

THE LOGIC OF EVOLUTION.

The Descent of Man. By Charles Darwin. Appletons, 1871.

Evolution and Logic. By Edward H. Parker, M.D., Poughkeepsie, 1878.

The Logic of Special Creation. By Laique. Ibid.

The Catholic World, December, 1877, and passim.

WE would gladly believe what LAIQUE implies, that the evolutionists merely prescind from the existence of God and Revelation, and endeavor to find out the origin of things from natural science alone. This is a laudable exercise of reason. Even in our schools of theology, as well as in the *Senior* class of our colleges, as LAIQUE must know, we are practiced in such investigations and prove God's existence and attributes independently of revealed religion; for it can be proved most exactly, LAIQUE'S assertion to the contrary notwithstanding. That we know it first by faith matters not. We receive a great many truths by faith alone, in fact nearly all that we learn, and it is only the recipients of what is called a liberal education who reduce them, each in his own profession, to their logical basis, and secure the multitude from error. But we have great reason to fear that Darwin, Tyndall, Huxley, etc., do not confine themselves to the study of natural history as a department of science, but that they reject, and hold in contempt, other equally or superiorly reasonable sources of truth. They seem to pay no attention to the "common-sense" (to use a technical term) of mankind. Tyndall laughs at prayer. Huxley ridiculed the Mosaic record in his New York lectures, calling it Miltonic, and so on. Now even if man's origin can be traced by the study of comparative anatomy, it is absurd to say that it may not be otherwise known. And it is in the highest degree unreasonable to ignore the teaching of religion, the facts of history, the truths of metaphysics, and the universal tradition of the human race, when these conflict with our theories. Nothing short of mathematical demonstration, or its equivalent, of the truth of a system, would make this course reasonable.

In the first place then we say to LAIQUE that the existence of God is a fact, not an assumption. And no conclusions in any field of scientific investigation may disregard facts in other fields. We think, moreover, that LAIQUE exaggerates the hypothesis of evolution. It is not a universal law. Whatever may be said of geology and chemistry, whereof more further on, evolution cannot be maintained in the moral and intellectual sphere. There is growth, we admit, but this as a rule is succeeded in races and nations, as well

as in individuals, by climax and decay, and absorption or death. The world shows periodicity, rather than constant development. We have not evolved a language comparable to the Latin or Greek, much less the Sanscrit. We do not approach the ancients in sculpture, painting or architecture, nor, perhaps, in mechanics. The Jews leaped from brick-making to a magnificent religious code, and a ritual which reached its climax under Solomon, and has risen and fallen occasionally since, but surely absolute progress has not been verified. Do you say that Christianity is a development of Judaism? We refer you to the fact that Christianity has had splendid phases, and then again depressions at times, though we deny that it was ever lost. Have the law codes of modern Europe approached the perfection of the XII Tables, the "written reason" of the Romans? Have the Chinese improved on Confucius? What process of evolution is shown in the production of Shakspeare? And does our more recent poetry excel his? So, too, as regards Homer, Demosthenes, Virgil, etc. These men are so singular and independent of antecedents that, from analogy, we might conclude in favor of a like origin for the various species of animals, and especially for the noblest, man. Yes, each particular nation, like an individual, grows, matures, decays and dies. Anarchy succeeds republicanism, just as this is born of revolution, and this is begot of tyranny, which is the debasement of monarchy, which is the result of anarchy. These changes are completed in a longer or shorter space of time in each nation or century, but there is no constant evolution of the less perfect into the more perfect. There is continual motion in a circle. So of civilization, the very refinements of which foster the germs that will eventually destroy it. This was very high in Greece and Rome, but it fell and died, and but for the incorporated spirit of Christianity surviving, it would probably not yet be resurrected. This circle is found in geology also. Nebulæ become solid, solids give birth to plants, and so on. But the rock is also worn away by the rain and changed into soil, and into vapor. The plant becomes coal and the coal becomes gases, and the gases are changed again into the rock. The sea is always invading the land, and the land in turn enlarges its bounds, as the sea recedes. Our cemeteries become cornfields: "from human mould we reap our daily bread," and we bury our dead in the gardens of our ancestors. Where is the constant development towards the higher form? So much for LAIQUE'S presentation of the evolution assumption. What we propose, however, is to show how illogical Darwin is, and for this purpose we will criticize the first chapter of his *Descent of Man*, as it summarizes and reduces to a conclusion the substance of the whole work.

