

FORERUNNERS
OF *ARWIN:*
1745 – 1859

EDITED BY *BENTLEY GLASS*

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under the auspices of

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CHOPENHAUER AS AN EVOLUTIONIST *

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The Absolute of the philosophy of Schopenhauer is notoriously one of the most complicated of all known products of metaphysical synthesis. Under the single, and in some cases highly inappropriate, name of "the Will" are merged into an ostensible identity conceptions of the most various character and the most diverse historic antecedents. The more important ingredients of the compound may fairly easily be enumerated. The Will is, in the first place, the Kantian "thing-in-itself," the residuum which is left after the object of knowledge has been robbed of all of the "subjective" forms of time and space and relatedness. It is also the Âtman of the Vedantic monism, the entity which is describable solely in negative predicates, though at the same time it is declared to sum up all of the genuine "reality" that there is in this rich and highly colored world of our actual (though illusory) experience. The Will is, again, the "Nature" of Goethe; it is the "vital force" of the late eighteenth and early nineteenth century vitalists in biology; and it is even the physical body of man and animals, in contrast with the mind. It is likewise the absolutely alogical element in reality, the "non-rational residuum," of one period of Schelling's philosophy; and it is an apotheosis of that instinctive, naive, spontaneous, unreflective element in human nature, which had sometimes been glorified by Rousseau and, in certain of his moods, by Herder. It is Spinoza's "striving of each thing *in suo esse perseverare*." It is the insatiable thirst for continued existence which the Buddhist psychology con-

* First published in *The Monist*, xxi, 1911.

ceives as the ultimate power that keeps the wheel of existence in motion, and it is a hypostasis of the Nirvana in which Buddhism conceives that thirst to be extinguished.

Though thus singularly manifold, these elements are not all necessarily incongruous *inter se*. But, apart from minor discrepancies among them, they all fall into at least two groups, having attributes which obviously cannot be harmonized as characterizations of one and the same entity. The Will, in Schopenhauer, has manifestly a positive and a negative aspect; it is thought of now in concepts to which the term "Will" is truly pertinent, now in concepts to which that term is singularly unsuitable. In so far as the "Will" is a designation for the thing-in-itself, or for the Vedantic Absolute, it is a being which is not only itself alien to time and to space and to all the modes of relation, unknowable, ineffable, but is also *ipso facto* incapable of accounting for, or of being manifested in, a world of manifold, individuated, striving and struggling concrete existences. It is merely the dark background of the world of experience; it is the One which remains while the many change and pass. From the point of view of the world of the many and of change, it is literally, as Schopenhauer said, "nothing." To the understanding it is necessarily as inaccessible, and, indeed, as self-contradictory and meaningless, as is the Unknowable of Herbert Spencer—of which it is, indeed, the twin brother, not to say the identical self. This kind of negative and inexpressible Absolute is a sufficiently familiar figure in the philosophy of all periods. Schopenhauer assuredly did nothing original in reviving it. What was original in his work was that he baptized this Absolute with a new, and startlingly inappropriate, name; and that he gave it this name because, in spite of himself, he was really interested in quite another kind of "ultimate reality" of which the name was genuinely descriptive.

The other aspect of Schopenhauer's "Will" is, of course, that in which it appears, as Spencer's Unknowable intermittently appears, as a real agency or tendency in the temporal world, as a power which is not merely behind phenomena, but also is manifested *in* phenomena; and, more especially, as a blind urge towards activity, towards change, towards individuation, towards the multiplication of separate entities—each of them instinctively affirmative of its own individual existence and also of the character of its kind—towards the diversification of the modes of concrete existence, and towards a struggle for survival between these modes. When Schopenhauer

speaks of the Will as a *Wille zum Leben*, it is sufficiently manifest that what he has before his mind is not in the least like the Oriental Brahm, "which is without qualities" and without relations and without change. It is, of course, true that Schopenhauer imagined that he had mitigated the baldness of the incongruity between the two aspects of the Will by calling the one reality and the other mere phenomenon, by insisting that the first sort of characterization tells us, so far as human language can, what the Will is in itself, while the second form refers only to the false appearance which the Will presents when apprehended by the Understanding. But, as a matter of fact, it is quite clear that the characteristics of the world of phenomena, as Schopenhauer habitually thinks of it, are explicable much more largely by the nature of the Will than by the nature of the Understanding. Schopenhauer is fond of reiterating, for example, that space and time constitute the *principium individuationis*; but they are so only in the sense that they provide a means for logically defining individuality. It is very apparent that there is nothing in the abstract notion of either space or time which can explain why that pressure towards individuation, that tendency towards the multiplication of concrete conscious individuals, should exist. It is, after all, the cosmic "Will" that must be conceived to be responsible for its own "objectification" in a temporal and spatial universe; for, even from Schopenhauer's own point of view, there is nothing in the conception of the forms under which the Will gets objectified which can account for the necessity of such objectification. It was with the Will in its concrete sense, and in its restless, temporal movement, that Schopenhauer was more characteristically concerned; it was the ubiquity and fundamental significance of this trait of all existence which constituted his personal and relatively novel *aperçu*.

