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ON THE ANTIQUITY AND THE UNITY OF THE HUMAN RACE.

The fundamental assertion of the Biblical doctrine of the origin of man is that he owes his being to a creative act of God. Subsidiary questions growing out of this fundamental assertion, however, have been thrown from time to time into great prominence, as the changing forms of current anthropological speculation have seemed to press on this or that element in, or corollary from, the Biblical teaching. The most important of these subsidiary questions has concerned the method of the Divine procedure in creating man. Discussion of this question became acute on the publication of Charles Darwin's treatise on the *Origin of Species* in 1859, and can never sink again into rest until it is thoroughly understood in all quarters that "evolution" cannot act as a substitute for creation, but at best can supply only a theory of the method of the Divine providence. Closely connected with this discussion of the mode of origination of man, has been the discussion of two further questions, both older than the Darwinian theory, to one of which it gave however a new impulse, while it has well-nigh destroyed all interest in the other. These are the questions of the Antiquity of Man and the Unity of the Human Race, to both of which a large historical interest attaches, though neither of them can be said to be burning questions of to-day.

The question of the antiquity of man has of itself no theological significance. It is to theology, as such, a matter of entire indifference how long man has existed on earth.

It is only because of the contrast which has been drawn between the short period which seems to be allotted to human history in the Biblical narrative, and the tremendously long period which certain schools of scientific speculation have assigned to the duration of human life on earth, that theology has become interested in the topic at all. There was thus created the appearance of a conflict between the Biblical statements and the findings of scientific investigators, and it became the duty of theologians to investigate the matter. The asserted conflict proves, however, to be entirely factitious. The Bible does not assign a brief span to human history: this is done only by a particular mode of interpreting the Biblical data, which is found on examination to rest on no solid basis. Science does not demand an inordinate period for the life of human beings on earth: this is done only by a particular school of speculative theorizers, the validity of whose demands on time exact investigators are more and more chary of allowing. As the real state of the case has become better understood the problem has therefore tended to disappear from theological discussion, till now it is pretty well understood that theology as such has no interest in it.

It must be confessed, indeed, that the impression is readily taken from a *prima facie* view of the Biblical record of the course of human history, that the human race is of comparatively recent origin. It has been the usual supposition of simple Bible readers, therefore, that the Biblical data allow for the duration of the life of the human race on earth only a paltry six thousand years or so: and this supposition has become fixed in formal chronological schemes which have become traditional and have even been given a place in the margins of our Bibles to supply the chronological framework of the Scriptural narrative. The most influential of these chronological schemes is that which was worked out by Archbishop Usher in his *Annales Veteri et Novi Testamenti* (1650-54), and it is this scheme which has found a place in the margin of the Authorized English Version of

the Bible since 1701. According to it the creation of the world is assigned to the year 4004 B. C. (Usher's own dating was 4188 B. C.); while according to the calculation of Petau (in his *Rationarium Temporum*), the most influential rival scheme, it is assigned to the year 3983 B. C. On a more careful scrutiny of the data on which these calculations rest, however, they are found not to supply a satisfactory basis for the constitution of a definite chronological scheme. These data consist largely, and at the crucial points solely, of genealogical tables; and nothing can be clearer than that it is precarious in the highest degree to draw chronological inferences from genealogical tables.

For the period from Abraham down we have, indeed, in addition to somewhat minute genealogical records, the combined evidence of such so-called "long-dates" as those of 1 Kings vi.1; Gal. iii.17, and several precise statements concerning the duration of definite shorter periods, together with whatever aid it may be possible to derive from a certain amount of contemporary extra-Biblical data. For the length of this period there is no difficulty, therefore, in reaching an entirely satisfactory general estimate. But for the whole space of time before Abraham, we are dependent entirely on inferences drawn from the genealogies recorded in the fifth and eleventh chapters of Genesis. And if the Scriptural genealogies supply no solid basis for chronological inferences, it is clear that we are left without Scriptural data for forming an estimate of the duration of these ages. For aught we know they may have been of immense length.

The general fact that the genealogies of Scripture were not constructed for a chronological purpose and lend themselves ill to employment as a basis for chronological calculations has been repeatedly shown very fully; but perhaps by no one more thoroughly than by Dr. William Henry Green in an illuminating article published in the *Bibliotheca Sacra* for April, 1890. These genealogies must be esteemed trustworthy for the purposes for which they are

recorded; but they cannot safely be pressed into use for other purposes for which they were not intended, and for which they are not adapted. In particular, it is clear that the genealogical purposes for which the genealogies were given, did not require a complete record of all the generations through which the descent of the persons to whom they are assigned runs; but only an adequate indication of the particular line through which the descent in question comes. Accordingly it is found on examination that the genealogies of Scripture are freely compressed for all sorts of purposes; and that it can seldom be confidently affirmed that they contain a complete record of the whole series of generations, while it is often obvious that a very large number are omitted. There is no reason inherent in the nature of the Scriptural genealogies why a genealogy of ten recorded links, as each of those in Genesis v and xi is, may not represent an actual descent of a hundred or a thousand or ten thousand links. The point established by the table is not that these are all the links which intervened between the beginning and the closing names, but that this is the line of descent through which one traces back to or down to the other.