Mr. Darwin's conclusion is as follows: "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 structure and that of all the animals around 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 own natural prejudice, and that arrogance which made our forefathers declare that they were descended from demigods, which leads us to demur to this conclusion."

This "frank" expression reminds us of the candor with which Huxley, in his New York lectures (September, 1877), recommended the admission that there may be worlds, in which two and two are not four! As to the snare laid to entrap our judgment: will Darwin maintain that the apparent motion of the sun around the earth is also a snare? How pleased Colored-Brother Jasper must have been with the Professor's conclusion. Regarding geological succession we will see that this does not help him. Concerning the persuasion of our forefathers that they were descended from demigods: this and the legend of the Golden Age confirms the Bible history of the elevated state in which man first appeared. How does Darwin account for this universal tradition? What right has he to call it arrogance? Its universality gives positive presumption in favor of its truth.

Let us follow the Professor's logic, however:

1. His first argument is drawn from the transmission of certain traits and variations from father to son. "Man varies in bodily structure and in mental faculties." "Such variations are transmitted to his offspring in accordance with the laws which prevail with the lower animals." "Man, like 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." Therefore man is a modified descendant of some pre-existing form. This conclusion is unwarranted. The strict conclusion (admitting the truth of the premises) is, that "men are more or less different from their primitive progenitors," but still are men. The assertion that some of the various races of men must be classed as doubtful species is contrary to fact: no matter how degraded the savage is, we have no difficulty in recognizing him as a man. No experience shows that accidental changes have risen into specific ones. "The oak and the bee and the rose, remain still the oak and the bee and the rose, throughout the accidental variations of ages; although every oak and bee and rose and every leaf on every tree differs in some respect from every other individual of its kind. Who has ever noticed oak leaves changing into maple leaves? If nature ad-

mitted such a change, a thousand indications would point to it. The transition is said by the evolutionists to be gradual, but some of it would always be apparent. We would have 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, from the ape to the man. Where do we find such transitional forms?" The leap of Mr. Darwin from accidental variations to specific changes is therefore unwarranted, and his argument worthless.

2. Darwin pretends a transition from a lower grade to a higher. "The lower cannot generate the higher: force 10 cannot produce force 20." If we have to admit improvement in animals and plants under man's cultivation and care, this is because man's knowledge and aid causes the advance. Animals and plants left to themselves very soon fall back. And this applies very remarkably to mankind itself. Men neglected, and not elevated by external influences coming from outside and above, may and do degenerate, and become more or less brutal (as we say), but the rise from barbarism to civilization is due to positive and superior causes. History shows and popular legends tell how some greater one came and taught and raised each people, some godlike Orpheus, or sagelike Cadmus, or Moses, or Hiawatha, but we find no warrant for assuming that men ever civilized themselves, though we can easily understand how they may and do speedily fall in manners; much less is it probable that apes improved themselves into men. The story of the man, "who lifted himself by his waistband," out West, is long ago exploded, and were it not for Christianity, men would fall away instead of remaining stationary or advancing.

3. Darwin pretends that "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 mind, being preserved, and injurious ones eliminated." Here he bases his argument upon the "struggle for existence:" concerning which we will merely say that it is the best men of the country who expose themselves for the common weal and die, leaving the propagation of the race to the stay-at-homes. War exhausts nations instead of advancing them, and this is true of the victors as well as of the vanquished. Witness the condition of savage tribes always at war with each other! We admit, however, that some races give way before others, but these also in their turn mature and die out. Indefinite progress is not verified. When races die out, others begin the march of civilization, very often with scarce a relic of their predecessors' outfit to start with. A complete return to barbarism is impossible for Christendom, because the Church endures forever: but the nations which possess Christianity rise and fall just the same, and so it will be till the final dissolution, when the whole

human race will die perhaps of inanition, or because the earth will be no longer a fit habitation for man.¹ Besides, "the struggle for existence is greatest in our large cities. Do we find the flower of the race in them?" Is it not the country blood that supplies the city's waste? And "would not the population of the city die out, if it were not for the accessions it receives from the country, where the people grow up apparently without any such struggle?"