Now the conception of the Will as a force or tendency at work in the world of phenomena is manifestly a conception which might have been expected to lead the author of it into an evolutionistic type of philosophy. Since the Will is characterized as *ein endloses Streben*, as *ein ewiges Werden*, as *ein endloser Fluss*, and since we are told of it that "every goal which it reaches is but the starting point for a new course," its manifestations or products might, it would seem, most naturally be represented as appearing in a gradual, progressive, cumulative order. The phrase "will to live" readily, if not inevitably, suggests a steady movement from less life to more

life and fuller, from lower and less adequate to higher and more adequate grades of objectification. But did Schopenhauer in fact construe his own fundamental conception in this way? An examination of his writings with this question in view makes it appear probable that at the beginning of his speculative activity he did not put an evolutionistic construction upon the conception of the Will; but it makes it clear that in his later writings he quite explicitly and emphatically adopted such a construction, connecting with his metaphysical principles a thorough-going scheme of cosmic and organic evolution. Singularly enough, this significant change in Schopenhauer's doctrine upon a very fundamental point has, so far as I know, not hitherto been fully set forth. Not only the most widely read histories of philosophy, but even special treatises on Schopenhauer's system, represent his attitude towards evolutionism wholly in the light of his early utterances; and even where his later expressions upon the subject are not forgotten, their plain import has often been denied, upon the assumption that they must somehow be made to harmonize with the position taken in his early and most famous treatise.

In *Die Welt als Wille und Vorstellung* Schopenhauer is pre-occupied chiefly with the negative and "other-worldly" aspect of his philosophy. His emphasis may, upon the whole, be said to be laid upon the consideration that the world of objects is but an illusory presentation of the Will, rather than upon the consideration that the Will is, after all, the kind of entity that presents itself in the guise of a world of objects and of minds. With this preoccupation, Schopenhauer delights to dwell upon the timelessness of the true nature of the Will. Yet, since even in his most mystical and nihilistic moments he is obliged to remember that the Absolute does somehow take upon itself a temporal form, this emphasis upon the eternity of true being did not of itself forbid his representing the temporal side of things as a gradual process of expansion and diversification. The passages in which Schopenhauer speaks of the timelessness of the Will ought not to be quoted, as they sometimes have been quoted, as constituting in themselves any negation of a developmental conception of the world in time; for such passages are not pertinent to the world in time at all. It is rather a subsidiary and somewhat arbitrary detail of his system, which he uncritically took over from Schelling, that leads Schopenhauer in this period to pronounce in favor of the constancy of organic species. Between

the Will as a timeless unity and the changing world of manifold phenomena he interpolates a world of Platonic Ideas, or archetypal essences of phenomena. This world, it is true, has only an ideal existence; it has, in a sense, not even the degree of reality that phenomenal objects have. But it has an important functional place in Schopenhauer's scheme of doctrine; since the Ideas, so to say, lay down the limits of diversity within which the phenomena may vary. Each individual being is in some degree different from every other, and the name of them is legion. But the generic forms, the *kinds* of individuals that there may be, are determined by the natures of the Ideas.

Now these Ideas relate primarily to the kinds of natural processes which Schopenhauer regards as the hierarchically ordered grades of the objectification of the Will—mechanism, chemism, organism, etc. But it is evident that Schopenhauer also includes among the Ideas the timeless archetypes of each species of organism. Even from the fact that, upon Schopenhauerian principles, the pure form of each species is eternal, as it behooves a Platonic Idea to be, it could not necessarily be inferred by any cogent logic that the temporal copies of these forms need be changeless. Schopenhauer none the less does appear to draw, in a somewhat arbitrary manner, the inference that species must be everlasting and immutable. He writes, in the Supplement to the third book of *Die Welt als Wille und Vorstellung* (second edition, 1844):

That which, regarded as pure form, and therefore as lifted out of all time and all relations as the Platonic Idea is, is, when taken empirically and as in time, the species; thus the species is the empirical correlate of the Idea. The Idea is, in the strict sense, eternal, while the species is merely everlasting (*die Idee ist eigentlich ewig, die Art aber von unendlicher Dauer*), although the manifestation of a species may become extinct upon any one planet.

So again (in the chapter on "The Life of the Species," *ibid.*, chapter 42) Schopenhauer writes:

This desire [of the individuals of a species to maintain and perpetuate the characteristic form of their species], regarded from without and under the form of time, shows itself in the maintenance of that same animal form throughout infinite time (*als solche Tiergestalt eine endlose Zeit hindurch erhalten*) by means

of the continual replacement of each individual of that species by another;—shows itself, in other words, in that alternation of death and birth which, so regarded, seems only the pulse-beat of that form (*εἶδος, ἰδέα, species*) which remains constant throughout all time (*jener durch alle Zeit beharrenden Gestalt*).

These passages seem to be clear in their affirmation of the essential invariability of species.

In *Der Wille in der Natur*, in 1854,¹ we find Schopenhauer passing a partly unfavorable criticism upon Lamarck, which at first sight undeniably reads as if he at that date still retained the non-evolutionistic position of his earlier treatise. He has been asserting that the adaptive characters of organisms are to be explained neither by design on the part of a creative artificer, nor yet by the mere shaping of the organism by its environment, but rather through the will or inner tendency of the organism, which somehow causes it to have the organs which it requires in order to cope with its environment. "The animal's structure has been determined by the mode of life which the animal desired to find its sustenance and not *vice versa*. . . . The huntsman does not aim at the wild boar because he happens to have a rifle: he took the rifle with him, and not a fowling piece, because he intended to hunt boars; and the ox does not butt because it happens to have horns, it has horns because it intends to butt." This, of course, sounds very much like a bit of purely Lamarckian biology; and Schopenhauer is not unmindful of the similarity.