A sufficient illustration of the freedom with which the links in the genealogies are dealt with in the Biblical usage, is afforded by the two genealogies of our Lord which are given in the first chapter of the Gospel of Matthew. For, it is to be noted that there are two genealogies of Jesus given in this chapter, differing greatly from one another in fulness of record, no doubt, but in no respect either in trustworthiness or in principle of record. The one is found in the first verse, and traces Jesus back to Abraham in just two steps: "Jesus Christ, the son of David, the son of Abraham". The other is found in verses 2-17, and expands this same genealogy into forty-two links, divided for purposes of symmetrical record and easy memorizing into a threefold scheme of fourteen generations each. And not even is this longer record a complete one. A compari-

son with the parallel records in the Old Testament, will quickly reveal the fact that the three kings, Ahaziah, Joash and Amaziah are passed over and Joram is said to have begotten Uzziah, his great-great-grandson. The other genealogies of Scripture present similar phenomena; and as they are carefully scrutinized, it becomes ever clearer that as they do not pretend to give complete lists of generations, they cannot be intended to supply a basis for chronological calculation, and it is illegitimate and misleading to attempt to use them for that purpose. The reduction for extraneous reasons of the genealogy of Christ in the first chapter of Matthew into three tables of fourteen generations each, may warn us that the reduction of the patriarchal genealogies in Genesis v and xi into two tables of ten generations each may equally be due to extraneous considerations; and that there may be represented by each of these ten generations—adequately for the purposes for which the genealogy is recorded—a very much longer actual series of links.

It must not be permitted to drop out of sight, to be sure, that the appearance of supplying data for a chronological calculation is in these particular genealogies not due entirely to the mere fact that these lists are genealogies. It is due to a peculiarity of these special genealogies by which they are differentiated from all other genealogies in Scripture. We refer to the regular attachment to each name in the lists, of the age of the father at the birth of his son. The effect of this is to provide what seems to be a continuous series of precisely measured generations, the numbers having only to be added together to supply an exact measure of the time consumed in their sequence. We do not read merely that "Adam begat Seth; and Seth begat Enosh; and Enosh begat Kenan". We read rather that "Adam lived an hundred and thirty years and begat Seth; and Seth lived an hundred and five years and begat Enosh; and Enosh lived ninety years and begat Kenan". It certainly looks, at first sight, as if we needed only to add these one hundred and thirty, one hundred and five, and ninety years together in order to ob-

tain the whole time which elapsed from the creation of Adam to the birth of Kenan; and accordingly as if we needed only to add together the similar numbers throughout the lists in order to obtain an accurate measure of the whole period from the Creation to the Deluge. Plausible as this procedure seems, however, it appears on a closer scrutiny unjustified; and it is the especial service which Dr. William Henry Green in the article already mentioned has rendered to the cause of truth in this matter that he has shown this clearly.

For, if we will look at these lists again, we shall find that we have not yet got them in their entirety before us. Not only is there attached to each name in them a statement of the age at which the father begot his son, but also a statement of how long the father lived after he had begotten his son, and how many years his life-span counted up altogether. If we do not read merely, "Adam begat Seth; and Seth begat Enosh; and Enosh begat Kenan"; neither do we read merely, "Adam lived one hundred and thirty years and begat Seth; and Seth lived one hundred and five years and begat Enosh; and Enosh lived ninety years and begat Kenan". What we read is: "Adam lived an hundred and thirty years, and begat a son in his own likeness, after his image; and called his name Seth: and the days of Adam after he begat Seth were eight hundred years: and he begat sons and daughters: and all the days that Adam lived were nine hundred and thirty years: and he died. And Seth lived an hundred and five years, and begat Enosh: and Seth lived after he begat Enosh eight hundred and seven years, and begat sons and daughters: and all the days of Seth were nine hundred and twelve years: and he died. And Enosh lived ninety years, and begat Kenan: and Enosh lived after he begat Kenan eight hundred and fifteen years and begat sons and daughters: and all the days of Enosh were nine hundred and five years: and he died". There is, in a word, much more information furnished with respect to each link in the chain

than merely the age to which each father had attained when his son was begotten; and all this information is of the same order and obviously belongs together. It is clear that a single motive has determined the insertion of all of it; and we must seek a reason for its insertion which will account for all of it. This reason cannot have been a chronological one: for all the items of information furnished do not serve a chronological purpose. Only the first item in each case can be made to yield a chronological result; and therefore not even it was intended to yield a chronological result, since all these items of information are too closely bound together in their common character to be separated in their intention. They too readily explain themselves moreover as serving an obvious common end which was clearly in the mind of the writer to justify the ascription of a different end to any one of them. When we are told of any man that he was an hundred and thirty years old when he begat his heir, and lived after that eight hundred years begetting sons and daughters, dying only at the age of nine hundred and thirty years, all these items co-operate to make a vivid impression upon us of the vigour and grandeur of humanity in those old days of the world's prime. In a sense different indeed from that which the words bear in Genesis vi, but full of meaning to us, we exclaim, "Surely there were giants in those days"! This is the impression which the items of information inevitably make on us; and it is the impression they were intended to make on us, as is proved by the simple fact that they are adapted in all their items to make this impression, while only a small portion of them can be utilized for the purpose of chronological calculation. Having thus found a reason which will account for the insertion of all the items of information which are given us, we have no right to assume another reason to account for the insertion of some of them. And that means that we must decline to look upon the first item of information given in each instance as intended to give us chronological information.