4. Darwin maintains that the anatomical similarity of man to lower animals gives traces of a common genetic origin or descent. This argument may be thus stated: "Wherever there is a 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 mammals show traces, etc." The first proposition contains the conclusion, and should be proved. Mr. Darwin does not prove it. The second proposition he proves abundantly, and no one ever denied it. His twenty pages of proof are interesting, but superfluous. What we want him to show is that where there is similarity, etc., there are traces of common descent. What wonder is it that man should be like other animals, destined as he is to live on the earth like them, amongst them, and on similar food? If he were totally unlike them, there would be reason for the wonder. There seems to be a very good reason why all the creatures that move upon the earth's surface should be of similar build. This is because they were made to live upon the one same surface, exposed to the same elements which impede motion and tend to destroy life. Man is an inhabitant of the earth like other animals, eating and drinking and moving like them. Why should he not resemble the rest? The same reasoning holds for the similarity in all the creatures that move in the air. The same for those that inhabit the water. Nay, more, there is a very evident reason why each of the great families of creatures should resemble one another. Abstracting from the accidental elements (if indeed there be any of these) which enter into their formation, the air, the land and the water are after all but different forms of one substance, are all composed of the same ingredients. Water may be considered as liquefied air, earth as solidified water. Marble can be melted into the liquid form, and air could be compressed into the solid. The elements composing all these various substances are few and identical. Hence their influence on animal life is similar in whatever

¹ We know that certain exceptions are raised to Vico's theory, the perennial existence of the Chinese for instance, and the Jewish people. Exceptions confirm the rule. The day of the Chinese is a long one comparatively. As for the Jews, their continued existence is owing to a special Providence, and as we showed above, neither their history nor that of the Chinese give any aid to the hypothesis of Evolution.

state they may be found, and the living animal which maintains life by overcoming the obstacles they oppose to its motion (life is motion or force), by adopting and assimilating them, and making them its own, requires similar faculties and like formation in whatever department of creation it may be found. We fail to see the force of the Professor's argument. Indeed, "to say that because the bodily structure of man is similar to that of the ape, therefore man is the descendant or co-descendant of the ape, is as uncalled for, 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." Look where Darwin's logic brings us out! Indeed from what we have seen above (No. 2), it is not unlikely that man left to himself would become more or less brutal, but what ground have we for thinking that a lot of apes could rise into the condition of reasonable beings?

5. Darwin says: "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. In 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." This is not true. The hand and the foot and the flipper and the wing are similar, because the elements in which they move and whose friction they encounter are "generally" (to use a technical term) similar. Moreover, these limbs serve purposes more or less similar for animals formed on the same "general" plan (V. No. 4), for habitation of the same terraqueous globe. Any greater similarity, however, than their respective uses require, between a man's hand and a horse's foot, we confess we do not perceive. Moreover, whoever made the first progenitor of any race, or, in Darwin's hypothesis, of all the races, could surely make others, and still others like them. We think as we have shown that similarity of structure can be accounted for without admitting community of descent. If it cannot, and if we are obliged to admit this conclusion in this particular department of science, then it is left for us to examine whether God, who freely gave laws to nature, has not deviated from them in this matter. If Revelation tells us that He has, then our conclusions from the study of natural history hold no longer, and must be set aside, because they are not essentially true, and however and how long soever they may fit in harmoniously, it is not repugnant that God, in the exercise of his liberty, should have acted otherwise. This is the difference that exists between mathematical and metaphysical conclusions, and those drawn from the contingent sciences. God's free will can influence these, but not those. And no investigator of the origin of things may logically

ignore the First Cause and His Attributes. Here we are at issue with LAIQUE, who says that "the scientist neither affirms nor denies the being of a God, as a scientist." He grants, however, that the being of a God is an assumption that is a necessity to the human mind. If it is necessary, then it is true. We prove God's existence from its necessity. Further, let us admit that "community of descent" makes similarity of structure intelligible; can we therefore conclude that it is the true theory? No. Plato imagined "the heavenly bodies to be under control of intellectual agents, and this made their movements intelligible. A theory may be ingenious, plausible, even satisfactory, but yet not necessarily true. So the similarity of animals is intelligible in the hypothesis of a common progenitor," but this is not the only way of explaining their likeness.

6. Darwin says: "Man is developed from an ovule . . . about the 125th of an inch in diameter, which differs in no respect from the ovules of other animals." "How does he know that it doesn't? He admits that the best microscope does not reveal everything with sufficient distinctness, and therefore he argues from effect to cause, and maintains that similarity of diseases and their imparting is a proof of similar organic structure. Very well. Then in like manner we would say: dissimilarity in 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 into a dog, another into a man. Is it conceivable that the three ovules are identically the same, so as to differ 'in no respect?'" Further: "the wings and feet of birds, no less than the hands and feet of man, all arise from the same fundamental embryonic form." Indeed! "We have two embryos: one develops into hands and feet, another into wings and feathers, yet we are told that they are both the same fundamental form. What is the fundamental form? Who has seen it? What is fundamental, and what accidental in its constitution?—You cannot conclude the fundamental sameness of two ovules otherwise than by their results, and the results constantly show their difference, not their sameness."

