MR. CHARLES DARWIN, in his *Descent of Man*, proposes to himself to show that man is nothing more than a modified beast, and that his remote ancestors are to be found among some tribes of brutes. A paradox of this kind, in a work of fiction such as Ovid's *Metamorphoses*, would not offend an intelligent reader; but in a work which professes to be serious and scientific it is extremely offensive, for it amounts to a deliberate insult to all humanity in general and to every human being in particular. Mr. Darwin's work violates the dignity of human nature, blots out of our souls the image and likeness of our Creator, and totally perverts the notions most cherished by civil and Christian society. This effort does certainly not entitle him to credit for wisdom. A man of ordinary prudence, before he undertakes to maintain in the face of the public a theory which conflicts with a doctrine thoroughly established and universally received, would examine both sides of the case, and ascertain that he is in possession of

sufficient evidence to make good his assertions and to defend them against the arguments of the opposite side. Mr. Darwin, on the contrary, seems to have satisfied himself that a man of his eminence in natural history had a right to be believed, whatever he might venture to say, even though he was to give no satisfactory evidence in support of his views, and no answer to the objections which he ought to refute.

We do not say that Mr. Darwin did not do his best to prove his new doctrine on man; we only say that he has signally failed in his attempt, and that his failure is as inexcusable as it is ignominious. A man of his ability should have seen that the origin of man was not a problem to be solved by physiology; and he ought also to have considered that a man of science could only stultify himself by submitting to the test of science a historical fact of which science, as such, is entirely incompetent to speak. Indeed, we scarcely know which to admire most in Mr. Darwin, the serenity with which he ignores the difficulty of his philosophic position, or the audacity with which he affirms things which he cannot prove. What a pity that a man so richly endowed by nature has been so entirely absorbed by the study of material organisms as to find no time for the more important study of philosophy, especially of psychology, without which it is impossible to form a rational theory respecting the origin and the destiny of man! Shall we add that a sound scientific theory cannot be the outcome of illogical reasoning? And yet it is a plain fact, though our advanced thinkers will deny it, that Mr. Darwin's logic, to judge from his *Descent of Man*, is as mischievous as most of his assumptions are reckless.

It would be impossible within the limits of our space to enter into a detailed examination of the logical and metaphysical blunders to which the Darwinian theory owes its existence. We shall, therefore, at present confine ourselves to a short criticism of the first chapter of the work in question; for, if we are not mistaken, every impartial reader will be able, after a sufficient analysis of this first chapter, to judge of the kind of logic that characterizes the whole treatise.

Mr. Darwin begins thus:

"He who wishes to decide whether man is the modified descendant of some pre-existing form would probably first inquire whether man varies, however slightly, in bodily structure and in mental faculties; and, if so, whether the variations are transmitted to his offspring in accordance with the laws which prevail with the lower animals. Again, are the variations the result, as far as our ignorance permits us to judge, of the same general causes, and are they governed by the same general laws, as in the case of other organisms—for instance, by correlation, the inherited effects of use and disuse, etc.? Is man subject to similar malconformations, the result of arrested development, of reduplication of parts, etc., and does he display in any of his anomalies reversion to some former and ancient type of structure? It might also naturally be inquired whether man, like so many other animals, has given rise to varieties and sub-races, differing but slightly from each other, or to races differing so much that they must be classed as doubtful species? How are such races distributed over the world; and how, when crossed, do they react on each other in the first and succeeding generations? And so with many other points."

This preamble, which superficial readers may have considered perfectly harmless, contains the seed of all the mischievous reasonings scattered through the rest of the

work. It comes to this: "If we find that man varies, however slightly, according to the same laws which prevail with the lower animals, we shall be justified in concluding that man is a modified descendant of some pre-existing form." Now, this assertion is evidently nothing but clap-trap for the ignorant. In the first place, Mr. Darwin takes for granted that mankind wishes to decide whether man is the modified descendant of some pre-existing form. This gratuitous supposition implies that mankind is still ignorant or doubtful of its true origin; which is by no means the case. We have an authentic record of the origin of man; and we know that the first man and the first woman were not the descendants of any lower pre-existing form. The Bible tells us very clearly that God created them to his own image and likeness; and so long as Mr. Darwin does not demolish the Biblical history of creation he has no right to assume that there may be the least reasonable doubt regarding the origin of man. Mr. Darwin, it is true, makes light of the Biblical history; but contempt is no argument. On the other hand, philosophy and common sense, and science, if not perverted, unanimously agree with the Mosaic record in proclaiming that the origin of man must be traced to a special creation. Thus there has never been, nor is there at present, among thinking men, any real doubt as to the origin of our race; whence we infer that the question raised by the *Descent of Man* is a mere fiction which would deserve no answer but a smile of pity.