The conclusion which we thus reach is greatly strengthened when we observe another fact with regard to these items of information. This is that the appearance that we have in them of a chronological scheme does not reside in the nature of the items themselves, but purely in their sequence. If we read the items of information attached to each name, apart from their fellows attached to the succeeding names, we shall have simply a set of facts about each name, which in their combination make a strong impression of the vigor and greatness of humanity in those days, and which suggest no chronological inference. It is only when the names, with the accompanying comments, are put together, one after the other, that a chronological inference is suggested. The chronological suggestion is thus purely the effect of the arrangement of the names in immediate sequence; and is not intrinsically resident in the items of information themselves.

And now we must call attention to a characteristic of Scripture genealogies in general which seems to find a specially striking illustration in these comments. This is the habit of interposing into the structure of the genealogies, here and there, a short note, attached to this name or that, telling some important or interesting fact about the person represented by it. A simple genealogy would run thus: "Adam begat Seth; and Seth begat Enosh; and Enosh begat Kenan" and the like. But it would be quite in the Biblical manner if there were attached to some, or even to each, of these names, parenthetical remarks, calling attention to something of interest regarding the several persons. For example, it would be quite after the Biblical fashion should we have rather had this: "Adam, who was the first man, begat Seth; and Seth, he it was who was appointed as another seed in the stead of Abel whom Cain slew, begat Enosh; and Enosh, at his birth men began to call on the name of Jehovah, begat Kenan." The insertion of such items of information does not in the least change the character of the genealogy as in itself a simple genealogy, sub-

ject to all the laws which governed the formation and record of the Scriptural genealogies, including the right of free compression, with the omission of any number of links. It is strictly parenthetical in nature.

Several examples of such parenthetical insertions occur in the genealogy of Jesus recorded in the first chapter of Matthew to which we have already referred for illustration. Thus in verse 2, the fact that Judah had "brethren" is interposed in the genealogy, a fact which is noted also with respect to two others of the names which occur in the list (verses 3 and 11): it is noted here doubtless because of the significance of the twelve sons of Jacob as tribe-fathers of Israel. Again we find in four instances a notification of the mother interposed (Tamar, verse 3; Rahab, verse 5; Ruth, verse 5; her of Uriah, verse 6). The introduction of the names of these notable women, which prepares the way for the introduction of that of Mary in verse 16, constitutes a very remarkable feature of this particular genealogy. Another feature of it is suggested by the attachment to the name of David (verse 6) the statement that he was "the King"; and to the name of Jechoniah the statement that his life-span fell at the time of the carrying away to Babylon: the account of these insertions being found, doubtless in the artificial arrangement of the genealogy in three symmetrical tables. The habit of inserting parenthetical notes giving items of interest connected with the names which enter into the genealogies is doubtless sufficiently illustrated by these instances. The only point in which the genealogies of Genesis v and xi differ in this respect from this one in Matt. i is that such items of information are inserted with reference to every name in those genealogies, while they are inserted only occasionally in the genealogy of our Lord. This is, however, a difference of detail, not of principle. Clearly if these notes had been constant in the genealogy in Matt. i instead of merely occasional, its nature as a genealogy would not have been affected: it would still have remained a simple genealogy subject to all the customary

laws of simple genealogies. That they are constant in the genealogies of Genesis v and xi does not, then, alter their character as simple genealogies. These additions are in their nature parenthetical, and are to be read in each instance strictly as such and with sole reference to the names to which they are attached, and cannot determine whether or not links have been omitted in these genealogies as they are freely omitted in other genealogies.

It is quite true that, when brought together in sequence, name after name, these notes assume the appearance of a concatenated chronological scheme. But this is pure illusion, due wholly to the nature of the parenthetical insertions which are made. When placed one after the other they seem to play into one another, whereas they are set down here for an entirely different purpose and cannot without violence be read with reference to one another. If the items of information were of a different character we should never think of reading them otherwise than each with sole reference to its own name. Thus, if they were given to show us how nobly developed primitive men were in their physical frames and read something as follows: "Adam was eight cubits in height and begat Seth; and Seth was seven cubits in height and begat Enosh; and Enosh was six cubits in height, and begat Kenan", we should have no difficulty in understanding that these remarks are purely parenthetical and in no way argue that no links have been omitted. The case is not altered by the mere fact that other items than these are chosen for notice, with the same general intent, and we actually read: "Adam lived an hundred and thirty years and begat Seth; and Seth lived an hundred and five years and begat Enosh; and Enosh lived ninety years and begat Kenan". The circumstance that the actual items chosen for parenthetical notice are such that when the names are arranged one after the other they produce the illusion of a chronological scheme is a mere accident, arising from the nature of the items chosen, and must not blind us to the fact that we have before us here