7. "Although Darwin has endeavored to convince us (with what success we have seen), that the human ovule differs in no respect from the ovules of other animals, 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 these, which does not exist in him." Men of science have always explained these organic differences by the old philosophic and scientific axiom: like generates like. Animals of different species owe their specific differences to their having issued from progenitors of different species.

This explanation was supported by an induction based on centuries of observation without a single example to the contrary. The professor explains the difference between animals by his theory of rudiments. For example: he places man in the order of four-handed animals, considering his feet as rudimentary or undeveloped hands. So he makes every difference between man and any other species to depend either on the development in man of an organ which is undeveloped and rudimentary in lower animals, or (as in the example cited), on the development in lower animals of some organ which is rudimentary and undeveloped in man. He goes on to account for this rudimentary condition: "The chief agents in causing organs to become rudimentary seems 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." Now this idea of rudimentary organs is an assumption. He does not establish it. Nor does he prove that the absence of certain useless parts (how does he know that any part is useless?) was a real suppression of a pre-existing part. Does history tell of any species possessing parts different from, or other than, the same species to-day? If you except monsters, Siamese twins, four-armed infants, etc., and these exceptions only confirm the rule, it does not. That there should exist in the lower animals organs rudimentary of those developed in man, is consistent with the hypothesis of evolution. But when the reverse is stated, may we not ask: where then is the constant transition from the lower to the higher form? Why isn't man's eye as perfect as that of the lynx? His ear better than the hound's? He would certainly be more perfect, if it were so. Say that he has something better than these: intelligence. But there is no incompatibility between advanced intellect and perfection of sense. The development of the higher faculty does not imply neglect of the lower, but rather more active and perfect use. Mr. Darwin asserts that "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 say that such muscles are not at all in a reduced condition, but in that 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 muscles 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 that such condition is merely rudimentary? "The nictitating

membrane is especially well developed in birds, . . . but in man it exists as a mere rudiment, called the semilunar fold." "How do you prove 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?" We admit that man's body is still very imperfectly understood. The various and contending schools of medicine certainly show this. And we cannot explain why one sex possesses what seem to be rudimentary parts corresponding to developed ones in the other. *Seem to be*: for we dare not assert that they are not complete and useful parts in themselves. When the Homœopaths and Allopaths and the Water-cure and the Eclectic have agreed amongst themselves on the essential points, regarding man's knowledge of his own body, they may turn their attention to these minor accessories. For the present, however, we cannot allow Mr. Darwin to assume without proof that they are what he claims. And, as he has not proved it, the argumentation based thereupon falls to the ground.

8. Before referring again to the professor's insistence upon geology, the lapse of ages, etc. (No. 10), we may still further illustrate the Logic of Evolution by a quotation from a discourse, delivered by Dr. Draper, at Springfield, Mass., on the 11th of October, 1877. It contains his answer to the question which his school must solve in order to make its doctrine acceptable. "How can we be satisfied that the members of this long series (the succeeding races found in the geological strata) are strictly the successive descendants by evolution from older forms, and in their turn progenitors of the latter? How do we know that they have not been introduced by sudden creations, and removed by sudden extinctions? Simply for this reason: the new groups make their appearance, while their predecessors are in full vigor. They come under an imperfect model which very gradually improves. Evolution implies such lapses of time. Creation is a sudden affair." This solution is not satisfactory. In the first place, the First Cause "could make new groups even while the others still flourished." Agassiz held that God made eight distinct species of men. Then again, according to Darwin (V. No. 7), it is while animals are in full vigor that they transmit their characteristics to their descendants. And besides, if the circumstances of those periods allowed those groups to flourish "in full vigor," those surroundings must have been wanting, which, according to Darwin, induce changes and developments in a race. Indeed the coexistence, asserted by Dr. Draper, of varying groups seems to show that distinct races could have flourished at the same period, as we see them do now, without any need of one being derived from the other. As to the model very gradually improving, the fact is "the most ancient known vertebrates are the

selachians and the ganoids, the highest of all the fishes in structure." (Agassiz, quoted by Dr. Parker, p. 17.) So much for the argument of Dr. Draper, after stating which, he adjured his hearers not to reject evolution.