In the second place, granting for the sake of argument that there may be an honest doubt about the origin of man, and that physiology and other kindred sciences are competent to answer it, would the inquiry suggested by Mr. Darwin convince an honest doubter that man is the descendant of a lower animal? Suppose that "man varies, however slightly, in bodily structure and in mental faculties"; suppose that "such variations are transmitted to his offspring in accordance with the laws which prevail with the lower animals"; and suppose that all the other conditions enumerated by Mr. Darwin are verified—would we then be justified in concluding that "man is a modified descendant of some pre-existing form"? Evidently not. The utmost that logic would allow us to grant is that the present form of human beings, owing to the slight variations transmitted to us by our human ancestors, may exhibit some accidental features slightly different from those which were possessed by the primitive men, yet without any change of the specific form, which must always remain essentially the same. But Mr. Darwin is not content with this. His peculiar logic allows him to confound the accidental and unimportant variations that occur within the limits of any single species with a gradual transition from one species to another—a transition which science no less than philosophy utterly rejects. Nowhere in nature do we find an instance of such a pretended transition. Varieties are indeed very numerous, but none of them show the least departure from the species to which they belong. The oak emits every year thousands of leaves, of which each one differs from every other in some accidental feature; but who has ever seen the oak-leaves change into fir-leaves, or fig-leaves,

or maple-leaves, or any other leaves? If nature admitted such a specific change, a thousand indications would awaken our attention to the fact. The transition, being gradual, would leave everywhere innumerable traces of its reality. There would be all around us a host of transitional forms from the fish to the lizard, from the lizard to the bird, from the bird to the ape, and from the ape to man. But where do we find such transitional forms? Science itself proclaims that they have no existence. Hence to affirm the transition from one species to another is a gross scientific blunder, whatever Mr. Darwin and his eminent associates may say to the contrary.

In the third place, even admitting that a gradual transition from one species to another were not rejected by science, Mr. Darwin's view would still remain a ludicrous absurdity. In fact, the pretended transition from a form of a lower to a form of a higher species would be an open violation of the principle of causality; and therefore, if any transition were to be admitted at all, it could only be a transition from a higher to a lower species. Thus, the transition from a human to a brutish form by continual deterioration and degradation, though repugnant to other principles, would not conflict with the principle of causality, inasmuch as deterioriation and degradation are negative results, which may be brought about by mere lack of intellectual, moral, and social development. But the transition from a brutish to a human form would be a positive effect without a positive proportionate cause. The lower cannot generate the higher, because to constitute the higher something is necessary which the lower cannot impart. Just as a force = 10 cannot produce an effect = 20, so cannot the irrational brute produce the rational man. To assume the contrary is to assume that the less contains the greater, that emptiness begets fulness—in a word, that nature is a standing contradiction.

A full development of this last consideration would lead us too far from our line of argument, as it would require a psychological treatment of the subject. We will merely remark that *rational* and *irrational* differ not only in degree but in kind; that the human soul is not produced by the forces of nature, but proceeds directly and immediately from God's creative action; and that Darwinism, which ignores the soul's spirituality and immortality, is, on this account also, a monument of philosophical ignorance.

But let us proceed. The author considers it an important point to ascertain "whether man tends to increase at so rapid a rate as to lead to occasional severe struggles for existence, and consequently to beneficial variations, whether in body or in mind, being preserved, and injurious ones eliminated." This is another of Mr. Darwin's delusions. It is not in the nature of man that the stronger should murder the weaker. Man, as a rule, is benevolent towards his kind, and even savages respect the life of the weak; whereas it is always the stronger that go to battle and fall in the struggle. Thus a struggle for existence, occasioned by a too rapid increase, would deprive the race of its best men and mar its further development. On the other hand, if at any time or in any place there has

been a struggle for existence, it is in our large cities that we can best study the nature of its results. Is it in London, Paris, Berlin, or Vienna that we meet the best specimens of the race? Surely, if there is a tremendous struggle for existence anywhere, it is in such capitals as these; and yet no one is ignorant that such proud cities would, in a few generations, sink into insignificance, were they not continually refurnished with new blood from the country, where the best propagators of the race are brought up in great numbers and without any apparent struggle for existence. But we need not dwell any further on this point. A struggle for existence presupposes existence; and if man existed before struggling, the origin of man does not depend on his struggle. Hence the so-called "important point" has really no importance whatever.

Then he asks: "Do the races or species of men, whichever term may be applied, encroach on and replace one another, so that some finally become extinct?" and he answers the question in the affirmative. To this we have no objection. We only remark that "races" and "species" are not synonymous; hence it is surprising how a naturalist of Mr. Darwin's celebrity could show the least hesitation which of the two terms he ought to apply to mankind.

He proceeds to examine "how far the bodily structure of man shows traces, more or less plain, of his descent from some lower form," and he contends that the existence of such "traces" can be proved, first, from the similarity of bodily structure in men and beasts; secondly, from the similarity of their embryonic development; thirdly, from the existence of rudimentary organs, which show that man and all other vertebrate animals have been constructed on the same general model.

