Philosophy and Darwinism

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It is a familiar fact of experience that oppositions set reflection in motion. What one previously apprehended with indifference and without attention suddenly becomes interesting once one catches sight of the oppositions bound up with it, and of the tensions to which it gives rise. Someone who, for other reasons, would feel no inclination to object to Darwinism may nevertheless find a motive for doing so in the conflicting interpretations of it—the diametrically opposed judgments of its worth and significance that one encounters on a daily basis. For one person, Darwinism is a wild speculation, a product of our materialistic age, which seeks confirmation for its strange and ultimate drives and inclinations in self-generated hypotheses; for another, it is a brilliant and magnificent conception, opening up vast perspectives, satisfying the human mind's ideal longing for the infinite, and awakening enthusiasm for higher and progressive forms of development. And if we return to the narrower circle in which this doctrine arose, and where scientific testing properly belongs—to the natural scientists themselves—we likewise find a striking opposition of views. While a large number of natural scientists (especially English and German ones) regard Darwin's doctrine as so highly probable that they are inclined to overlook what is lacking in the evidential support—indeed, that several even embark on far-reaching speculations and abandon the firm ground of their discipline—others (notably French researchers, with whom most Danes seem to side) insist that an explanation is not a proof, but presupposes proof in order to have validity, and that, despite all the importance hypotheses may have for science, it is entirely inadmissible, even for a moment, to forget the gaps in the evidence because of the appeal of a hypothetical explanation.

There is therefore good reason to undertake an examination of the logical and ethical worth of Darwinism, in order to settle which of these competing judgments is the true one, and what stance we ought to adopt toward this remarkable doctrine, which has now made its way from the scholar's quiet study out into the streets and is being employed as a powerful weapon in the intellectual battles of our age. Philosophy has, apart from these external occasions, by virtue of its own task, a duty to carry out such an examination. It is philosophy's task to attain self-consciousness with respect to the nature and method of scientific cognition, to sharpen insight into the stages a doctrine must pass through before it can be incorporated into the realm of scientific truths, and to uphold the necessary conditions for the truth and validity of cognition. But its vocation is not confined to this. As it investigates the life of human consciousness, its laws and its elements, and traces its development through history, it seeks at the same time to situate every cognitive result as a member within the whole organism of mind, and must therefore at every point examine how the result achieved stands as a contribution to a general worldview. No result has truly been appropriated by the human mind until this examination has been carried out. And only when this has been done can the result have legitimate practical consequences, for the third member of the philosophical investigation becomes: what practical and ethical significance the appropriated truth acquires.

It is clear that the logical examination is here the most important. One must first settle whether a doctrine is true or not, before proceeding to examine its significance in a metaphysical and ethical respect. One is all too often inclined to take the reverse path and suppose that what has ideal significance must also have real existence. From this inclination have sprung the theological and speculative doctrines that hold sway over the general consciousness. And many of Darwinism's champions have adopted the same standpoint; they have fashioned a new theology, a new dogma, out of the purely empirical hypothesis Darwin put forward. The theory of cognition must oppose both of these tendencies and seek above all to fix its gaze on the real connections of the matter. It impresses upon us the necessity of resignation. An old proverb says: "One who believes does not hurry." One might with equal justice say: "One who knows does not hurry!"— understanding by the one who knows the person who has an eye for the essential conditions of cognition as well as for the ideas that lead the human mind forward in its theoretical and practical striving. Why should these ideas necessarily have a—supernatural or natural— reality? Are they not precisely ideas by virtue of pointing beyond what is factually given, by posing new tasks for thinking and action? One whose worldview does not require a dogmatic fixing of the content of the highest ideas as

external fact will, with greater calm and impartiality, allow the scientific method for the cognition of the real to be satisfied, and will bow entirely to its results.

I.

One may say that science would stand still without hypothesis. In order to find the law according to which a given factor operates, or to find the cause underlying a given regularity in phenomena, one must necessarily venture beyond what is immediately at hand, and must often make large leaps into entirely different circles of phenomena in order to test whether the sought explanation is not to be found there. It has rightly been said that researchers who stand still and wait until they are driven from outside to move forward will never make the great discoveries. Discovery presupposes an activity that goes beyond the mere accumulation of facts, that seeks a unity in the manifold, a common law for all the differences. It is not least this activity and energy that makes Copernicus, Kepler, and Newton such great figures in the history of science. But this is only one side of the matter. The path thought takes from phenomena to the law or cause may be the one that looks boldest and most magnificent; but it is not the one that is, scientifically speaking, decisive. We may admire that energy, but we do not rely on what it accomplishes when it cannot manage to travel the opposite path back again, when it cannot, from the assumed law and the postulated cause, lead us back to the phenomenal connection. In other words: the hypothesis must be verified, confirmed by its agreement with facts won through immediate observation. Newton too had an eye for this, when he demands that the cause one assumes to explain certain phenomena must be a *vera causa*—that is, one that in reality proves to have the effects attributed to it.