nothing but ordinary genealogies, accompanied by parenthetical notes which are inserted for other than chronological purposes; and that therefore these genealogies must be treated like other genealogies, and interpreted on the same principles. But if this be so, then these genealogies too not only may be, but probably are, much compressed, and merely record the line of descent of Noah from Adam and of Abraham from Noah. Their symmetrical arrangement in groups of ten is indicative of their compression; and for aught we know instead of twenty generations and some two thousand years measuring the interval between the creation and the birth of Abraham, two hundred generations, and something like twenty thousand years, or even two thousand generations and something like two hundred thousand years may have intervened. In a word, the Scriptural data leave us wholly without guidance in estimating the time which elapsed between the creation of the world and the deluge and between the deluge and the call of Abraham. So far as the Scripture assertions are concerned, we may suppose any length of time to have intervened between these events which may otherwise appear reasonable.

The question of the antiquity of man is accordingly a purely scientific one, in which the theologian as such has no concern. As an interested spectator, however, he looks on as the various schools of scientific speculation debate the question among themselves; and he can scarcely fail to take away as the result of his observation two well-grounded convictions. The first is that science has as yet in its hands no solid data for a definite estimate of the time during which the human race has existed on earth. The second is, that the tremendous drafts on time which were accustomed to be made by the geologists about the middle of the last century and which continue to be made by one school of speculative biology to-day have been definitively set aside, and it is becoming very generally understood that

man cannot have existed on the earth more than some ten thousand to twenty thousand years.

It was a result of the manner of looking at things inculcated by the Huttonian geology, that speculation during the first three quarters of the nineteenth century estimated the age of the habitable globe in terms of hundreds of millions of years. It was under the influence of this teaching, for example, that Charles Darwin, in 1859, supposed that three hundred million years were an under-estimate for the period which has elapsed since the latter part of the Secondary Age.¹ In reviewing Mr. Darwin's argument in his *Students' Manual of Geology*, Professor Jukes remarked on the vagueness of the data on which his estimates were formed, and suggested that the sum of years asserted might with equal reasonableness be reduced or multiplied a hundredfold: he proposed therefore three million and thirty billion years as the minimum and maximum limits of the period in question. From the same fundamental standpoint, Professor Poulton in his address as President of the Zoological Section of the British Association for the Advancement of Science (Liverpool, September, 1896) treats as too short from his biological point of view the longest time asked by the geologists for the duration of the habitable earth—say some four hundred millions of years. Dwelling on the number of distinct types of animal existence already found in the Lower Cambrian deposits, and on the necessarily (as he thinks) slow progress of evolution, he stretches out the time required for the advance of life to its present manifestation practically illimitably. Taking up the cudgels for his biological friends, Sir Archibald Geikie² chivalrously offers them all the time they desire, speaking on his own behalf, however, of one hundred million years as possibly sufficient for the period of the existence of life on the globe. These general estimates imply, of course, a

¹ *Origin of Species*, ed. I., p. 287.

² Address as President of the Geological Section of the British Association, Dover, 1899.

very generous allowance for the duration of human life on earth; but many anthropologists demand for this period even more than they allow. Thus, for example, Professor Gabriel de Mortillet³ reiterates his conviction that the appearance of man on earth cannot be dated less than two hundred and thirty thousand years ago, and Professor A. Penck^{3a} would agree with this estimate, while Dr. A. R. Wallace has been accustomed to ask more than double that period.⁴

These tremendously long estimates of the duration of life on earth and particularly of the duration of human life, are, however, speculative, and, indeed, largely the creation of a special type of evolutionary speculation—a type which is rapidly losing ground among recent scientific workers. This type is that which owes its origin to the brooding mind of Charles Darwin; and up to recent times it has been the regnant type of evolutionary philosophy. Its characteristic contention is that the entire development of animate forms has been the product of selection, by the pressure of the environment, of infinitesimal variations in an almost infinite series of successive generations; or to put it rather brusquely, but not unfairly, that chance plus time are the true causes which account for the whole body of differentiated forms which animate nature presents to our observation. Naturally therefore heavy draughts have been made on time to account for whatever it seemed hard to attribute to brute chance, as if you could admit the issuing of any effect out of any conditions, if you only conceived the process of production as slow enough. James Hutton had duly warned his followers against the temptation to appeal to time as if it were itself an efficient cause of effects. “With regard to the effects of time”, he said,⁵ “though the continuance of time may do much in those operations which are extremely slow, where no change to our observation had

³ *Revue Mensuelle* of the Paris School of Anthropology, for January 15, 1897.

^{3a} Silliman Lectures at Yale, for 1908.

⁴ *Nature*, October 2, 1873, pp. 462-463; *Darwiniana*, p. 456.