This truth forces itself upon thoughtful zoologists and anatomists with such cogency that, unless their mind is purified by a deeper philosophy, it may lead them into strange error. Now this actually happened to a very eminent zoologist, the immortal De Lamarck, who has acquired undying fame by his discovery of the classification of animals into vertebrates and invertebrates, so admirable in profundity; for he quite seriously maintains and tries to prove at length that the shape of each animal species, the weapons peculiar to it, and its organs of every sort adapted for outward use, were by no means present at the origin of that species, but have, on the contrary, come into being gradually *in the course of time* and through continued generation, in consequence of the exertions of the animal's will, evoked by the nature of its situation

¹ This is the date of the second edition. The first edition appeared in 1836; to it I have not been able to have access.

and environment,—i. e., through its own repeated efforts and the habits to which these gave rise.

Schopenhauer then goes on to urge certain purely biological objections, which may for the moment be passed over, to what he conceives to be the Lamarckian hypothesis. The most serious misconception on Lamarck's part, however, he declares to arise from an incapacity for metaphysical insight, due to the unfortunate circumstance that that naturalist was a Frenchman.

De Lamarck's hypothesis arose out of a very correct and profound view of nature; it is an error of genius, which, in spite of all its absurdity, yet does honor to its originator. The true part of it should be set down to the credit of Lamarck himself, as a scientific inquirer; he saw rightly that the primary element which has determined the animal's organization is the will of the animal itself. The false part of it must be laid to the account of the backward state of metaphysics in France, where the views of Locke and his feeble follower, Condillac, still hold their ground, and where, accordingly, bodies are supposed to be things in themselves, and where the great doctrine of the ideality of space and time and of all that is represented in them . . . has not yet penetrated. De Lamarck, therefore, could not conceive his construction of living beings otherwise than as in time and succession. . . . The thought could not occur to him that the animal's will, as a thing in itself, might lie outside time, and in that sense be prior to the animal itself. Therefore he assumes the animal to have first been without any clearly defined organs, and indeed without any clearly defined tendencies, and to have been equipped only with perceptions. . . . But this primary animal is, in truth, the Will to Live; as such, however, it is metaphysical, not physical. Most certainly the shape and organization of each animal species has been determined by its own will according to the circumstances in which it needed to live; not, however, as a thing physical, in time, but on the contrary as a thing metaphysical, out of time.

As it stands, this passage, apart from its context, is no doubt most naturally interpreted as a rejection, not merely of the details of Lamarck's hypothesis, but also of the general doctrine of a gradual transformation of species in time. Its import has been so understood by a number of expositors of Schopenhauer. Thus Kuno Fischer writes: "Schopenhauer blames De Lamarck for representing animal species as evolved through a genetic and historical process, instead

of conceiving of them after the Platonic manner.”² So Rádl³: “Schopenhauer speaks in praise only of the Lamarckian doctrine that the will is the cause of organic forms; Lamarck’s genetic philosophy, on the other hand, he rejects.” But these writers have neglected to observe that, only a few pages later in the same treatise, Schopenhauer sets down an unequivocal though brief affirmation of the origination of species from one another through descent; and does so on the ground that without such a hypothesis the unity of plan manifest in the skeletal structure of great numbers of diverse species would remain unintelligible. In other words, Schopenhauer argues in favor of transformism by pointing to one of the most familiar evidences of the truth of the theory of descent, viz., the homologies in the inner structure of all the vertebrates. In the neck of the giraffe, for example, (he remarks) we find, prodigiously elongated, the same number of vertebrae as we find in the neck of the mole contracted so as to be scarcely recognizable. This unity of plan, argues Schopenhauer, requires to be accounted for; and it can *not* be accounted for as one of the aspects of the general adaptation of organisms to their environment. For that adaptation might in many cases have been as well, or better, realized by means of a greater diversity in the architectural schemes of species having diverse environments and instincts.

This *common anatomical feature* (*Element*) which, as has been already mentioned, remains constant and unchangeable, is so far an enigma,—namely, in that it does not come within the teleological explanation, which only begins after that basis is assumed. For in many cases a given organ might have been equally well adapted to its purpose even with a different number and arrangement of bones. . . . We must assume, therefore, that this common anatomical feature is due, partly to the fact that the original forms of the various animals have arisen one out of another (*dass die Urformen der Tiere eine aus der andern hervorgegangen sind*), and that it is for this reason that the fundamental type of the whole line of descent (*Stamm*) has been preserved.⁴

And Schopenhauer himself adds a reference to a passage in the *Parerga und Paralipomena*⁵ (to be examined below) in which, at

² Arthur Schopenhauer, 1893, p. 463.

³ *Geschichte der biologischen Theorien*, II, 465 n.

⁴ *Der Wille in der Natur*, 3rd ed., 1878, p. 53.

⁵ To #91 of the first edition, 1851 (= #93 of the second edition).

much greater length, his own particular form of organic evolutionism is expounded.

