

FORERUNNERS
OF *ARWIN:*
1745 – 1859

EDITED BY *BENTLEY GLASS*

OWSEI TEMKIN

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under the auspices of

The Johns Hopkins History of Ideas Club

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ERDER: PROGRESSIONISM
WITHOUT TRANSFORMISM*

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If certain of the French *philosophes* have received less credit than is their due for their evolutionist opinions, Herder has often been praised for an early profession of faith in the doctrine of the transformation of species, though in fact he repeatedly and quite explicitly repudiated it. A writer of this century, Bärenbach,¹ has written a book to show that Herder was a precursor of Darwin, and declares that in his *Ideen zur Philosophie der Geschichte der Menschheit*, "he laid down the fundamental laws of the modern development theory, and of the Darwinian theory in particular, and gave clear expression to the law of the evolution of organisms and the theories of natural selection and the struggle for existence." Professor Osborn's account of Herder's relation to the theory apparently follows Bärenbach, and as a result is highly misleading. Herder, says Osborn, probably was helped to his evolutionism by "coming under the influence of Kant's earlier views." But "Herder was less cautious than his master, and appears almost as a literal prophet of the modern natural philosophy. In a general way he upholds the doctrine of the transformation of the lower and higher forms of life, of a continuous transformation from lower to higher types

* Reprinted with considerable revision from articles in *Popular Science Monthly*, 1904, pp. 327-336, and in *Journal of Philosophy*, 1922, Vol. xix (14), pp. 381-385.

¹ Herder als Vorgänger Darwin's; cf. the same writer's monograph on Herder in *Der neue Plutarch*, vi. My citation is from the latter work. The author was a Hungarian, and a philosopher of Kantian affiliation.

and of the law of perfectibility." "In his *Ideen*, published in Tübingen in 1806, . . . we see that Herder clearly formulated the doctrine of unity of type which prevailed among all the evolutionists of the period immediately following."

These few sentences contain an undue proportion of errors, and the whole exposition of Herder's views from which they are taken is substantially wrong. It is worth while, therefore, to attempt a more accurate account of Herder's attitude towards evolutionism than is to be found in current writings on the subject. In a matter of this kind, even accuracy about dates is not wholly to be disdained; and it should be observed that the *Ideen* were published, not at Tübingen in 1806, but at Riga and Leipzig in 1784-5. Again, Herder, although once a pupil, was hardly a disciple of Kant; the author of the *Metakritik* would assuredly have been surprised to hear Kant called his "master"; and it is sufficiently clear, from Herder's own language, that the influence which led him to employ such expressions as have caused some to consider him an evolutionist, was that of Buffon and other naturalists of the century, not that of Kant. During Herder's student days (1762-4) in Königsberg, indeed, it is improbable that Kant's influence could have encouraged a belief in organic, as distinguished from cosmic, evolution. Herder, in the *Ideen*, argues at length against what he calls "the unproved and totally self-contradictory paradox" that animal species can depart from their divinely appointed character and that man is directly related to the ape.

Yet Herder's book is certainly full of *aperçus* that come near to the evolution theory; and it doubtless helped to produce a state of mind favorable to the acceptance of the theory. Some passages in the *Ideen*, read by themselves, might easily seem to justify the classification of Herder with the thoroughgoing evolutionists. Where he stands in the matter may perhaps best be shown by setting down in catalogue-fashion the several contentions that he advanced in regard to the history of the animal kingdom and the relation of the lower species to man.