Bearing in mind that Mr. Darwin's object is to prove that there are "traces," more or less plain, of man's descent from some lower form, we cannot help expressing our astonishment when we find that he has failed to see the necessity of grounding his proofs on a secure foundation. That the bodily structure of man has some resemblance to the structure of other mammals; that all the bones of his skeleton can be compared with corresponding bones in a monkey, bat, or seal; that this comparison may be extended to his muscles, nerves, blood-vessels, and internal viscera; that the brain, the most important of all organs, follows the same law, etc., etc., are indeed well-known facts, from which we rightly infer that man is constructed on the same *general* type as other mammals. But can these same facts be considered as "traces," more or less plain, of man's descent from any lower form? Mr. Darwin says *Yes;* but instead of giving any conclusive reason for his assertion, he loses his time in accumulating superfluous anatomical and physiological details which, however instructive, have no bearing upon the thesis he has engaged to prove.

To prove his assumption he ought to have made a syllogism somewhat like the following:

Wherever there is similarity of bodily structure or development there are "traces" of a common origin or descent;

But man and other mammals have similar bodily structures and a similar development;

Therefore man and other mam-

mals show "traces" of a common origin or descent.

This argument would have left no escape to the most decided adversary of the Darwinian view, if its first proposition had been susceptible of demonstration. But Mr. Darwin, seeing the utter impossibility of demonstrating it, and yet being unable to dispense with it, resorted to the ordinary trick of his school, which consists in assuming latently what they dare not openly maintain; and thus he turned the whole attention of his reader to the second proposition, which had no need of demonstration, as it was not questioned by instructed men. Thus the twenty pages of physiologic lore with which Mr. Darwin in this chapter distracts and amuses his readers may be styled, in a logical point of view, a prolonged *ignoratio elenchi*—an effort to prove that which is conceded instead of that which is denied—a blunder into which men of science of the modern type are sure to fall when they presume to meddle with matters above their reach.

There is one sense only in which it may be affirmed that the similarity of bodily structure in men and lower animals proves their common origin, and it is this: that men and animals have been made by the same Creator on a similar ideal type of homogeneous organic arrangements; in other terms, that their organic similarity proves them to be the work of the same Maker. Man was destined to live on this earth among other inferior animals and surrounded by like conditions. His animal life was therefore to be dependent on similar means of support, exposed to similar influences, and subject to similar needs. It is not surprising, then, that he should have received from a wise Creator an organic constitution similar to that of the inferior creatures that were placed around him. This fully accounts for the similarity of the human organism with that of other mammals. But to say that because the bodily structure of man is similar to that of the ape, therefore man is the descendant of the ape, is as nonsensical as to say that because the bodily structure of the ape is similar to that of man, therefore the ape is the descendant of man. How was it possible for Mr. Darwin to lay down such an absurd principle, and not foresee how easily it might be turned against his own conclusion?

Thus the argument drawn from the similarity of bodily structure is a mere delusion. It avails nothing to say that man is liable to receive from the lower animals, and to communicate to them, certain diseases, as hydrophobia, variola, the glanders, syphilis, cholera, herpes, etc. This fact, says Mr. Darwin, "proves the similarity of their tissues and blood, both in minute structure and composition, far more plainly than does their comparison under the best microscope or by the aid of the best chemical analysis." But this is a mistake; for the evidence afforded by the microscope as to existing diversities cannot be negatived by any guesses of ours respecting the communication of diseases and its conditions; it being evident that what is obscure and mysterious is not calculated to weaken the certitude of a fact which we see with our own eyes. Nor does it matter that "medicines produce the same effect on them [monkeys] as on us," or that many monkeys "have a strong taste for tea, coffee, and spirituous liquors," or even that a certain monkey "smoked tobacco with plea-

sure" in Mr. Darwin's presence. These and other details of the same nature may be interesting, but they are no indication of a common origin, except in the sense which we have pointed out—viz., that they are the work of the same Maker.