Now, abundant in contradictions though Schopenhauer was, it is difficult to suppose that he can have expressed, within half a dozen pages, diametrically opposed views upon a perfectly definite and concrete question of natural science, in which he manifestly took an especial interest—and that he can, in spite of his habit of carefully revising each edition of his works, have left such a piece of obvious self-contradiction standing in the final version of *Der Wille in der Natur*. If, now, bearing this in mind, we revert to the criticism of Lamarck, which has not unnaturally misled hasty readers of Schopenhauer, we shall see that what is criticized is *not* the doctrine of the derivation of species from earlier species by descent, but only a specific theory of the manner in which “the Will” works in the formation of species. Lamarck, at least as Schopenhauer understood him, placed behind every organ or function of all animals, as its cause and temporal antecedent, a *felt need*, a conscious desire, leading it to the activities by means of which that organ is developed. To this Schopenhauer objects, in the first place, that the hypothesis implies that if we should go back to the beginning of the series of animals we should come to a time in which the ancestor of all the animals existed *without any organs or functions at all*, in the form of a *mere need*, a desire pure and simple;—which implication he regards as reducing the hypothesis to an absurdity. This is an entirely pertinent criticism upon Lamarck’s explanation of specific characters as the results of use and disuse of organs, in so far as that explanation is taken as the sole explanation. The criticism applies, not only to the origination of animal organs and functions in general, but also to the origination of any particular class of organs and functions. It is difficult to see how an animal, yearn it ever so strongly, can develop an organ out of its needs merely as such; or how it can modify by use or disuse a type of organ of which it is not yet in possession. Given the rudiments of an eye, with a specific visual sensibility, and it is at least conceivable that the persistent utilization of such a rudimentary organ might somehow lead to its further development; but some sort of eye must necessarily first be given. In other words, Lamarckianism (as apprehended by Schopenhauer) did not sufficiently recognize that the primary thing in species-forming must be the appearance (through obscure embryogenetic processes with which conscious needs and

desires can have nothing to do) of suitable congenital variations. The essence of Lamarck's error, as Schopenhauer sees it, is that, according to the French naturalist, "it is the will which arises out of knowledge," i. e., out of the animal's temporally antecedent consciousness of its own need; whereas, in fact, "the will did not proceed from the intellect, nor did the intellect exist, together with the animal, before the will made its appearance." We cannot even say that the will, in the sense of a definite concrete volition, existed before the production of the organ requisite to make the fulfilment of the given kind of volition possible in an animal species. In short, Schopenhauer's doctrine was that the timeless Will, working in time in the form of a blind purposiveness, gives rise to the organs and the potencies of new species by producing new congenital characters *before* any felt need for and endeavor after those characters have arisen; while Lamarck's doctrine, as Schopenhauer believed, was that an actual (though doubtless vague) awareness of need, and a concrete movement of conation, temporally precede the production of each new character or organ. The two doctrines were really distinct; but (as will presently more fully appear) the one was as definitely evolutionistic as the other.

It was, furthermore, an objection in Schopenhauer's eyes to Lamarck's theory (and would have doubtless been urged by him as an objection to the Darwinian theory) that it supposed species to have been formed by the gradual enlargement and accumulation of characters too small and trivial at their first emergence to be functionally significant, or useful in the struggle for survival. He says,

Lamarck overlooks the obvious objection . . . that, long before the organs necessary for an animal's preservation could have been produced by such endeavors as these carried on through countless generations, the whole species must have died out from the want of them.

Schopenhauer, after his definite adoption of evolutionism, always insisted not only upon the primacy of the fact of variation in the explanation both of species-form and of adaptation, but also upon the doctrine that, though one species descends from another, it descends *ready-made*. In other words—and in the twentieth-century words—Schopenhauer was, in his view concerning species, a mutationist, though one of a somewhat extreme and peculiar sort.

In interpreting the bearing of Schopenhauer's comments on Lamarck in *The Will in Nature* I have, of course, been guided not only by the context of that passage, but also by the passage in the *Parerga und Paralipomena* to which, as has been mentioned, he himself refers his reader for a fuller exposition of his views on the question of species. The latter passage occurs in the small treatise (Chapter VI of *Parerga und Paralipomena*) entitled *Zur Philosophie und Wissenschaft der Natur*, perhaps the most important of its author's later writings, but one which has been amazingly neglected by the historians of philosophy and even by writers of special monographs on Schopenhauer. With the publication of this work (1850)⁶ he quite unmistakably announced—what remained his final view—that the philosophy of nature to which his metaphysics of the Will properly led was of a frankly and completely evolutionistic type. Since this part of the *Parerga und Paralipomena* (unlike most of the rest of that collection) has, so far as I know, never been done into English, I shall, in setting forth the teachings of it, for the most part simply give a translation of Schopenhauer's own words.⁷

Organic life originated, Schopenhauer declares, by a *generatio aequivoca* of the organic (under certain definite physical conditions) out of the inorganic; indeed, he believed, with singular scientific naiveté, that spontaneous generation is an everyday occurrence, taking place "before our eyes in the sprouting of fungi from decaying vegetable matter." But only the simplest forms can have been thus produced.

Generatio aequivoca cannot be conceived to occur in the higher grades of the animal kingdom as it does in the lowest. The form of the lion, the wolf, the elephant, the ape, or that of man, cannot have originated as do the infusoria, the entozoa and epizoa,—cannot have arisen directly from the sea-slime coagulated and warmed by the sun, nor from decaying organic substances. The genesis of these higher forms can be conceived of only as a *generatio in utero heterogeneo*,⁸—such that from the womb, or

⁶ It is evident from the references in *The Will in Nature* that the evolutionistic passages occurred in the first edition of *Zur Philosophie und Wissenschaft der Natur*, though in the text of the second edition from which I shall quote (published posthumously, 1861) they are amplified by additions written by Schopenhauer as late as 1859 or 1860.

⁷ What immediately follows is based upon *Parerga und Paralipomena*, II, #90-94, 74, 87.

⁸ Birth from a parent belonging to a different species from that of the offspring; "heterogenesis," in Kölliker's terminology.

rather from the egg, of some especially favored pair of animals, when the life-force of their species was in them raised to an abnormal potency, at a time when the positions of the plants and all the atmospheric, telluric and astral influences were favorable, there arose, exceptionally, no longer a being of the same kind as its parents, but one which, though of a closely allied kind, yet constituted a form standing one degree higher in the scale. In such a case the parent would for once have produced not merely an individual but a species. Processes of this sort naturally can have taken place only after the lowest animals had appeared in the usual manner and had prepared the ground for the coming races of animals.