1. Herder clearly recognized that there had been a sequence of temporally successive forms appearing upon the globe, beginning with simpler forms and proceeding to those most highly organized; "from stones to crystals, from crystals to metals, from these to plants, from plants to animals and from animals to man, we see the

form of organization ascend; and with it the powers and propensities of the creature become more various, until finally they all, so far as possible, unite in the form of man" (Bk. V, chap. 1). Each new type is dependent for its existence upon the prior existence of simpler types—dependent usually, indeed, in a very plain sense, since the newcomer commonly has the earlier-born creatures for its necessary food. "It is manifestly contrary to Nature that she should bring all creatures into existence at the same time. The structure of the earth and the inner constitution of the creatures themselves make this impossible. Elephants and worms, lions and infusoria, do not appear in equal numbers, nor could they be created, in consistency with their natures, at one time or in equal proportions. Millions of shellfish must needs have perished before our bare rock of earth could be made a fruitful soil for a finer type of life; a world of plants is destroyed each year in order that higher beings may be nourished thereby. Even if one wholly disregards the final causes of the creation, yet even in the very raw material of Nature there lies the necessity that one being should come out of many, that in the revolving cycle of creation countless multitudes should be destroyed so that through this destruction a nobler but less numerous race might come into being" (Bk. X, chap. 2). "Man, therefore, if he was to possess the earth and be the lord of creation, must find his kingdom and his dwelling-place made ready; necessarily therefore, he must have appeared later and in smaller numbers than those over whom he was to rule" (*ibid.*). Most of this Herder might have got from Buffon; and there is obviously nothing in these passages which necessarily implies the mutability of species, nothing which is inconsistent with the doctrine of special but gradual creation. Nor is there even in such a passage as this: "From air and water, from heights and depths, I see the animals coming nearer to man, and step by step approximating his form. The bird flies in the air; every deviation of its structure from that of the quadruped is explicable from its element. The fish swims in the water: its feet and hands are transformed into tail and fins," etc. (Bk. II, chap. 3). If Herder had not elsewhere seemed to deny such a theory, we might at first sight be disposed to construe this passage as an assertion of the literal transformation of species. But when the words are closely scrutinized it is evident that they require no such interpretation. They say no more than that animals came into being

in a progressive order in which the human type was steadily approximated, and in which each form was adapted to its environment.

2. In this connection, Herder liked to dwell upon the homologies of form and structure observable in all vertebrates, and indeed, as he thought, in all creatures, even those that are outwardly most dissimilar. There is a certain *Hauptform* or *Hauptplasma* in which the whole animal kingdom agrees. "It is undeniable that, amid all the differences of the living beings on the earth, a certain uniformity of structure and, as it were, a standard form, appears to prevail, which yet is transformed into the richest diversity. The similarity of the skeletal structure of land animals is obvious; . . . the inner structure makes the thing especially evident, and many outwardly uncouth forms are in the essentials of their internal anatomy exceedingly like man. The amphibia deviate farther from this standard; birds, fishes, insects, aquatic animals—the last of which merge in the vegetal or inorganic world—deviate still farther. Beyond this our eyes cannot penetrate; but these transitions render it not improbable that in marine forms, plants, and even in the so-called inanimate things the same basis of organization may rule, though infinitely more rude and confused. In the eye of the Eternal Being, who sees all things in one connected whole, it may be that the form of the ice-particle, as it is generated, and that of the snowflake that is formed upon it, may have an analogous resemblance to the formation of the embryo in the womb. We can therefore accept it as a general law that, the nearer they approach man, the more do all creatures resemble him in their essential form; and that Nature, amid the infinite variety which she loves, seems to have fashioned all the living things upon our earth after a single original model (*Hauptplasma*) of organization" (Bk. II, chap. 4).² Herder had also learned from the comparative anatomists that it is a corollary to this similarity of structure that organs which function usefully in certain species appear also in other species where they have little or no apparent use or function; in other words, he knew of the existence of vestigial and rudimentary organs. "What Nature had given to one animal as a merely accessory feature (*Nebenwerk*) she has developed into an essential feature in another; she brings it into

² This passage is quoted in part in *From the Greeks to Darwin*—being the only citation from Herder there given; but the translation is singularly inaccurate, and in one place makes Herder appear to say the opposite of his real meaning. First ed. 1894, pp. 103-4; second ed. 1929, pp. 153-4.

plain view, enlarges it, and makes the other organs—though still in perfect harmony—subservient to it. Elsewhere again these subordinate parts predominate; and all organized beings appear as so many *disjecti membra poetæ*. He who would study them must study one in another; where an organ appears neglected or concealed, let him turn to some other creature in which Nature has perfected and plainly displayed it" (loc. cit.).