But, says Mr. Darwin, "the homological construction of the whole frame in the members of the same class is intelligible, if we admit their descent from a common progenitor, together with their subsequent adaptation to diversified conditions. On any other view the similarity of pattern between the hand of a man or monkey, the foot of a horse, the flipper of a seal, the wing of a bat, etc., is utterly inexplicable. It is no scientific explanation to assert that they have all been formed on the same ideal plan." These words, which occur at the end of the chapter we are examining, show how little Mr. Darwin understands the duty of his position as author of a new theory. To say that an explanation is not *scientific* is a very poor excuse for setting it aside. Science, if not perverted, is an excellent thing, but it does not profess to give an explanation of every subject we may think of. Its range is co-extensive with the material world, but only with respect to matter and its modifications as known by observation and experiment. This means that there are numberless things about which science is altogether incompetent to speak, because such things do not fall under observation and experiment. To pretend, therefore, that an explanation which is not scientific has no claim to be heeded by a man of science, is like pretending that a man of science, as such, must remain in blissful ignorance of everything which transcends experiment and observation. Will Mr. Darwin reject historical explanations of historical events, philosophical explanations of philosophical conclusions, mathematical explanations of mathematical questions? The origin of things is not a scientific but a philosophic problem. Science cannot speak of creation, of which it can have no experimental knowledge; it gives it up to the philosopher and the theologian, who alone know the grounds on which it must be demonstrated. The question, then, whether mammals have all been formed on the same *ideal* plan, is not scientific, and therefore it needs no scientific explanation. The plea that the explanation is not scientific might be held valid, if Mr. Darwin had humbly acknowledged his inability to rise above matter, and his incompetency to give a judgment in philosophic matters; but his disregard of the explanation shows that, when he calls it *not scientific*, he desires his reader to believe that it is *anti-scientific* or irreconcilable with science; and this is as absurd as if he pretended that reason and science destroy one another.

On the other hand, what shall we say of the pretended "scientific" explanation offered by Mr. Darwin? "The homological construction of the whole frame in the members of the same class is intelligible, if we admit their descent from a common progenitor." Is this appeal to a common progenitor a scientific explanation of the fact in question? If a common progenitor accounts scientifically for the fact, why should not a common Creator account scientifically for it? Science—that is, Mr. Darwin's science—does not know a common Creator; it knows even less of a

common progenitor; and yet it sets up the latter to exclude the former, and boasts that its gratuitous and degrading hypothesis is a "scientific" explanation! Yet all true scientists aver that no instance has ever been found of a transition from one species to another; philosophers go even further, and show that such a transition is against nature. Hence Mr. Darwin's hypothesis, far from being scientific, contradicts science and philosophy, observation and experiment, reason and fact. The descent from a common progenitor, even if it made "intelligible" the similarity of different mammals, would still be unscientific. The ancients accounted for the movement of the heavenly bodies by putting them under the control of intellectual agents. This hypothesis made the astronomical phenomena intelligible. The fall of heavy bodies was accounted for by assuming that all such bodies had a natural intrinsic tendency to a central point. This hypothesis, too, made the fall of bodies intelligible. Even in modern physics a number of hypotheses have been proposed regarding light, magnetism, electricity, chemical changes, etc., to make phenomena intelligible. But hypotheses, however satisfactory at first, are soon discarded when a deeper study of the facts reveals new features and new relations for which such hypotheses cannot account. This is why the hypothesis of the descent of all mammals from a common progenitor, even if it seems to make their homological construction intelligible in a manner, must be rejected. For in every species of mammals we find features for which the hypothesis cannot account, and relations of genetic opposition by which the hypothesis is reduced to nothing.

Mr. Darwin says that, "on any other view, the similarity of pattern between the hand of a man or monkey, the foot of a horse, the flipper of a seal, the wing of a bat, etc., is utterly inexplicable." We do not see any great similarity between the hand of a man and the foot of a horse or the flipper of a seal, etc. We would rather say, with Mr. Darwin's permission, that we see in all such organs a great dissimilarity. Each of them has a special adaptation to a special end, and each of them is constructed on a different specific pattern. Their similarity is therefore generic, not specific; and, accordingly, each species must have its own distinct progenitors. We might make other remarks, but we are afraid that we have already taxed the patience of the reader to a greater extent than the case requires; and therefore we will now pass to the second argument of the author.

This second argument is drawn from the consideration of the embryonic development. "Man," says Mr. Darwin, "is developed from an ovule about the 125th of an inch in diameter, which differs in no respect from the ovules of other animals." This is a very reckless assertion. For how does Mr. Darwin happen to know that the human ovule "differs in no respect" from the ovules of other animals? When a man of science lays down an assertion as the groundwork of his doctrine, he must be able to show that the assertion is true. Hence we are entitled to ask on what foundation our great scientist can maintain his proposition. Will he appeal to the microscope? Probably he will, but to no purpose; for

he has just declared, as we have seen, that the best microscope does not reveal everything with sufficient distinction. On the other hand, if he resorts to the mode of reasoning which he has just employed while speaking of diseases—that is, if he argues from the effects to the causes—he cannot but defeat himself; for, as similarity of diseases was, in his judgment, a proof of similar organic structure, so now the dissimilarity of the final development of two ovules will be a proof that the two ovules are really dissimilar. One ovule constantly develops into a monkey, another constantly develops into a dog, and a third constantly develops into a man. Is it conceivable that the three ovules are identically the same, so as to "differ in no respect"? We do not know what Mr. Darwin will reply. At any rate he cannot reply on scientific grounds; for science neither knows the intimate constitution of the ovules, nor is it likely ever to know it, as the primordial organic molecules baffle the best microscopic investigations.