The reader will observe in the account of the conditions requisite for the production of these exceptional births traces of Schopenhauer's queer weakness for occultism; but the condition which he chiefly insists upon is less remote from the range of conceptions sanctioned by modern natural science. The productive potency of organisms, "which is only a special form of the generative power of nature as a whole," undergoes this "abnormal heightening" when it encounters antagonistic forces, conditions tending to restrict or destroy it; "it grows with opposition." This tendency, for example, manifests itself in the human race in times of war, pestilence, natural catastrophes, and the like; and in such periods of special intensification of the power of reproduction, that power, Schopenhauer seems to conceive, shows also a greater instability and variability, a tendency to the production of new forms which thereafter remain constant. Now, says Schopenhauer—adopting the geological system of Cuvier—a renewal of life through *generatio aequivoca*, followed by an increasing multiplication of diverse descendant species, must have taken place "after each of those great revolutions of the earth, which have at least thrice extinguished all life upon the globe so that it required to be produced anew, each time with more perfect forms, i. e., with forms more nearly approximating our existing fauna. But only in the series of animals that have come into being subsequently to the last of these great catastrophes, did the process rise to the pitch of producing the human race—though the apes had already made their appearance in the preceding epoch."

We have seen Schopenhauer in *The Will in Nature* declaring in favor of the theory of descent on the ground that it affords the only possible explanation of the homologies of the skeletons of the

vertebrates. In the present writing he still more emphatically declares in favor of it on the ground of the argument from recapitulation—of the parallelism of the ontogenetic and the phylogenetic series.

The batrachians visibly go through an existence as fishes before they assume their characteristic final form, and, according to a now fairly generally accepted observation, all embryos pass successively through the forms of lower species before attaining to that of their own. Why, then, should not every new and higher species have originated through the development of some embryo into a form just one degree higher than the form of the mother that conceived it? This is the only reasonable, i. e., the only rationally thinkable, mode of origination of species that can be imagined.

Schopenhauer was thus, as I have already said, not only an evolutionist in his biology but also a mutationist; his speculations are prophetic of the theory of De Vries and Goldschmidt rather than that of Darwin. But the scale on which he supposed these “discontinuous variations” to occur is calculated to make our contemporary mutationists stare and gasp; the changes of form which he assumed are saltatory indeed. He writes:

We are not to conceive of this ascent as following a single line, but rather as mounting along several lines side by side. At one time, for example, from the egg of a fish an ophidian, and afterwards from the latter a saurian arose; but from some other fish's egg was produced a batrachian, from one of the latter subsequently a chelonian; from a third fish arose a cetacean, possibly a dolphin, some cetacean subsequently giving birth to a seal, and a seal finally to a walrus. Perhaps the duckbill came from the egg of a duck, and from that of an ostrich some one of the larger mammals. In any case, the process must have gone on simultaneously and independently in many different regions, yet everywhere with equally sharp and definite gradations, each giving rise to a persistent and stable species. It cannot have taken place by gradual, imperceptible transitions.

The implication with respect to the simian descent of man Schopenhauer does not shirk:

We do not wish to conceal from ourselves the fact that, in accordance with the foregoing, we should have to think of the

first men as born in Asia from the pongo (whose young are called orang-outangs) and in Africa from the chimpanzee—though born men, and not apes. . . . The human species probably originated in three places, since we know only three distinct types which point to an original diversity of race—the Caucasian, the Mongolian and the Ethiopian type. The genesis of man can have taken place only in the old world. For in Australia Nature has been unable to produce any apes, and in America she has produced only long-tailed monkeys, not the short-tailed, to say nothing of the highest, i. e., the tailless apes, which represent the next stage before man. *Natura non facit saltus*. Moreover, man can have originated only in the tropics; for in any other zones the newly generated human being would have perished in the first winter. . . . Now in the torrid zones man is black, or at least dark brown. This, therefore, without regard to diversities of race, is the true, natural and distinctive color of the human species; and there has never existed a race white by nature.

In another of the *Parerga und Paralipomena* Schopenhauer speaks of mankind as “this race whose kinship with the ape does not exclude kinship with the tiger.”

Schopenhauer does not leave us without a clue as to the writer from whom he learned his evolutionism; though—seldom generous in his acknowledgments, and always prepared to think the worst of the English—he is a good deal more copious in criticism than in appreciation of that writer.

The conception of a *generatio in utero heterogeneo* which has here been expounded was first put forward by the anonymous author of the *Vestiges of the Natural History of Creation* (6th ed., 1847), though by no means with adequate clearness and definiteness. For he has entangled it with untenable assumptions and gross errors, which are due in the last analysis to the fact that to him, as an Englishman, every assumption which rises above the merely physical—everything metaphysical, in short—is forthwith confused with the Hebraic theism, in the effort to escape which, on the other hand, he gives an undue extension to the domain of the physical. Thus an Englishman, in his indifference and complete barbarism with respect to all speculative philosophy or metaphysics, is actually incapable of any spiritual (*geistig*) view of Nature; he knows no middle ground between a conception of it as operating of itself according to rigorous and, so far as possible, mechanical laws, and a conception of it as

manufactured according to a preconceived design by that Hebrew God whom he speaks of as its "Maker." The parsons, the English parsons, those slyest of all obscurantists, are responsible for this state of things.