3. Herder had further learned from Buffon that, within the limits of the specific type, a species may vary widely under differing climatic influences. "Those species that inhabit nearly all parts of the globe, are differently formed in almost every climate," etc. (Bk. II, chap. 3).

4. The author of the *Ideen* also recognized, and frequently dilated upon, that fact in nature which later suggested the specifically Darwinian form of the theory of descent—the fact, namely, that Nature turns out more aspirants for life than she can provide with the means of living, and that there results from this a universal struggle for existence between species and between individuals. Herder had, in fact, been profoundly impressed by the way in which the life-processes of nature seem to be the expression merely of a blind, striving *Wille zum Leben* (in the language of a later school), careless of the single life, tending only to the production of the greatest possible number of living beings, each of them competing with all the others. The discovery of this impressive and sinister aspect of nature was, certainly, the main source, alike of the most important scientific hypothesis of the nineteenth century, and of certain of the most significant and characteristic developments of nineteenth-century philosophy—especially of philosophical pessimism. The emphasis which Herder lays upon this class of facts is therefore interesting and noteworthy: "Where and when each being *could* arise, there it arose; energies (*Kräfte*) pressed in through every gate of entrance and formed themselves to life" (Bk. X, chap. 2). "Nature employs infinitely many germs; . . . she must needs therefore reckon upon some loss, since all things crowd upon one another (*alles zusammengedrängt ist*), and nothing finds room completely to develop itself" (Bk. II, chap. 2). "The whole creation is at war, and the most conflicting powers lie close to one another. . . . Each being strives with each, since each itself is hard-pressed for life; it must save its own skin, and guard its own existence. Why does

Nature act thus? Why does she thus crowd her creatures one upon another? Because she aimed to produce the greatest number and the greatest variety of living things in the least possible space; so that one subdues another, and only through the equilibrium of opposing powers is peace brought about in the creation. Every species cares for itself as if it were the only one in existence; but by its side stands another which keeps it within bounds; and it was only in this adjustment of warring species that creative Nature found the means of preserving the whole" (Bk. II, chap. 3). In all this Nature (for Herder almost invariably personifies) takes no account of the individual, but rather sacrifices him ruthlessly to her "one great end, which is—not the little end of the sentient creature alone, but—the propagation and continuance of the species." And in this connection Herder anticipates Schopenhauer in picturing the pleasures of the love of the sexes, and the romantic illusions connected with that love in man, as merely a subtle trick whereby "Nature" cajoles the individual to sacrifice himself to her larger aim. Schopenhauer's famous chapter on the "Metaphysics of the Love of the Sexes" is little more than an amplification of a passage in the second book of the *Ideen*. Always, Herder perceives, when the reproduction and increase of life is at stake, Nature turns Machiavellian, and plays upon the egoism of the individual for her own very different ends. "It is," he writes, "particularly humiliating to man that in the sweet impulses which he terms love, and to which he attributes so much spontaneity, he obeys the laws of Nature almost as blindly as a plant. . . . Two creatures sigh for each other, and know not for what they sigh; they languish to become one, which dividing Nature has denied; they swim on a sea of deception. Sweetly deceived creatures, enjoy your time; yet know that ye accomplish not your own little dreams, but, pleasantly compelled, the great aim of Nature. . . . As soon as she has secured the species, she suffers the individual gradually to decay. Hardly is the season of love over before the stag loses his proud antlers, the bird its song and much of its beauty, the plants their fairest colors. The butterfly sheds its wings and expires, while alone and unweakened it might have lived through half the year. This is the course of Nature in the development of beings out of one another; the stream flows on, though one wave is lost in the wave that succeeds it" (Bk. II, chap. 2).

But though Herder thus clearly remarked these characteristics of Nature's dealings, he did not deduce from them either the biological

or the philosophical consequences which have since become familiar. It did not occur to him to find in the facts of the over-production of organisms and the struggle for existence an explanation—such as Maupertuis had already proposed—of that progressive production and selection of more highly organized and better adapted beings, the reality of which he so fully recognized. Nor was he led, by his apprehension of a universal tendency to the maximum production of living things, to erect the notion of “unconscious will” into the central conception of a metaphysical system.