⁵ *Theory of the Earth*, II. 205.

appeared to take place, yet where it is not in the nature of things to produce the change in question, the unlimited course of time would be no more effectual than the moment by which we measure events in our observation". The warning was not heeded: men seemed to imagine that, if only time enough were given for it, effects, for which no adequate cause could be assigned, might be supposed to come gradually of themselves. Aimless movement was supposed, if time enough were allowed for it, to produce an ordered world. It might as well be supposed that if a box full of printers' types were stirred up long enough with a stick, they could be counted on to arrange themselves in time in the order in which they stand, say, in Kant's *Critic of Pure Reason*. They will never do so, though they be stirred to eternity. Dr. J. W. Dawson⁶ points out the exact difficulty, when he remarks that "the necessity for indefinitely protracted time does not arise from the facts, but from the attempt to explain the facts without any adequate cause, and to appeal to an infinite series of chance interactions apart from a designed plan, and without regard to the consideration that we know of no way in which, with any conceivable amount of time, the first living and organized being could be produced from dead matter". Nothing could be more certain than that what chance cannot begin the production of in a moment, chance cannot complete the production of in an eternity. The analysis of the complete effect into an infinite series of parts, and the distribution of these parts over an infinite series of years, leaves the effect as unaccounted for as ever. What is needed to account for it is not time in any extension, but an adequate cause. A mass of iron is made no more self-supporting by being forged into an illimitable chain formed of innumerable infinitesimal links. We may cast our dice to all eternity with no more likelihood than at the first throw of ever turning up double-sevens.

It is not, however, the force of such reasoning but the

⁶ *Relics of Primaeval Life*, 1897, p. 323.

pressure of hard facts which is revolutionizing the conceptions of biologists to-day as to the length of the period during which man has existed on earth. It is not possible to enumerate here all the facts which are co-operating to produce a revised and greatly reduced estimate of this period. First among them may doubtless be placed the calculations of the life-period of the globe itself which have been made by the physicists with ever increasing confidence. Led by such investigators as Lord Kelvin, they have become ever more and more insistent that the time demanded by the old uniformitarian and new biological speculator is not at their disposal. The publication in the seventh decade of the past century of Lord Kelvin's calculations, going to show that the sun had not been shining sixty millions of years, already gave pause to the reckless draughts which had been accustomed to be made on time; and the situation was rendered more and more acute by subsequent revisions of Lord Kelvin's work, progressively diminishing this estimate. Sir Archibald Geikie complains that "Lord Kelvin has cut off slice after slice from the allowance of time he was at first prepared to grant for the evolution of geological history", until he has reduced it from forty to twenty millions of years, "and probably much nearer twenty than forty". This estimate of the period of the sun's light would allow only something like six millions of years for geological time, only some one-sixteenth of which would be available for the caenozoic period, of which only about one-eighth or forty thousand years or so could be allotted to the pleistocene age, in the course of which the remains of man first appear.^{6a} Even this meagre allowance is cut in half by the calculation of Professor Tait;⁷ while the general conclusions of these investigators have received the support of independent calculations by

^{6a} Cf. the estimates of G. F. Wright, *Records of the Past*, vii, 1908, p. 24. He suggests for Post-Tertiary time, say 50,000 years; and adds that, even if this be doubled, there could be assigned to the post-glacial period only some 10,000 years.

⁷ *Recent Advances in Physical Science*, pp. 167-168.

Dr. George H. Darwin and Professor Newcomb; and more recently still Mr. T. J. J. See of the Naval Observatory at Washington has published a very pretty speculation in which he determines the total longevity of the sun to be only thirty-six millions of years, thirty-two of which belong to its past history.⁸

It is not merely the physicists, however, with whom the biological speculators have to do: the geologists themselves have turned against them. Recent investigations may be taken as putting pre-Quaternary man out of the question (the evidence was reviewed by Sir John Evans, in his address at the Toronto meeting of the British Association, August 18, 1897). And revised estimates of the rate of denudation, erosion, deposition of alluvial matter in deltas, or of stalagmitic matter in the floors of caves have greatly reduced the exaggerated conception of its slowness, from which support was sought for the immensely long periods of time demanded. The post-glacial period, which will roughly estimate the age of man, it is now pretty generally agreed "cannot be more than ten thousand years or probably not more than seven thousand in length".⁹ In this estimate, both Professor Winchell¹⁰ and Professor Salisbury¹¹ agree, and to its establishment a great body of evidence derived from a variety of calculations concur. If man is of post-glacial origin, then, his advent upon earth need not be dated more than five or six thousand years ago; or if we suppose him to have appeared at some point in the later glacial period, as Professor G. F. Wright does, then certainly Professor Wright's estimate of sixteen thousand to twenty thousand years is an ample one.

⁸ On the so-called "Planetesimal Hypothesis" of Professors Chamberlin and Moulton which does not presuppose a molten sun and earth, these calculations which proceed on the basis of the "cooling-globe hypothesis" are of course without validity. And in recent years a somewhat despairing appeal has been made to the behavior of radium to suggest that all calculations based on rate of waste are valueless.

⁹ Cf. especially articles in the *Bibliotheca Sacra* for July, 1903.

¹⁰ *American Geologist*, September, 1902.

¹¹ *Final Report of the New Jersey State Geologist*, 1902.