"The embryo itself," he adds, "at a very early period can hardly be distinguished from that of other members of the vertebrate kingdom. . . . At a somewhat later period, when the extremities are developed, 'the feet of lizards and mammals,' as the illustrious Von Baer remarks, 'the wings and feet of birds, no less than the hands and feet of man, all arise from the same fundamental form.' It is, says Prof. Huxley, 'quite in the later stages of development that the young human being presents marked differences from the young ape.' "

If these assertions and quotations are intended as a proof that the human ovule "differs in no respect" from the ovules of lower animals, we must confess that our advanced scientific thinkers are endowed with a wonderful power of blinding themselves. We have two ovules: the one develops into hands and feet; the other develops into wings and feathers; and yet we are told that they are both "*the same* fundamental form"! What is the fundamental form? Who has seen it? We are sure that neither Prof. Huxley nor the illustrious Von Baer has had the privilege of inspecting and determining the proper form of the mysterious organism known under the name of ovule. Much less have they, or has Mr. Darwin, discerned what is fundamental and what is not in its constitution. They are, therefore, not more competent to judge of the fundamental sameness of two ovules than is the blind to judge of colors; and their view, as founded on nothing but presumption and ignorance, must be considered altogether unscientific.

The same view is also, as we have already shown, eminently unphilosophic. If two ovules are essentially the same and "differ in no respect" from one another, what is it that causes them invariably to develop into different specific organisms? Does a constant difference in the effects countenance the idea that they proceed from identical causes? It is evident that a theory which resorts to such absurdities for its support has no claim to be accepted, or even tolerated, by lovers of reason and truth. The very boldness of its affirmations, its air of dogmatism, its allegation of partisan authorities, and its contempt of fundamental principles prove it to be nothing but a flippant attempt at imposition.

Although Mr. Darwin has insisted so strongly on the similarity between our bodily structure and that of the lower animals, and although he has endeavored to con-

vince us that the human ovule differs in no respect from the ovules of other animals, yet he is compelled by abundant evidence to admit that there is something in man which does not exist in the lower animals, and something in the lower animals which does not exist in man. How does he account for these organic differences? Men of science, only twenty years ago, would have explained the fact by the old philosophical and scientific axiom, *Omne animal generat simile sibi*, which means that each species of animals has progenitors of the same species; whence they would have inferred by legitimate deduction that animals of different species owe their specific differences to their having issued from progenitors of different species. This explanation was universally received, as it was supported by an induction based on centuries of observation, without a single example to the contrary. It was, therefore, a truly scientific explanation. But twenty years are passed, and with them (if we believe Mr. Darwin) the axioms, the logic, and the experimental knowledge of all centuries have disappeared from the world of science, to make room for higher and deeper conceptions. It was not an easy task, that of giving the lie to a uniform and perpetual experience; but to Mr. Darwin nothing is difficult. He needs only a word. With one word, "Rudiments," he is confident that he will transform the objections of the old science into arguments in his favor, just as King Midas by the touch of his hand transmuted everything into shining gold.

The world has hitherto believed that man has only two hands, whereas the monkey has four. But we must not say this in Mr. Darwin's face. If we did, he would inform us that we are strangely mistaken. Man, he pretends, belongs to the order of quadrumana; hence he has four hands no less than the monkey, though two of them are used as feet, which may be considered as rudimentary or undeveloped hands. If we were to remark in his presence that monkeys have a tail, whilst man can boast of no such elegant appendage, he would immediately confound our ignorance by informing us that we all possess a rudimentary tail, which might be made to develop and grow by mere local irritation.

In this way he explains all the organic differences which separate one species from another. Every difference is made to depend either on the development in man of an organ which is undeveloped and rudimentary in lower animals, or on the development in lower animals of some organ which is rudimentary and undeveloped in man. To explain this theory he reasons as follows:

"The chief agents in causing organs to become rudimentary seem to have been disuse at that period of life when the organ is chiefly used (and this is generally during maturity), and also inheritance at a corresponding period of life. The term 'disuse' does not relate merely to the lessened action of muscles, but includes a diminished flow of blood to a part or organ from being subjected to fewer alterations of pressure, or from becoming in any way less habitually active. Rudiments, however, may occur in one sex of those parts which are normally present in the other sex; and such rudiments, as we shall hereafter see, have often originated in a way distinct from those here referred to. In some cases organs have been reduced by means of natural selection, from having become injurious to the species under changed habits of life. The process of reduction is probably often aided through the two principles of compensation and economy

of growth; but the later stages of reduction, after disuse has done all that can fairly be attributed to it, and when the saving to be effected by the economy of growth would be very small, are difficult to understand. The final and complete suppression of a part already useless and much reduced in size, in which case neither compensation nor economy can come into play, is perhaps intelligible by the aid of the hypothesis of pangenesis."