5. In his accounts of the beginnings of human society, and of the moral instincts without which society could not exist, Herder observes that these beginnings were made possible by a prior peculiarity in the physiological constitution which distinguishes the human species—namely, by the greater length of the period of helpless infancy. This, of course, is an idea upon which many evolutionistic moralists and sociologists have latterly delighted to dwell. Herder sets forth how the prolongation of infancy was the condition and the chief cause of man’s moral nature—how it provided the true training school in which the featherless biped was fitted for the social state: “The first society arose in the paternal habitation, bound together by the ties of blood, of mutual reliance, and of love. Thus to destroy the savagery of men and to habituate them to domestic intercourse, it was necessary that infancy in our species should continue for some years. Nature held them together by tender bonds, so that they might not separate and forget one another, like the beasts that soon reach maturity. The father becomes the teacher of his son, as the mother has been his nurse, and thus a new tie of humanity is formed. Herein lay the ground of the necessity of human society, without which it would have been impossible for a human being to grow up, and for the species to multiply. Man is thus born for society; this the affection of his parents tells him, this the years of his longer infancy show” (Bk. IV, chap. 6).

This conception, however, was by no means a new idea of Herder’s own. It is therefore a little curious to find the idea put forward by evolutionist writers of the end of the nineteenth century as a fresh and striking discovery. Even so learned a man as the late John Fiske supposed it to be a great novelty, and even conceived that he himself was the original discoverer of it. In the preface to his book *The Destiny of Man* Fiske wrote: “The detection of the

part played by the lengthening of infancy in the genesis of the human race is my own especial contribution to the doctrine of evolution, so that I feel somewhat uncertain as to how far that subject will be understood." But the thing had been detected, not merely by Herder, but also by Pope, some fifty years before him. Pope wrote, in the Third Epistle of the *Essay on Man* (1733):

Thus beast and bird their common charge attend,
The mothers nurse it, and the sires defend;
The young dismissed, to wander earth or air,
There stops the instinct, and there ends the care.
A longer care man's helpless kind demands,
That longer care contracts more lasting bands. . . .
Still as one brood, and as another rose,
These nat'ral love maintained, habitual those:
The last, scarce ripened into perfect man,
Saw helpless him from whom their life began,
While pleasure, gratitude and hope combined
Still spread the interest, and preserved the kind.

Pope got the suggestion of this from one of Bolingbroke's *Fragments or Minutes of Essays*, which appear to have been written for the purpose of thus providing the poet with material. But Pope here sees the point better than his philosophical mentor. Bolingbroke was attempting, on the one hand, to show that "man is connected by his nature . . . with the whole tribe of animals, and so closely with some of them, that the distance between his intellectual faculties and theirs, which constitutes as really, though not so sensibly, as figure the difference of species, appears, in many instances, small, and would probably appear still less, if we had the means of knowing their motives, as we have of observing their actions."³ On the other hand, he is replying to those theologians who loved to dilate upon the miseries of the "natural state of mankind." He writes accordingly:

I say then, that if men come helpless into the world like other animals; if they require even longer than other animals to be nursed and educated by the tender instinct of their parents, and if they are able much later to provide for themselves, it is because they have more to learn and more to do; it is because they are prepared for a more improved state and for greater happiness. . . .

³ "Fragment L," *Works*, 1809, ed.; viii, p. 231.

The condition wherein we are born and bred, the very condition so much complained of, prepares us for this coincidence (of social and self-love). . . . As our parents loved themselves in us, so we love ourselves in our children, and in those to whom we are most nearly related by blood. Thus far instinct improves self-love. Reason improves it further.⁴

Bolingbroke here emphasizes the value of a long infancy "in giving time for educative influences to work upon the plastic brain," but he suggests less plainly than Pope a relation between this physiological peculiarity of the human species and the origin of society.