The effect of these revised estimates of geological time has been greatly increased by growing uncertainty among biologists themselves, as to the soundness of the assumptions upon which was founded their demand for long periods of time. These assumptions were briefly those which underlie the doctrine of evolution in its specifically Darwinian form; in the form, that is to say, in which the evolution is supposed to be accomplished by the fixing through the pressure of the environment of minute favorable variations, arising accidentally in the midst of minute variations in every direction indifferently. But in the progress of biological research, the sufficiency of this "natural selection" to account for the development of organic forms has come first to be questioned, and then in large circles to be denied.¹² In proportion, however, as evolution is conceived as advancing in determined directions, come the determination from whatever source you choose;¹³ and in proportion as it is conceived as advancing onwards by large increments instead of by insensible changes;¹⁴ in that proportion the demand on time is lessened and even the evolutionary speculator feels that he can get along with less of it. He is no longer impelled to assume behind the high type of man whose remains in the post-glacial deposits are the first intimation of the presence of man on earth, an almost illimitable series of lower and ever lower types of man through which gradually the brute struggled up to the high humanity, records of whose existence alone have been preserved to us.¹⁵ And he no longer requires to

¹² Cf. V. L. Kellogg, *Darwinism To-day*, 1907; R. Otto, *Naturalism and Religion*, 1907; Wasmann, *Die moderne Biologie und die Entwicklungslehre*, ed. 3, 1906+; James Orr, *God's Image in Man*, 1905; Dennert, *Am Sterbelager des Darwinismus*, 1903.

¹³ That "orthogenesis" is a fact is much more widely recognized than is the validity of Eimer's special mode of accounting for it.

¹⁴ The recognition of the reality of these saltations, or "mutations" as De Vries inadequately terms them, is again largely independent of any particular theory with reference to them.

¹⁵ Cf. Hubrecht in *De Gids* for June 1896; Otto, *Naturalism and Religion*, 1897, p. 110; Orr, *God's Image in Man*, 1905, p. 134. E. D.

postulate immense stretches of time for the progress of this man through paleolithic, neolithic and metal-using periods, for the differentiation of the strongly marked characteristics of the several races of man, for the slow humanizing of human nature and the slower development of those powers within it from which at length what we call civilization emerged. Once allow the principle of modification by leaps, and the question of the length of time required for a given evolution passes out of the sphere of practical interest. The height of the leaps becomes a matter of detail, and there is readily transferred to the estimation of it the importance which was formerly attached to the estimation of the time involved. Thus it has come about, that, in the progress of scientific investigation, the motive for demanding illimitable stretches of time for the duration of life, and specifically for the duration of human life on earth, has gradually been passing away, and there seems now a very general tendency among scientific investigators to acquiesce in a moderate estimate—in an estimate which demands for the life of man on earth not more than, say, ten or twenty thousand years.

If the controversy upon the antiquity of man is thus rapidly losing all but a historical interest, that which once so violently raged upon the unity of the race may be said already to have reached this stage. The question of the unity of the human race differs from the question of its antiquity in that it is of indubitable theological importance.

Cope, *The Primary Factors of Organic Evolution*, 1896, thinks there is evidence enough to constitute two species of the genus *homo*—*Homo sapiens* and *Homo neanderthalensis*, to the latter of which he assigns a greater number of simian characteristics than exist in any of the known races of the *Homo sapiens*. But he requires to add (p. 171): "There is still, to use the language of Fraipont and Lohest, 'an abyss' between the man of Spy and the highest ape"—although, on his own account he adds, surely unwarrantably, "though, from a zoölogical point of view, it is not a wide one." In point of fact the earliest relics of man are relics of *men*, with all that is included in that, and there lies between them and all other known beings a hitherto unbridged "abyss".

It is not merely that the Bible certainly teaches it, while, as we have sought to show, it has no teaching upon the antiquity of the race. It is also the postulate of the entire body of the Bible's teaching—of its doctrine of Sin and Redemption alike: so that the whole structure of the Bible's teaching, including all that we know as its doctrine of salvation, rests on it and implicates it. There have been times, nevertheless, when it has been vigorously assailed, from various motives, from within as well as from without the Church, and the resources of Christian reasoning have been taxed to support it. These times have now, however, definitely passed away. The prevalence of the evolutionary hypotheses has removed all motive for denying a common origin to the human race, and rendered it natural to look upon the differences which exist among the various types of man as differentiations of a common stock. The motive for denying their conclusiveness having been thus removed, the convincing evidences of the unity of the race have had opportunity to assert their force. The result is that the unity of the race, in the sense of its common origin, is no longer a matter of debate; and although actually some erratic writers may still speak of it as open to discussion, they are not taken seriously, and practically it is universally treated as a fixed fact that mankind in all its varieties is one, as in fundamental characteristics, so also in origin.