On this passage, which forms the main foundation of the Darwinian theory of rudiments, much might be said; but we must limit ourselves to the following obvious remark. Science and philosophy reason on ascertained facts, but do not invent them; whereas Mr. Darwin in this very passage, as in many others, not only invents with poetic liberty all the facts which he needs to build up his theory, but also violates the laws of reasoning by drawing from his imaginary facts such conclusions as even real facts would not warrant. Philosophy would certainly not allow him to assume without proof that "organs *become* rudimentary"; for this is not an ascertained fact. Nor would philosophy permit the gratuitous introduction of rudiments derived "from the corresponding organs of other more developed animals"; for there is no evidence that such has ever been the case. Nor would philosophy sanction "the final and complete suppression of a part already useless"; for on the one hand we have no means of knowing whether a part be really useless, and on the other no total suppression of organic parts has ever been known to occur (except in monsters) within the range of any given species. Nor would philosophy permit an appeal to the hypothesis of pangenesis or to the principle of compensation to evade the difficulties of which the new theory cannot give a solution; for the hypothesis of pangenesis is itself in need of proof, and the principle of compensation involves, in our case, a begging of the question, inasmuch as it assumes the mutability of species—the very thing which the theory is intended to demonstrate.

But, says Mr. Darwin, perhaps the hypothesis of pangenesis would make "intelligible" the suppression of a useless part. Let it be so, though we hold the contrary to be true; what then? Is all hypothesis to be accepted which would make a thing "intelligible"? The succession of days and nights was intelligible in the Ptolemaic hypothesis; the loss of a battle becomes intelligible by the hypothesis of treason; the death of an old woman is intelligible by the hypothesis of starvation; but no man of sense would mistake the hypothesis for a fact. The truth is that Mr. Darwin, before attempting the explanation of what he calls "the final and complete suppression of a part," was bound to prove that the absence of such a part was a *real suppression* of the pre-existing part. This he has not done; in fact, he had no means of doing it. Hence all his reasonings on this subject are paralogistic, and his theory of rudiments is a rope of sand.

The preceding remarks are fully applicable to the other examples of rudiments given by the author in the fourteen remaining pages of the chapter. Thus, "rudiments of various muscles have been observed in many parts of the human body." We flatly deny the assertion. "Not a few muscles which are regularly present in some of the lower animals can occasionally be detected in man in a greatly-reduced condition." We answer that such mus-

cles are not at all in a *reduced* condition, but in the condition originally required by the nature of the individual. "Remnants of the *panniculus carnosus* in an efficient state are found in various parts of our bodies; for instance, the muscle on the forehead by which the eyebrows are raised." On what ground can this muscle be called a *remnant?* "The muscles which serve to move the external ear are in a rudimentary condition in man. . . . The whole external shell (of the ear) may be considered a rudiment, together with the various folds and prominences which in the lower animals strengthen and support the ear when erect." Where is the proof of such rudimentary condition? "The nictitating membrane is especially well developed in birds, . . . but in man it exists as a mere rudiment, called the semilunar fold." How is it proved that the semilunar fold is a mere rudiment, and not a special organism, purposely contrived by the hand of the Creator at the first production of man?

Mr. Darwin goes on making any number of assertions of the same kind, not one of which is or can be substantiated, and yet at the end of the chapter closes his argumentation in the following triumphant words:

"Consequently, we ought frankly to admit their community of descent [of man and other vertebrate animals]. To take any other view is to admit that our own structure, and that of all the animals around us, is a mere snare laid to entrap our judgment. This conclusion is greatly strengthened, if we look to the members of the whole animal series, and consider the evidence derived from their affinities or classification, their geographical distribution and geological succession. It is only our natural prejudice, and that arrogance which made our forefathers declare that they were descended from demi-gods, which leads us to demur to this conclusion. But the time will before long come when it will be thought wonderful that naturalists who were well acquainted with the comparative structure and development of man and other mammals should have believed that each was the work of a separate act of creation."

This conclusion, though well known, and already famous throughout the scientific world, is here given in the proper words of the great naturalist, that the reader may see what unbounded confidence a man of science can place in himself and in his speculations. All the scientific world, excepting a few sectarian unbelievers, is against him; he knows it, and he is not dismayed. If you listen to him, his opponents are "arrogant"; they demur to his conclusion only because they pretend to be "the descendants of demi-gods." He alone is right, he alone understands science. Buffon, Cuvier, Quatrefages, Agassiz, Elam, Frédault, and a host of other naturalists are evidently wrong. In fact, all philosophers are wrong; Mr. Darwin alone knows how to interpret scientific results; and he is so sure of this that he ventures to prophesy his approaching triumph over those benighted naturalists who, though "well acquainted with the comparative structure and development of man and other mammals," are nevertheless so foolish as to believe that each species is the work of a separate act of creation. Such is his modesty!