There is in this, however, no evidence of originality on Pope's part; for the more significant aspect of the matter had been pointed out nearly half a century earlier by Locke, in Sections 79-80 of the *Second Treatise of Government*:

The end of conjunction between male and female being not barely procreation, but the continuation of the species, this conjunction betwixt male and female ought to last, even after procreation, so long as is necessary to the nourishment and support of the young ones, who are to be sustained by those that got them until they are able to shift and provide for themselves. . . . And herein, I think, lies the chief, if not the only reason, why the male and female in mankind are tied to a longer conjunction than other creatures, *viz.*, because the female is capable of conceiving, and, *de facto*, is commonly with child again, and brings forth too a new birth, long before the former is out of a dependency for support upon his parents' help. . . . [Thus] the father is under an obligation to continue in conjugal society with the same woman longer than other creatures, whose young, being able to subsist of themselves before the time of procreation returns again, the conjugal bond dissolves itself. . . . Wherein one can not but admire the wisdom of the great Creator who . . . hath made it necessary that society of man and wife should be more lasting than that of male and female among other creatures, that so their industry might be encouraged, and their interest better united, to make provision and lay up goods for their common issue.

How far beyond Locke the same idea can be traced I do not know, but it is certain that the theory of the value of longer infancy which Fiske presented in 1874 as something "entirely

⁴ "Fragment L," *ibid.*, p. 240. Pope versifies the last four sentences cited in the *Essay on Man*, Ep. III, lines 149, 124, 133-4.

new in all its features" ⁵ had been clearly set forth as early as 1689, in one of the most familiar classics of English political philosophy.

But unfortunately this pleasing theory had been subjected to some rather damaging criticism by Rousseau in 1755, in a note appended to his *Discourse on the Origin of Inequality*. Referring to the passage of Locke cited above, Rousseau remarks, in substance, that, if it is a question of explaining the origin of the family, the thing primarily to be accounted for is the beginning of the permanent cohabitation of male and female during the nine months between copulation and the birth of the child. If the parents did not live together—i. e., if the habit of family life had not already been formed—during this period, why should the primitive human male have come to the aid of the female “*after the accouchement*”? “Why should he aid her to rear an infant which he does not even know to be his, and the birth of which he has neither purposed nor foreseen?” Locke, in seeking in the length of human infancy an explanation of the beginnings of the permanent family, had forgotten, Rousseau intimates, another characteristic of the human species—the long period of gestation. When this is borne in mind—as Rousseau’s criticism implies—it becomes evident that the proposed explanation presupposes the thing to be explained. The helplessness of the human infant certainly would not have united the parents unless they had already, for a considerable period, been united; and if their union had endured for so long, it is not obviously necessary to invoke additional explanations to account for its having endured longer—especially as the period of helplessness, Rousseau suggests, was probably much briefer in the case of primitive man. At all events, the first and great transition—that from casual matings to relatively lasting cohabitation of the sexes—is left unexplained by the theory in question. Thus—for these and other reasons—Rousseau concludes that *le raisonnement de Locke tombe en ruine*.

He would doubtless have pronounced a similar judgment on later examples of the same argument. For the weakness of the argument should have been still clearer by the time it was revived in the late 19th century. It was then well known to naturalists that the family is not peculiar to man; and that, apparently, “in the higher apes monogamy is the rule, the male and female roaming at large in a family party.” ⁶ The gorilla, for example, “lives in a society con-

⁵ *Outlines of Cosmic Philosophy*, I, p. viii.