In our natural satisfaction over this agreement between Scripture and modern science with respect to the unity of humanity, we must not permit ourselves to forget that there has always nevertheless existed among men a strong tendency to deny this unity in the interests of racial pride. Outside of the influence of the Biblical revelation, indeed, the sense of human unity has never been strong and has ordinarily been non-existent.¹⁵ The Stoics seem to have been the first among the classical peoples to preach the unity of mankind and the duty of universal justice and philan-

¹⁵ Cf. H. Bavinck, *The Philosophy of Revelation*, pp. 137 sq.

thropy founded upon it. With the revival of classical ideas which came in with what we call the Renaissance, there came in also a tendency to revive heathen polygenism, which was characteristically reproduced in the writings of Blount and others of the Deists. A more definite co-Adamitism, that is to say the attribution of the descent of the several chief racial types to separate original ancestors, has also been taught by occasional individuals such, for example, as Paracelsus. And the still more definite pre-Adamitism, which conceives man indeed as a single species, derived from one stock, but represents Adam not as the root of this stock, but as one of its products, the ancestor of the Jews and white races alone, has always found teachers, such as, for example, Zanini. The advocacy of this pre-Adamitic theory by Isaac de la Peyrère in the middle of the seventeenth century roused a great debate which soon however died out, although leaving echoes behind it in Bayle, Arnold, Swedenborg. A sort of pre-Adamitism has continued to be taught by a series of philosophical speculators from Schelling down, which looks upon Adam as the first real man, rising in developed humanity above the low, beast-like condition of his ancestors. In our own day George Catlin¹⁶ and especially Alexander Winchell¹⁷ have revived in its essentials the teaching of de la Peyrère. "Adam", says Professor Winchell, "is descended from a black race, not the black race from Adam". The advancing knowledge of the varied races of man produced in the latter part of the eighteenth and the earlier nineteenth century a revival of co-Adamitism (Sullivan, Crueger, Ballenstedt, Cordonière, Gobineau) which was even perverted into a defense of slavery (Dobbs, Morton, Nott and Gliddon). It was in connection with Nott and Gliddon's *Types of Mankind* that Aggasiz first published his theory of the diverse origin of the several types of man, the only

¹⁶ *O-kee-pa*, London, 1866: he referred the North American Indians to an antediluvian species, which he called *Anthropus Americanus*.

¹⁷ *Pre-Adamites*, Boston, 1880.

one of these theories of abiding interest because the only one arising from a genuinely scientific impulse and possessing a really scientific basis. Agassiz's theory was the product of a serious study of the geographical distribution of animate life, and one of the results of Agassiz's classification of the whole of animate creation into eight well-marked types of fauna involving, so he thought, eight separate centers of origin. Pursuant to this classification he sought to distribute mankind also into eight types, to each of which he ascribed a separate origin, corresponding with the type of fauna with which each is associated. But even Agassiz could not deny that men are, despite their eightfold separate creation, all of one kind: he could not erect specific differences between the several types of man.¹⁸ The evidence which compelled him to recognize the oneness of man in kind remains in its full validity, after advancing knowledge of the animal kingdom and its geographical distribution¹⁹ has rendered Agassiz's assumption of eight centers of origination (not merely distribution) a violent hypothesis; and the entrance into the field of the evolutionary hypothesis has consigned all theories formed without reference to it to oblivion. Even some early evolutionists it is true played for a time with theories of multiplex times and places where similar lines of development culminated alike in man (Haeckel, Schaffhausen, Caspari, Vogt, Buchner), and perhaps there is now some sign of the revival of this view; but it is now agreed with practical unanimity that the unity of the human race, in the sense of its common origin, is a necessary corollary of the evolutionary hypothesis, and no voice raised in contradiction of it stands much chance to be heard.

It is, however, only for its universal allowance at the hands of speculative science that the fact of the unity of

¹⁸ Similarly Heinrich Schurtz while leaving the descent of men from a single pair an open question, affirms that it is a fact that "humanity forms one great unity."

¹⁹ It was Wallace's *Geographical Distribution of Animals* which struck the first crushing blow.

the human race has to thank the evolutionary hypothesis. The evidence by which it is solidly established is of course independent of all such hypotheses. This evidence is drawn almost equally from every department of human manifestation, physiological, psychological, philological, and even historical. The physiological unity of the race is illustrated by the nice gradations by which the several so-called races into which it is divided pass into one another; and by their undiminished natural fertility when intercrossed; by which Professor Owen was led to remark that "man forms but one species, and differences are but indications of varieties" which "merge into one another by easy gradations".²⁰ It is emphasized by the contrast which exists between the structural characteristics, osteological, cranial, dental, common to the entire race of human beings of every variety and those of the nearest animal types; which led Professor Huxley to assert that "every bone of a gorilla bears marks by which it might be distinguished from the corresponding bones of a man; and that, in the present creation at any rate, no intermediate link bridges over the gap between *Homo* and *Troglodytes*".²¹ The psychological unity of the race is still more manifest. All men of all varieties are psychologically men and prove themselves possessors of the same mental nature and furniture. Under the same influences they function mentally and spiritually in the same fashion, and prove capable of the same mental reactions. They, they all, and they alone, in the whole realm of animal existences manifest themselves as rational and moral natures; so that Mr. Fiske was fully justified when he declared that though for zoological man the erection of a distinct family from the chimpanzee and orang might suffice, "on the other hand for psychological man you must erect a distinct kingdom: nay you must even dichotomize the universe, putting man on one side and all things else on the other".²² Among the manifestations of

²⁰ Burgess, *Antiquity and Unity of the Race*, p. 185.

