts of the gospel. Dare to be downright with all the uncompromising courage of your own Bible, while with it your watchwords are love, joy, peace, reconciliation. Be fair, be charitable, be Christ-like, but let there be no mistake. Let it be made absolutely clear that Christianity can not, must not, be watered down to suit the palate of either Hindu, Parsee, Confucianist, Buddhist, or Mohammedan, and that whosoever wishes to pass from the false religion to the true can never hope to do so by the rickety planks of compromise, or by the help of faltering hands held out by half-hearted Christians. He must leap the gulf in faith, and the living Christ will spread his everlasting arms beneath and land him safely on the Eternal Rock."

APPENDIX B.

NOTES ON THE COMPARATIVE IMMUNITY OF THE JEWISH NATION FROM INFECTIOUS DISEASES.*

The interesting nature of this question, upon which conflicting opinions are being publicly expressed, will plead an excuse for the insertion of the following remarks, from the pen of one specially competent to deal therewith.

The Jews certainly do enjoy immunity from the ravages of cholera, fever, and small-pox in a remarkable degree. Their blood seems to be in different condition from that of other people.

The public papers reported that there was not one case of death among the Jews from cholera in Naples during the last visitation, though many thousands of the natives died. The *average* life of Jews is also of greater duration than that of most other classes,—this although they suffer much privation, and for the most part live in unwholesome localities, and are obliged to work at disagreeable and even injurious employment. They seem less receptive of disease caused by blood poisoning than others.

The Mosaic laws as to diet and cleanliness have been strictly observed by them during many hundred generations, and must have materially benefited their constitution.

As to diet,—the laws against offering in sacrifice any maimed or injured animal, or one out of condition, have led to abstinence from all animal food which is injured or diseased. Careful inspection of animals is practised by competent persons after slaughter, and this bars the possibility of contamination and transmission of disease through animal food. The prohibition to eat of blood has ever been most strictly obeyed. All trace of blood is cleansed out of (what has been officially passed as pure and wholesome) meat before cooking,—so that this source of disease is also stopped. Hence the Jewish constitution can and does *resist* infection. The sobriety and temperance of their habits also strengthen their resisting power.

* Contributed to the Journal.

The Jews also benefit, not only by the annual thorough *turning out* of their dwellings at Passover and by the whitewashing; but by the ceremonial bathing, especially on the eve of the weekly Sabbath, which is also practised, and conduces to cleanliness.

It is worthy of note that at a recent annual inspection of the Whitechapel Baths and Washhouses, the Inspector, Colonel —, reported that these institutions were mainly supported by Jews and Jewesses, who resort to them in thousands annually.

Ceremonial purification of the person, the clothing, and the dwellings among Jews does check the spread of disease, and help to strengthen the constitutional immunity created in past generations by obedience to the law of God as to diet and purification.

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Member of the Royal Asiatic Society.

APPENDIX C.

RECENT EGYPTIAN DISCOVERIES.

The work of excavating the ruins of the Great Temple of Bubastis, which were discovered last year by M. Naville, has lately been resumed with very interesting and important results.

Last year two great halls had been discovered—a grand hypostyle hall, strewn with fallen monolithic columns of the 12th dynasty workmanship, and a hall without columns, but lined with elaborate bas-relief sculptures, representing a great religious ceremony, and containing tens of thousands of minutely-executed hieroglyphic inscriptions. A third hall, dating from the reign of Osorkon I. has now been found between the hypostyle hall of Rameses II. and the festival hall of Osorkon II. The roof was supported by two large columns with palm capitals, and the walls were sculptured with bas-reliefs on a large scale, representing Osorkon I. in the act of worshipping Bast and the other deities of the city. Eastward,—that is to say, at the end by which the temple was entered,—two parallel trenches have revealed the site of a colonnade; and here the base of a statue of Nectanebo I., has been found: thus showing that he made additions to both extremities of the structure. The western end, now in course of excavation, appears to be of great width; but its length is as yet not ascertained. That it contains the sanctuary may be taken for granted, and the sanctuary is probably the work of Nectanebo.

Within the hall a series of remarkable discoveries have been made, showing that Bubastis was the site of an important settlement. They consist of two black granite statues, of the unmistakable Hyksos types; the lower half of a seated statue of an unknown King, also of Hyksos work; and a fine red granite architrave engraved with the cartouche of Apepi, the most famous of the Hyksos rulers. The third of these, the statue broken off at the waist, is the most remarkable of them. M. Naville, writing in April this year, 1888, sends the following description:—

“Our most important discovery up to the present time was made yesterday morning. I had noticed on Friday the corner of a block of polished black granite which I thought might belong to some good monument, and I had it unearthened yesterday. It proved to be the lower half of a life-sized figure of very beautiful workmanship, with two columns of finely-cut hieroglyphs engraved down each side of the front of the throne to right and left of the legs of the statue. These inscriptions give the name and titles of an absolutely unknown King, who, judging from the work, must belong to the Hyksos period, or, at all events, to one of the obscure dynasties preceding the Hyksos invasion. I forward a copy of the inscriptions. One cartouche contains a sign which is quite new to me, and which I cannot therefore decipher. The other reads ‘Ian-Ra’ or ‘Ra-Ian,’—a name unlike any I have ever seen. He is described, most strangely, as the worshipper of his Ka (*i.e.* his ghost, or double). . . .” M. Naville then mentions that the Pharaoh of Joseph is called “Reiyân the son of El Walid” in Arab literature, but attaches no weight to this fact, for the utter valuelessness of Egyptian history, when written with the reed pen of the Arab Chronicler, is only too well known. A writer in the *Times* adds: “In the meanwhile it must be conceded that the letter-for-letter identity of the two names is, to say the least of it, very extraordinary. We must not, however, forget that ‘Ra-ian’ may with equal correctness be read ‘Ian-Ra,’ and ‘Ian-Ra’ is curiously like the name of the Hyksos ‘Iannas’ or ‘Janias,’ who, in a long quotation which professes to be given *verbatim* from Manetho by Josephus (answer to Apion, Book I., section 14), is said to have reigned for fifty years and one month, and to have been the successor of Apôphis, and the predecessor of Assis. It would be unreasonable to doubt that Iannas is as truly an historical personage as Apepi; and it is at least possible that Iannas and Ian-Ra may be one and the same. That Joseph served a Hyksos King has long been accepted by the majority of Egyptologists as a very probable hypothesis, both chronologically and from the internal evidence of the Biblical narrative.”

[As M. Naville is one of the members of this Institute, a paper giving the final results of the explorations may be expected.]