⁶ Pycroft, *The Courtship of Animals*, 1914, p. 25.

sisting of male and female, and their young of various ages and the family group inhabits the recesses of the forest. . . . The male animal spends the night crouching at the foot of the tree, and thus protects the female and their young, which are in the nest above, from the nocturnal attacks of leopards.”⁷ Fiske ignored the zoological knowledge of his time in declaring that “while mammals lower than man are gregarious,” it is only in man that there “have become established those peculiar relationships which constitute what we know as the family.”⁸ The fact is simply that some species are of a monogamous or monandrous habit, and that the ancestors of man were probably of such a species. *Why* an animal has this characteristic we do not know. The theory of natural selection would, indeed, suggest that *if* the young of a species remain helpless for a long period, that species is more likely to survive if the male remains with the female and aids her to defend the young. But this would only mean that a primarily unfavorable variation—helpless infancy—was accompanied by another variation which in some degree offset its disadvantages. The latter variation cannot have been *caused* by its effect—the better protection of the young; and it therefore is not explained by that effect. And it must, as Rousseau’s observation suggests, have manifested itself primarily as an instinct to continue with the same mate or (in the case of the male, in some species) mates, *before* the birth of offspring. Fiske fell into an extraordinary inversion of causal relations, and at the same time missed the fact that really needed to be accounted for, when he wrote that “one effect of lengthened infancy of stupendous importance” was that, among our “half-human forefathers,” as “helpless babyhood came more and more to depend on parental care, the fleeting sexual relationships established among mammals were gradually exchanged for permanent relations.”

As an explanation of the origin of the family, then, Fiske’s theory was neither new nor true. Nor did it show the “value,” in the sense of the indispensability, of prolonged infancy, even as a means to man’s greater intellectual attainments. It was not evident that the

⁷ Hartmann, *Anthropoid Apes* (1885), p. 231. Garner, however, describes both gorilla and chimpanzee as monandrous but not usually monogamous. “The chimpanzee,” he asserts, “keeps his children with him until they are old enough to go away and rear families of their own.” (*Apes and Monkeys*, 1900, pp. 99, 232.)

⁸ *The Meaning of Infancy*, 1909, p. 29.

continued plasticity requisite for the learning-process need be inseparable from physical helplessness; and in fact, it is not.

6. In all these cases the receptive and pregnant mind of Herder had grasped and elaborated separate ideas which (with the exception of the last) have since become familiar as arguments for or deductions from the doctrine of organic evolution. But did he himself accept that doctrine? Did he believe in the mutability of species and in the literal descent of man from lower forms of life? If I am able to interpret his utterances correctly, he did not. There are several passages in the *Ideen* in which Herder discusses the relation of man to the animal kingdom; and, in order that the reader may have the means of deciding for himself what Herder's position was, I will cite them at some length. "There are those," he says (Bk. III, chap. 6),

who have, I will not say degraded man to the rank of a beast, but have denied to him the character of his race, and would make him out to be a degenerate animal (*ausgeartete Thier*) which in striving after a higher perfection has wholly lost the distinctive qualities (*Eigenheit*) of its species. This, however, is manifestly contrary to the truth and to the evidence of natural history; man obviously has characteristics that no animal possesses, and performs actions of which both the good and the evil belong to him alone. . . . Since every animal remains true upon the whole to the character of its species, and since we alone have free will instead of necessity for our ruling power, then this difference must be investigated as a fact—for fact it undeniably is. The other questions—how man came by this distinctive characteristic; whether it was his from the beginning, or is adventitious and acquired: these are questions of a purely historical sort. Now, setting aside all metaphysics, let us confine ourselves to physiology and experience.

Herder then points out the anatomical peculiarities of man, particularly those which, as Daubenton had shown, are connected with his greatest peculiarity, the upright attitude. And in view of these considerations Herder concludes thus:

Would the human animal, if he had been for ages in an inferior state—and if he had been formed as a quadruped in his mother's womb, with wholly different proportions—would he have left that state of his own accord and have raised himself to an erect

posture? Out of the faculties of a beast, which would ever be drawing him backward, could he have made himself a man, and, even before he became a man, have invented human speech? If man had ever been a four-footed animal, if he had been such for thousands of years, assuredly he would remain such still; and nothing but a miracle of new creation could have made him what he now is. Why, then, should we embrace unproved, nay, totally self-contradictory, paradoxes, when the structure of man, the history of his species and, as it seems to me, the whole analogy of the organization of our earth, lead us to another conclusion? No creature that we know has ever departed from its original organization and adapted itself to another contrary to it; for it can operate only through the powers that inhere in its organization, and Nature is abundantly able to hold each living being fast in that state to which she has assigned it. In man everything is adapted to the form he now bears; from this everything in his history is explicable; without it nothing is capable of explanation. . . . Why should we humble in the dust the crown of our high calling, and shut our eyes to that central point in which all the radii of Nature's circle seem to converge?