Perhaps we, too, may be allowed to venture a little prophecy. Mr. Darwin is not young, and before many years, we are sorry to say, death will snatch him from us; his scientific friends in England and in Germany will shed a cold tear on his dead "mammalian structure,"

while his spiritual and immortal soul will be summoned before the God he has insulted in the noblest of his creatures, to account for the abuse of his talents, and to receive the sentence due to those who know and disregard truth. Then the *Descent of Man* will soon be a thing of the past; and those who now sing its praises in all tunes, and feign such an enthusiastic conviction of its coming triumph, will become the laughing stock of cultivated society, unless they put a timely end to their "scientific" jugglery. This is the fate which the common sense of mankind keeps in store for the Darwinian theory.

Mr. Darwin, in formulating his conclusion, sums up the whole discussion in a single sentence: "To take any other view is to admit that our own structure, and that of all the animals around us, is a mere snare laid to entrap our judgment." No doubt a "snare" is laid; not, however, by the Author of nature, but by the author of the *Descent of Man.* The homologousness of animal structures does not prove a common genetic descent: it only proves, as we have shown, that all such structures are the work of the same Maker; hence the arbitrary substitution of a common progenitor for a common Creator is "a mere snare" laid by Mr. Darwin to entrap the judgment of the ignorant. We say *of the ignorant;* for he who knows anything about philosophy will simply wonder at the audacity of a writer who derives reason from unreason, and intellect from organism; and he who knows anything about divine revelation will rebuke him for his disregard of the Mosaic history, than which no document has greater antiquity or higher authority; whereas he who knows anything of zoölogy will be scandalized at the impudence of a man who dares to contradict in the name of science what he knows to be an unquestionable fact and a fundamental principle of science—viz., the unchangeableness of species.

To "strengthen" his worthless conclusion Mr. Darwin bids us look to "the members of the whole animal series" and consider "the evidence derived from their affinities or classification, their geographical distribution and geological succession." But it must be evident to every intelligent reader that the considerations here suggested by Mr. Darwin are not calculated to "strengthen" his position. Between the members of the animal series there are not only affinities, but also specific differences and incompatibilities, which a man of science ought not to ignore, were they ever so embarrassing to his inventive genius. And as to the "geological succession" of animal forms, need we remind Mr. Darwin that the geological remains and their succession afford the most peremptory refutation of his theory? He himself acknowledges that no transitional forms from one species to another have been dug up from the bowels of the earth; whereas his theory requires a succession of animal remains of all transitional forms and in all stages of development. It would have been wiser for him to have kept back all mention of geology; but, alas! those who lay snares for others sometimes succeed also in entrapping themselves.

This may suffice to give an idea of the first chapter of the *Descent of Man,* and even of the whole work. Everywhere we find the same want of rigorous logic, the same

absence of method, the same disregard of principles, and the same abundance of fanciful assumptions. Such is not the proceeding of science. "I believe," says Prof. Agassiz, "that the Darwinian system is pernicious and fatal to the progress of the sciences." "This system," says Dr. Constantin James, "starts from the unknown, appeals to evidences which are nowhere to be found, and falls into consequences which are simply absurd and impossible. One would say that Darwin merely undertook to blot out creation and bring back chaos."* We cannot, without trespassing on the limits prescribed to this article, give the scientific arguments by which these and other eminent writers set at naught the assumptions, the reasonings, and the conclusions of our eccentric "mammalian," but we venture to say that if the reader procures a copy of Dr. James' work, and examines the Darwinian theory in the light of the facts that the learned author has culled from physiology, palæontology, and other branches of science connected with the history of the animal world, he will be fully satisfied that the *Descent of Man* is nothing but a congeries of blunders.

But we may be asked: How is it possible to admit that a theory so manifestly absurd should have been received with enthusiasm and lauded to the skies by men of recognized ability and scientific eminence? The answer is obvious. Scientific eminence, as now understood, means only acquaintance with the materials of science, and is no warrant against false reasoning. "There can be fools in science as well as in any other walk in life," says a well-known English writer; "in fact, in proportion to the small aggregate number of scientific men, I should be disposed to think that there is a greater percentage in that class than in any other." But the same writer gives us another remarkable explanation of the fact.

"I have read," says he, "the writings of Mr. Darwin and Prof. Huxley and others, and had the advantage of personal talk with an eminent friend of theirs who shares their views, and I have read without prejudice, but failed to find that they advanced one solid argument in support of their views. I am quite certain that, if this controversy could be turned into a law-suit, any judge on the bench would dismiss the case against the evolutionists with costs, without calling for a reply. The eminent friend I allude to, himself one of the first of living mathematicians, and an intimate associate of Tyndall, Huxley, Spencer, etc., and sharing their views, was candid enough to admit that the theory was beset with difficulties, that quite as many facts were against it as for it, that it hardly seemed susceptible of proof. And when I asked why he held the theory under such a condition of the evidence; why, on the assumption of this law, Dr. Tyndall chaffed and derided prayer, and Prof. Huxley gnashed his teeth at dogma and chuckled over the base descent of man, his reply was: 'We are bound to hold it, because it is the only theory yet propounded which can account for life, all we see of life, without the intervention of a God. Nature must be held to be capable of producing everything by herself and within herself, with no interference *ab extra*, and this theory explains how she may have done it. Hence we feel bound to hold it, and to teach it.' Shade of Bacon! here is science!"*

These words need no comment of ours. We knew already from other evidences that a conspiracy had been formed with the aim of

* *Du Darwinisme; ou l'homme singe.* Paris, 1877, page 170.