This can scarcely be considered a very clear and coherent criticism of Robert Chambers. But the passage makes it appear highly probable that it was through becoming acquainted, late in the eighteenth-forties, with the mutationist evolutionism of Chamber's *Vestiges*, that Schopenhauer was led to adopt and to develop in his own fashion a similar doctrine.

These transformist opinions in biology were, in the treatise *Zur Philosophie und Wissenschaft der Natur*, merely a part of a thorough-going scheme of evolutionism, which included a belief in the development of the chemical elements out of an original undifferentiated *Urstoff*, in the gradual formation of the solar system, and in an evolutionary geology.⁹ His cosmogony Schopenhauer takes over from Laplace. The general outlines of the history of our planet, as he conceives them in the light of the geology of Cuvier, are set forth in a passage which is interesting enough to be worth quoting at length:

The relation of the latest results of geology to my metaphysics may be briefly set forth as follows: In the earliest period of the globe, that preceding the formation of the granitic rocks, the objectification of the Will to Live was restricted to its lowest phases—i. e., to the forces of inorganic nature—though in these it manifested itself on the most gigantic scale and with blind impetuosity. For the already differentiated chemical elements broke out in a conflict whose scene was not merely the surface but the entire mass of the planet, a struggle of which the phenomena must have been so colossal as to baffle the imagination. . . . When this war of the Titans had spent its rage, and the granite rocks, like gravestones, had covered the combatants, the Will to Live, after a suitable pause and an interlude in which marine deposits were formed, manifested itself in its next higher stage—a stage in the sharpest contrast with the preceding—namely, in the dumb, and silent life of a purely plant-world. . . . This plant-world gradually absorbed carbon from the atmosphere, which was thus for the first time made capable of sustaining animal life.

⁹ Op. cit., Sect. 74.

Until this was sufficiently accomplished, the long and profound peace of that world without animals continued. At length a great revolution of Nature put an end to this paradise of plants and engulfed its vast forests. Now that the air had been purified, the third great stage of the objectification of the Will began, with the appearance of the animal world: in the sea, fishes and cetaceans; on the land, only reptilia, though those were of colossal size. Again the curtain fell upon the cosmic stage; and now followed a still higher objectification of the Will in the life of warm-blooded animals—although these were chiefly pachydermata of genera now extinct. After another destruction of the surface of the globe, with all the living things upon it, life flamed up anew, and the Will to Live objectified itself in a world of animals exhibiting a far greater number and diversity of forms, of which the genera, though not the species, are still extant. This more complete objectification of the Will to Live through so great a multiplicity and variety of forms reached as high as the apes. But even this, the world just before ours, must needs perish, in order that the present population of the globe might find place upon fresh ground. And now the objectification of the Will reached the stage of humanity. . . .

An interesting incidental consideration, in view of all this, is that the planets which circle round the countless suns in all space—even though some of them may be still in the merely chemical stage, the scene of that frightful conflict of the crudest forces of Nature, while others may be in the quiet of the peaceful interlude—yet all contain within themselves those secret potencies from which the world of plants and animals must soon or late break forth in all the multiplicity of its forms. . . . But the final stage, that of humanity, once reached, must in my opinion be the last, for this brings with it the possibility of the negation of the Will, whereby there comes about a reversal of the whole inner tendency of existence (*der Umkehr vom ganzen Treiben*). And thus this *Divina Commedia* reaches its end. Consequently, even if there were no physical reasons which made certain a new world-catastrophe, there is, at all events, a moral reason, namely, that the world's continuance would be purposeless after the inmost essence of it has no longer need of any higher stage of objectification in order to make its deliverance (*Erlösung*) possible.

It is thus clear that by 1850 Schopenhauer had formulated his conception of the "objectification of the Will" in thoroughly evolutionistic terms and had incorporated into his philosophy a com-

plete system of cosmogony and phylogeny.¹⁰ It was at about the same time that Herbert Spencer was beginning to formulate the outlines and primary principles of the *Synthetic Philosophy*, which has commonly passed for the first comprehensive attempt by any nineteenth-century philosopher to generalize the conception of evolution and to give to it the principal role in his system. The two doctrines may, in truth, not unconstructively be set side by side. They exhibit, in the first place, a degree of resemblance which is likely to be overlooked by those who cannot discern, beneath diversities of terminology and of emphasis, identities of logical essence. In both systems, for example, the ultimate nature of things is placed beyond the reach of temporal becoming. Spencer's evolutionary process belongs only to the realm of "the knowable," Schopenhauer's to the world of the Will as objectified; behind the one stands, as true reality, the Unconditioned, alien to all the characters of human experience and all the conceptions of human thought; behind the other stands the Will as it is in itself, timeless, indivisible, ineffable. In other words, both systems consist of an evolutionary philosophy of nature projected against the background of an essentially mystical and negative metaphysics. Yet each, as I have already remarked, regards its supratemporal and indeterminate Absolute as the very substance and sum of the world in time; and each is prone to the same inconsistency, that of practically treating this same Absolute as the real ground and explanation of becoming and as a power at work in the temporal movement of things. In the degree of emphasis which they lay upon this negative element in their doctrine, the two philosophers, no doubt, greatly differ. Spencer closes the door upon it after half a dozen chapters, and then forgets it for whole books at a time—reverting to it only at the moments when his logic seems, in the deduction of the laws of "the Knowable," to be on the point of breaking down.