²¹ *Man's Place in Nature*, p. 104.

²² *Through Nature to God*, p. 82.

the psychological peculiarities of mankind, as distinguished from all other animate existences, is the great gift of speech which he shares with no other being: if all human languages cannot be reduced to a single root, they all exhibit a uniquely human faculty working under similar laws, and bear the most striking testimony to the unity of the race which alone has language at its command. The possession of common traditions by numerous widely separated peoples is only a single one of many indications of a historical inter-communion between the several peoples through which their essential unity is evinced, and by which the Biblical account of the origination of the various families of man in a single center from which they have spread out in all directions is powerfully supported.²³

The assertion of the unity of the human race is imbedded in the very structure of the Biblical narrative. The Biblical account of the origin of man (Gen. i. 26-28) is an account of his origination in a single pair, who constituted humanity in its germ, and from whose fruitfulness and multiplication all the earth has been replenished. Therefore the first man was called Adam, Man, and the first woman, Eve, "because she was the mother of all living" (Gen. iii, 20); and all men are currently spoken of as the "sons of Adam" or "Man" (Deut. xxxii.8; Ps. xi.4; I Sam. xxvi.19; I Kings viii.39; Ps. cxlv.12, etc.). The absolute restriction of the human race within the descendants of this single pair is emphasized by the history of the Flood in which all flesh is destroyed, and the race given a new beginning in its second father, Noah, by whose descendants again "the whole earth was overspread" (Gen. ix.19), as is illustrated in detail by the table of nations recorded in Genesis x. A profound religious-ethical significance is given to the differentiations of the peoples, in the story of the tower of Babel in the eleventh chapter of Genesis, in which the divergences and separations which divide man-

²³ Cf. the discussion in the seventh lecture of Bavinck's *Philosophy of Revelation*, 1908.

kind are represented as the product of sin: what God had joined together men themselves pulled asunder. Throughout the Scriptures therefore all mankind is treated as, from the Divine point of view, a unit, and shares not only in a common nature but in a common sinfulness, not only in a common need but in a common redemption.

Accordingly although Israel was taught to glory in its exaltation by the choice of the Lord to be His peculiar people, Israel was not permitted to believe there was anything in itself which differentiated it from other peoples; and by the laws concerning aliens and slaves was required to recognize the common humanity of all sorts and conditions of men; what they had to distinguish them from others was not of nature but of the free gift of God, in the mysterious working out of His purpose of good not only to Israel but to the whole world. This universalism in the divine purposes of mercy, already inherent in the Old Covenant and often proclaimed in it, and made the very keynote of the New—for which the Old was the preparation—is the most emphatic possible assertion of the unity of the race. Accordingly not only do we find our Lord Himself setting His seal upon the origination of the race in a single pair, and drawing from that fact the law of life for men at large (Matt. xix. 4); and Paul explicitly declaring that "God has made of one every nation of men" and having for His own good ends appointed to each its separate habitation, is now dealing with them all alike in offering them a common salvation (Acts xvii. 26 sq.); but the whole New Testament is instinct with the brotherhood of mankind as one in origin and in nature, one in need and one in the provision of redemption. The fact of racial sin is basal to the whole Pauline system (Rom. v.12 sq.; 1 Cor. xv.21 sq.), and beneath the fact of racial sin lies the fact of racial unity. It is only because all men were in Adam as their first head that all men share in Adam's sin and with his sin in his punishment. And it is only because the sin of man is thus one in origin and therefore of the same nature and quality,

that the redemption which is suitable and may be made available for one is equally suitable and may be made available for all. It is because the race is one and its need one, Jew and Gentile are alike under sin, that there is no difference between Jew and Gentile in the matter of salvation either, but as the same God is Lord of all, so He is rich in Christ Jesus unto all that call upon Him, and will justify the uncircumcision through faith alone, even as He justifies the circumcision only by faith (Rom. ix. 22-23, 28 sq.; x.12). Jesus Christ therefore, as the last Adam, is the Saviour not of the Jews only but of the world (John iv. 42; 1 Tim. iv.10; 1 Jno. iv.14), having been given to this His great work only by the love of the Father for the world (Jno. iii.16). The unity of the human race is therefore made in Scripture not merely the basis of a demand that we shall recognize the dignity of humanity in all its representatives, of however lowly estate or family, since all bear alike the image of God in which man was created and the image of God is deeper than sin and cannot be eradicated by sin (Gen. v.3; ix.6; 1 Cor. xi.7; Heb. ii. 5 sq.); but the basis also of the entire scheme of restoration devised by the divine love for the salvation of a lost race.

So far is it from being of no concern to theology, therefore, that it would be truer to say that the whole doctrinal structure of the Bible account of redemption is founded on its assumption that the race of man is one organic whole, and may be dealt with as such. It is because all are one in Adam that in the matter of sin there is no difference, but all have fallen short of the glory of God (Rom. iii.22), and as well that in the new man there cannot be Greek and Jew, circumcision and uncircumcision, barbarian, Scythian, bondman, freeman; but Christ is all and in all (Col. iii.11). The unity of the old man in Adam is the postulate of the unity of the new man in Christ.

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