In a later passage (Bk. VII, chap. 1) Herder directly discusses, only to reject, the theories of those (he probably has Monboddó especially in mind) who assert a kinship, or an identity of species, between the apes and man. "I could wish," he writes,

that the affinity of man to the ape had never been urged so far as to cause people to overlook, in seeking a graded scale (*Leiter*) of being, the actual steps and intervals without which no scale can exist. What, for example, can the rickety orang-outang explain in the figure of the Kamchatkan, the pigmy chimpanzee in the size of the Greenlander, the pongo in the Patagonian? for all these forms would have arisen from the nature of man if there had been no such thing as an ape upon the earth. . . . In point of fact, the apes and man were never one and the same species (*Gattung*). For each race Nature has done enough, to each she has given its own proper heritage. The apes she has divided into as many species and varieties as possible, and extended these as far as she could. But thou, O man, reverence thyself! Neither the pongo nor the gibbon is thy brother; the American and the Negro are. These then thou shouldst not oppress nor kill nor rob, for they are men like thee; but with the ape thou canst not enter into fraternity.

Herder expresses himself in a similar vein in a preface which he wrote for a German translation (1784) of the work in which Lord Monboddo set forth, among other things, his theory of the close relationship of man and monkey.⁹ Herder praises cordially Monboddo's taste for ancient art, and his large and philosophical way of dealing with the problem of the origin and development of human language; but he warns the reader against Monboddo's views on the orang-outang. The opinion that "*Affe und Mensch e i n Geschlecht sei*," Herder marks as "an error which even the facts of anatomy contradict."

In another chapter of the *Ideen* Herder speaks of the transitions (*Uebergänge und Ueberleitungen*) and metamorphoses (*Verwandlungen*) through which Nature leads the successive orders of animals, in a fashion which seems at first sight plainly to imply the derivation of higher from lower species by ordinary descent; yet in the same paragraph he pauses to insist upon the fixity of specific types:

It may appear that such transitions are incompatible with the definiteness of form to which every species remains true, and in which not the smallest bone undergoes alteration. But the reason for this invariability is apparent; since every creature can receive its organization only from other creatures of its own species. Our orderly Mother Nature has thus plainly predetermined the way by which any organic power should come into actual existence (*Wirksamkeit*); and thus nothing can escape from its once-determined form (Bk. V, chap. 3).

It is hard to see how any reader of Herder's generation could have understood these utterances, when taken all together, in any other sense than as an assertion of the essential immutability of species and a denial of man's descent from simian or any other animal ancestors. How Herder would have explained the gradual appearance of progressively higher forms is, undeniably, somewhat incomprehensible. But the truth is that his whole treatment of the subject is poetical, vague, and not very careful of consistency, rather than explicit, definite, and scientific. The theory of descent was, at the time he wrote, almost a commonplace of current biological discussion; but his attitude towards it was certainly hostile. He was most of all eager to show that the characteristics and poten-

⁹ See Lovejoy, "Monboddo and Rousseau," *Essays in the History of Ideas*, 1948, pp. 38-61, especially pp. 45-54.

cies of so noble a creature as man cannot have been derived by inheritance from any merely animal ancestors. His positive doctrine was—to use the terms customary in the first half of the nineteenth century (see below, 382)—a “progressionist” form of “the theory of special creation.” Every species was brought into existence by a separate act of the Creator. But the embarrassing implications of the later special-creation theory Herder seemingly avoided by referring to the Universal Cause, not as “God,” but as “Nature.” That he was not a forerunner of Darwin is evident from the fact that Herder’s only explanation of the progressive march of the history of organisms is teleological; it was the “purposes of Mother Nature” that caused everything to go through the stages of development which we know. But Darwin’s most fundamental conviction was that teleological explanations are to be excluded from natural history.