Schopenhauer, too, can forget the obscure background of exist-

¹⁰ It is a singular illustration of the present condition of the historiography of scientific and philosophical ideas, that this fact is ignored, in such reputable histories of philosophy as those of Höffding, Windelband, Kuno Fischer (who devotes a whole volume to Schopenhauer) and in Rádl's *Geschichte der biologischen Theorien* (II, 457). Most of the histories of philosophy which do not contradict the fact, at least fail to mention it. It is, however, correctly though concisely set forth in Frauenstädt's *Neue Briefe über die Schopenhauersche Philosophie*, 1876, p. 103, and in Dacqué's *Der Descendenzgedanke und seine Geschichte*, 1903, p. 82.

ence when he is absorbed in the concrete phenomena of evolution; but he takes it, on the whole, more seriously, and draws the veil from before it more frequently. And the more closely Kantian affinities of his epistemology create for him a difficulty in adjusting his evolutionism to his metaphysics, which Spencer seemingly escapes—though he escapes it only by an evasion. Since, for Schopenhauer, space and time are subjective forms of perception, pre-mental evolution, the formation of planetary systems and of planets themselves before the emergence of consciousness, necessarily has for him an especially equivocal ontological status.

The geological processes which took place before there was any life on earth were present in no consciousness; . . . from lack of a subject, therefore, they had not even objective existence, i. e., they were not at all. But what is meant by speaking of their "having been" (*Dagewesensein*)? The expression is at bottom purely hypothetical; it means that *if* any consciousness had been present in that primeval period, it *would have* then observed those processes. To them the regress of phenomena leads us back; and it therefore lay in the nature of the thing-in-itself to manifest itself in such processes [i. e., if there had been any consciousness for it to manifest itself to].

When Spencer declares that our conceptions of space and time are modes of thought produced *in us* somehow by the Unconditioned, but not ascribable to that entity itself, he involves himself in a similar difficulty about early geological time, and *implies* an identical way of dealing with the difficulty; but so far as I can recall, he does not anywhere directly face the question.

The points of resemblance between the system of Schopenhauer and that of Spencer, however, consist chiefly in the general fact that both were evolutionists, and that their evolutionist cosmology had much the same sort of metaphysical setting. In its spirit, as in its details, Schopenhauer's evolutionism was quite different from Spencer's. He is, but for some analogies in the philosophy of certain of the Romantics, the first representative of a tendency in evolutionistic philosophy that is essentially hostile to the tendency of which Spencer is the representative. Spencer's enterprise is neither more nor less than a resumption of that which Descartes had undertaken in 1633, in his suppressed treatise on "The World"; the nineteenth-century philosopher, like the one of the seventeenth century, conceives it possible to deduce from the laws of the motion of the parts

of a conservative material system the necessity for the gradual development of such a world as we now find. Spencer's evolutionism, in short, is, or rather attempts to be, thoroughly mechanistic. And in the course of the whole process, therefore, (though Spencer frequently forgets this) no real novelties can appear except novelties in the spatial arrangement of the particles of matter. Even these novelties are only the completely predetermined consequences of the sum of matter and energy originally present in the universe, and of the laws of relative motion. The whole cosmic history is solely a process of redistribution of matter and change of direction in motion. It is for this reason that Bergson was fond of saying of Spencer that his system contains nothing that really has to do with either becoming or evolution; "he had promised to trace out a genesis, but he has done something quite different; his doctrine is an evolutionism only in name."

Schopenhauer's evolutionism of the ever-expanding, self-diversifying Will, however, is radically anti-mechanistic. For it the universe, even the physical universe, cannot be a changeless closed system, in which no truly new content ever emerges. The primary characteristic of the Will is that it is never satisfied with the attained, and therefore ever goes on to further attainment. Its objectification, in the latest phase of Schopenhauer's thought, becomes necessarily progressive and cumulative. In short, a philosophy which conceives the genesis and movement of the temporal world in terms of the Will necessarily gives a very different account of the biography of the cosmos from that presented by a philosophy which aspires to tell the whole story in terms of mechanics and in accord with the principle that the ultimate content of nature never suffers increase or diminution. This latter program Spencer, it is true, realizes very imperfectly. In the later volumes of the *Synthetic Philosophy*, the *First Principles* seem often pretty completely forgotten. There are not a few strains of what may be called the Romantic type of evolutionism in Spencer. But in him these strains are incongruous with the primary postulate of his system; in Schopenhauer they are the characteristic note of the whole doctrine.

This contrast between the two types of evolutionism found in these two writers is due in part to certain features in their respective doctrines which arose without dependence upon their evolutionism. They had essentially opposed preconceptions about the program and possibilities of science. Spencer was from his youth obsessed

with the grandiose idea of a unification of all knowledge. All truths were eventually to be brought under some "highest generalization which is true not of one class of phenomena, but of all classes of phenomena, and which is thus the key to all classes of phenomena." This, of course, meant the theoretical possibility of the reduction of the more complex sciences to the simpler ones—of physiology to chemistry, of chemistry to physics, and of all physics to the mechanics of molecules. This intellectual process of explanation of the more complex by the simpler and more generalized type of phenomena was the counterpart, and in truth a necessary implication, of the objective process of evolution of simple into more complex arrangements of the matter of the universe. Schopenhauer, on the other hand, from the beginning insisted upon the irreducibility of the several sciences to one another, and most emphatically upon the uniqueness and autonomy of biology. When science, he writes, "in the quest for causal explanations (aetiology) declares that it is its goal to eliminate all ultimate forces except one, the most general of all (for example, impenetrability) which science flatters itself upon thoroughly understanding; and when, accordingly, it seeks to reduce (*zurückzuführen*) by violence all other forces to this single force, it then destroys its own foundation and can yield only error instead of truth. If it were actually possible to attain success by following this course, the riddle of the universe would finally find its solution in a mathematical calculation. It is this course that people follow when they endeavor to trace back physiological effects to the form and composition of the organism, this perhaps to electricity, this in turn to chemism, and this finally to mechanism."¹¹ Just why Schopenhauer adopted this doctrine of the irreducibility and discontinuity of scientific laws at a period when he apparently had not adopted evolutionism, is not wholly clear. He seems to have been partly led to such a view by his conception of the Platonic Ideas. Since for each of the broad divisions of science, which correspond to grades of objectification of the Will, there is a separate Idea, Schopenhauer seems to have felt that the distinctness of the several Ideas forbade the supposition of the complete reducibility of the laws of one science to those of a prior one. But inasmuch as the whole notion of the Platonic Ideas is a logically irrelevant part of the Schopenhauerian system, this