9. We have not alluded to Mr. Darwin's argument from "sexual selection." We maintain, however, that facts do not support it. Besides, too much is claimed for this principle. The perpetuation of the race appears to be left to its ordinary members, and though it be true, that "*fortes creantur fortibus*," yet, as was said of nations (No. 3), so in families, a climax is verified; and not only are the greatest individuals remarkably unprolific, but their children are very often notoriously inferior, and their stock speedily dies out. Animals improve by crossing of superiorly gifted individuals, it is true, but it is man who makes the selection. We have no authority for the assumption that animals out of the state of domestication have improved on the qualities possessed by their predecessors in all historic time. The reverse is speedily verified, when they return to the wild state. We ourselves, even at our best, dare not maintain our mental or physical superiority to our fathers of the best periods in past ages, and this notwithstanding our superior opportunities for profiting by the "struggle for existence." If any change has taken place, it is very probably for the worse. There are even those, who hold that just as various animal tribes have become exhausted and have disappeared from the earth, so even the human race gradually but surely, and in spite of occasional revivals of bodily and mental vigor, increases in weakness, and will eventually die out. This is asserted by astronomers, as a necessity of their theory that with the gradual extinction of the volcanic fires the earth loses its heat, grows less and less fertile, and will at last be totally unfit to sustain human life.

10. We may advert here to another singular assumption of Mr. Darwin's. When he is asked why, if his theory of gradual transformation is true, no perceptible specific change is noticed in the various races of domestic animals, where man's ingenuity has been brought to play in improving breeds, etc.: why for instance, our household friend, the cat, is clearly "that same old cat," the Egyptians, two thousand generations (of cats) ago, called *Sciau* (shee-ow), a name evidently formed like the *miau* of the Grecians, and the *gnao* of the Italians, in imitation of the same vocal sounds with which we ourselves are so familiar; he replies that this period, in the existence of the feline tribe, is too brief for us to notice the change which, nevertheless, is surely taking place, and appeals to cycles of time. This is appealing to something we know nothing about, and as it is gratuitously asserted, it is as readily denied. If geology, as far as it has progressed, as well as history, shows no

traces of transition, from one species to another in the cat, or any other tribe, where do you base your assumption? How shall we designate the *frankness*, which asks us "frankly" to admit a conclusion grounded on such baseless hypothesis? And yet I but prove myself "a savage" (*Descent of Man*, vol. 2, p. 369), if, after his arguments and the details by which they are supported, I do not believe that man is the "co-descendant with other mammals of a common progenitor!" Yet, as we have endeavored to show, it is on such pillars that the professor raises his edifice of evolution. Would it be too much for us to say that if these be its foundations, it is indeed a "castle in Spain," the "baseless fabric of a vision?" And for such a theory he wants us to reject, even without examination, all historical evidence, metaphysics, the testimony of our senses, the Church, and the inspired word of God!

II. We proposed to deal only with the *logical process* of Darwinism. We say nothing about its repugnance to the conclusions of metaphysics, nothing about the destruction of morality which is a necessary outcome of the system, when it is not content with evolving the body of man from the brutal form, but claims that even his mind and soul are mere developments of corresponding (?) constituent parts of lower animals. But we will notice the concluding paragraph in LAIQUE'S very well formulated exposition of the new theory, and with this bring our remarks to a close. "Some are honest enough to say that, if biological evolution is true, the Bible is not, but as they said the same when cosmical evolution was announced, they may allay their fears, and enlarge their conceptions of Deity, and hold with the evolutionist that God was there in the beginning of this world, and will be in it to the end of it." The truth of the Bible is independent of our philosophical and scientific systems, and "honest" people will acknowledge, when they witness how one of these overthrows and succeeds to another, that their unaided reason is very weak, and that their assurance of the truth of the Bible must be derived from another source. For our part we say, under correction of the Church of God, the infallible interpreter of the Bible, that if the letter of the Mosaic record were the only obstacle in the way of the acceptance of evolution, we do not see why this theory could not be defended, at least as far as the production of Adam's body is concerned. The earth indeed the Lord has delivered up to the disputations of men, but his Revealed Word not so. He has appointed an infallible teacher to guard and interpret it, lest it become for "honest" people a snare and a stumbling-block, instead of a lamp for their feet and a light on their way; and we are blessed in the knowledge that, while the Church does not directly teach geology, natural history, or any other science, she decides when the Word of God is contradicted in their name, and thus indirectly, but just as certainly, secures us from error.