* *On the Intrusion of certain Professors of Physical Science into the Region of Faith and Morals:* An address delivered to the members of the Manchester Academia of the Catholic Religion by J. Stores Smith, Esq.

turning science against religion, and we now see its work. We have here a candid avowal that the enthusiasm of certain scientists for the new theory has its root in malice, not in reason, and is kept up, though with ever-increased difficulty, in the interest not of science but of a brutal atheism. In fact, science has nothing to do with the origin of man; and the very attempt at transforming a historical event into a scientific speculation clearly reveals the wicked determination of obscuring, corrupting, and discrediting truth. To carry out their object the leaders of the conspiracy organized a body of infidel scientists, doctors, professors, lecturers, and journalists; they took hold of the scientific press, which was to illustrate the names and magnify the merits of such men as Moleschott, Louis Büchner, Wolff, Von Baer, or such men as Clausius, Tyndall, Spencer, and Comte, or as Huxley, Draper, and Häckel—a task not at all difficult, as these men, and others whom we might name, were all bound together in a mutual-admiration society, in which the celebrity of each member was an honor and an encouragement for all the other members, and the praises lavished upon each one were repaid with interest to all the others. Thus they have become great scientific oracles, each and all; and by ignoring as completely as possible the writings, the discoveries, and even the existence of those men of science who did not fall on their knees before the new ideas, they succeeded in creating a belief that they alone were in possession of scientific truth, and they alone were enlightened enough to point out with infallible certainty the hidden path of progress.

Their success, to judge from the number and tone of their scientific publications, must have been very flattering to their vanity. It is probable, however, that their noise is greater than their success. (The profligate and the sceptic may, of course, relish a theory which assimilates them to the ape or the hog, makes the soul a modification of matter, and suppresses God;) but the honest, the pure, the thoughtful are not easily duped by the low hypotheses of these modern thinkers. Society in general rejects with disgust a doctrine which aims at degrading humanity and destroying the bases of morality, religion, and civilization. If there is no God, rights and duties, the main ties of the social body, must be given up; justice will become an unmeaning word, and civil and criminal courts a tyrannical institution. If man is only a modified beast, if his soul is not immortal, if his end is like that of the dog, then why should the stronger refrain from hunting and devouring the weaker? Do we not hunt and kill and eat other animals? Alas! the progress of humanity towards barbarism and cannibalism is so intimately and inevitably connected with Darwinism that even the most uncivilized of human beings would protest against its admission.

That society is still unwilling to submit to the dictation of this advanced science, and that common sense is yet strong enough to silence the present scientific blustering, is a fact of which we find an implicit confession in the writings and addresses of anti-Christian thinkers. *Nature*, a weekly illustrated journal of science, the *Popular Science Monthly*, and other publications of the infidel party, do not cease to inculcate the introduction of science (materialism, evo-

lution, pantheism, etc.) into the schools frequented by our children. They have found that our schools are not godless enough to secure the triumph of unbelief: they are godless in a negative sense only, inasmuch as they ignore God; but now they must be made positively godless by teaching theories which do away with creation, which deny providence, which leave no hope of reward, and ridicule all fear of punishment in an after-life; and they must be made positively immoral by teaching that man is always right in following his animal proclivities, as all other animals do, and that no human being can be justly called to account for his doings, it being demonstrated by science that what we call "free-will" is an organic function subject to invariable laws, like everything else in the material world, with no greater freedom to choose its course than a stone has under terrestrial attraction. These doctrines are widely circulated in printed works, but make few converts, owing to the fact that they come too late, and find the minds of men already imbued with principles of an opposite nature; and, therefore, it is now proposed to instil all this poison into the minds of the young, who have no antidote at hand to counteract its destructive action. We hope that this new attempt will be defeated; but when we see that the attempt is considered necessary for a successful diffusion of the false scientific theories of the day, we cannot be much mistaken if we infer that the success of such theories up to the present time has been less satisfactory to the infidel schemers than their publications pretend.

As for the *Descent of Man*, however, no amount of sophistry, in our opinion, will succeed in making it fashionable. The Darwinian theory is utterly unscientific and unphilosophical. Common sense, geology, and history condemn it; logic proclaims it a fraud; and human dignity throws upon it a look of pity and dismisses it with ineffable contempt. Mr. Darwin may yet live long enough to see his theory totally eclipsed and forgotten, when he will ask himself whether it would not have been better to devote his talents, his time, and his labor to striving to elevate rather than striving to debase his kind.