¹¹ *Die Welt als Wille und Vorstellung*, #27.

explanation does not carry us very far. Whatever his reasons, the fact remains that Schopenhauer attached the utmost importance to his contention that, at the points where one typical phase of the Will's self-manifestation passes over into a higher one, new modes of action, essentially different kinds of being, must be recognized. Consequently, when he eventually arranged the grades of the Will's objectification in a serial, temporal order, thus converting his system into an evolutionism, this contention made his evolutionism one which implied the repeated production of absolute novelties in the universe, and the supervention from time to time of natural laws supplementary to, if not contradictory of, the laws or generalizations pertinent to the phenomena of a lower order.

Another detail of Schopenhauer's body of doctrine which likewise antedates the evolutionistic transformation of his system but yet has an important relation to certain subsequent developments in the philosophy of evolution, was his peculiar form of teleology. He was equally opposed, on the one hand, to the conception of conscious design as an explanation of the adaptive characters of organisms, and on the other hand to the mechanistic elimination of all purposiveness from nature. Between these two extremes he endeavored to find room for a teleology dissociated from anthropomorphism. The Will moves towards ends determined by its own inner nature, though it does not foresee these ends. It triumphs over obstacles in its way, and circumvents obstructions; but it does so blindly and without conscious devices. This notion of a blind purposiveness, which more than any other philosopher Schopenhauer may be said to have introduced into the current of European philosophy, has come in our own day to be a familiar conception in the interpretation of the meaning of evolution, especially in its biological phase. Here again Schopenhauer is the precursor of Bergson. That philosopher too rejected what he called *le finalisme radical* not less than the radical mechanistic doctrine, while insisting upon the indispensability of some notion of "finality" in any attempt to comprehend the development of organisms. From this point of view Bergson has objected, upon grounds altogether similar to those which have been noted in Schopenhauer's references to Lamarck, to the Lamarckian tendency to identify the cause of the production of new characters with "a conscious effort of the individual"; while he at the same time has regarded Lamarckianism as approaching far nearer than does Darwinism, with its essentially mechanistic interpretation of

organic evolution, to a correct representation of the developmental process. Like Schopenhauer, Bergson adopted, as the biological theory most congenial to his metaphysics of the *poussée vitale*, a combination of the doctrines of orthogenesis and of mutation. The later writer may or may not have been influenced by the earlier one, but there can be no doubt that in Schopenhauer we find the first emphatic affirmation of the three conceptions most characteristic of the biological philosophy of *L'évolution créatrice*.

It is a somewhat curious circumstance that the trait in Schopenhauer's conception of the action of the "objectified" Will which has hitherto most attracted the notice of writers on the history of biology is closely related to the fundamental conception of precisely that sort of organic evolutionism to which he was most opposed. The universal prevalence of a struggle for existence among organisms was eloquently set forth by Schopenhauer forty years before Darwin published the *Origin of Species*. But it seems never to have occurred to Schopenhauer to regard this struggle as an explanation of the formation of species and the adaptation of organisms to their environments. Why he was unlikely to do so is evident from all that has been already said. The Darwinian hypothesis makes a species and the adaptive characteristics merely the result of a sort of mechanical pressure of external forces. Slight promiscuous variations, due probably to fortuitous displacements in the molecules of the germ-cell, are conserved or eliminated in the course of the jostle for survival, according as they do or do not fit the individuals possessing them to keep a footing in that turmoil. But such a doctrine assigns to the organism itself, and to its inner potencies, an essentially passive role; development is, as it were, extorted from living things by external circumstances, and is not a tendency expressive of all that is most characteristic in the nature of organisms as such. The metaphysician whose ruling conception was that of a cosmic life-force was debarred by the dominant temper of his thought and the deepest tendency of his system from any such account of the causes and the meaning of that progressive diversification of the forms of life, the reality of which he clearly recognized. Thus, though Schopenhauer incidentally shows certain affinities with Darwinism, he is much more truly to be regarded as the protagonist in nineteenth century philosophy—at just the time when Darwin was elaborating a mechanical biology and Spencer a would-be mechanistic cosmogony

—of that other form of evolutionism which a recent French writer has described as “a sort of generalized vitalism.”¹² He was thus the first important representative of the tendency which, diversely combined with other philosophical motives, and expressed with varying degrees of logical coherency, has been chiefly represented since his time by such writers as Nietzsche, Bernard Shaw, Guyau, E. D. Fawcett, and Bergson. The Romantic evolutionism of all these writers is, it is true, innocent of the pessimistic coloring of Schopenhauer’s philosophy; but the pessimism of Schopenhauer was always connected rather with those preconceptions in his doctrine which were really survivals from older systems, than with that vision of the Will as creatively at work in the temporal universe, which was his real contribution to the modern world’s stock of metaphysical ideas.

¹² M. René Berthelot, *Evolutionisme et Platonisme*, 1908, p. II.