What is it, then, that Darwin's hypothesis seeks to explain? It is the fact that living beings divide themselves into certain distinct groups with distinctive characteristic marks that remain fixed and persistent for each individual group—that is, the fact of what are called specific differences. The plant and animal kingdoms divide themselves, for observing and classifying inquiry, into sharply demarcated species. Botanists and zoologists have, on the common view, completed their task once they have, by careful examination of a plant's or animal's inner and outer characteristics, determined which species, genus, and family it must be assigned to. One traces the developmental history of the individual, one investigates the agreements among individual species and groups them accordingly; but the question of the origin of the species itself is not drawn into the investigation, because immediate observation shows no transition from one species

to another.

Yet there are many things that can indicate that the concept of species does not have absolute validity. Not only does it prove difficult, indeed impossible in many cases, to determine what should be called a species and what should be regarded as a mere variety; but this very representation of absolutely completed life-forms— according to which life was only the self-preservation of these forms, or their struggle to maintain themselves against external conditions—the representation by which a sharp distinction was drawn between the organism and its surroundings, as if they did not necessarily belong together as members of the circle of vital phenomena, was too contradictory and outwardly mechanical for many researchers not to feel the urge to go beyond it. So long as theological ideas still dominated the consciousness of most natural scientists, this urge could admittedly be satisfied by tracing the absolute specific differences back to different acts of creation, each species being conceived as created on its own. But when awareness of natural connection and the necessity of natural causes develops, the urge can no longer be satisfied in this way. Insofar as natural scientists still regard the different species as each separately created, this is in general only to be taken as a rhetorical expression of their assumption that the origin of species is inexplicable. Already at the close of the last century the idea of the natural origin of species makes its appearance, and remarkably enough at roughly the same time in England, France, and Germany: in Erasmus Darwin (Charles Darwin's grandfather), in Geoffroy St. Hilaire and Lamarck, and in Goethe and Oken. These earliest attempts each point, individually, to the operation of external causes, but most of them lay the main weight on an inner formative force, a spontaneous capacity for perfection that was supposed to lead living beings from lower to higher levels. To that extent there is still something mystical and indeterminate in these attempts.

The brilliance of the way in which Darwin took up the old problem rests on the fact that this indeterminate and mystical element steps aside in favour of reference to a definite, factually operative force. To that extent Newton's demand for a *vera causa* can be said to be satisfied. The factor Darwin refers to is the so-called quality selection, or natural selection—the fact that only the favourably placed organisms live and reproduce, while the weak and unfavourably placed perish. Nature thus passes living beings through a sieve, as it were, and from this process of sifting there must necessarily emerge more developed forms better suited to the conditions. It is this natural selection that produces races and varieties: why, then, should it not also be able to produce species? "It has often been asserted," says Darwin, "but the assertion is incapable of proof, that the amount of

variation under nature is a strictly limited quantity… I can see no limit to this power, in slowly and beautifully adapting each form to the most complex relations of life." In these words the logical validity of Darwinism finds its clearest expression.

The resolution of the dispute depends, namely, on the question: does natural selection have limits or not? But this question science is unable to answer at its present stage. This is what makes Darwinism a hypothesis and justifies the hesitation of sober-minded researchers to see it presented as an established doctrine that one may now simply accept. This explains the stance of French positivism toward this question. There are undoubtedly many who conflate positivism and Darwinism without knowing that they exclude one another. Auguste Comte sharply criticized Lamarck's theory, seeing in it an unjustified attempt to transfer the law of development, which applies to the individual organism, to the species as a whole. One of his disciples, the celebrated anatomist Charles Robin, has recently repeated this objection and shown that it applies to Darwin as well. He maintains in particular, drawing on the exact results of anatomy, that variation has its definite limits. Every organism can swing between its extreme points; if the alteration goes beyond them, the organism does not develop but dies. And precisely the living beings whose organization is very simple—such as zoophytes and worms—vary only within narrow limits; yet it is from them that the higher species are supposed to have developed. And in any case one cannot trace the development of one species from another in the way one can trace how one stage of an individual's life develops out of another. "It is also progress and a sign of insight to understand how to examine a general proposition before accepting it." Robin accordingly regards it as a testimony to the philosophical spirit of French researchers that most of them declare themselves against Darwin. The German Häckel will admittedly make it a test of human intellectual superiority whether one accepts Darwinism and "the philosophy grounded upon it" or not, and accordingly credits the English and Germans with being further advanced in cultural development. Littré has rightly branded this as chauvinism. And if—which from the standpoint of rigorous science must be regarded as possible—the Darwinian hypothesis should prove false, the standing of that superiority would look precarious. What Kant doubted—that there would ever arise a Newton for the science of organic life—Häckel sees realized in Darwin. He holds that Darwin's theory is one of the greatest conquests of the human mind, which "can immediately be placed alongside Newton's theory of gravitation" —indeed, that it even surpasses it! Against such an oversight of the principles of the inductive method as is here laid at the foundation, logic must protest. Newton's discovery stands as an ideal in science because it is an unparalleled

example of the union of brilliant intuition and rigorous demonstration, in which no link has been skipped and all particulars fit together into a magnificent edifice. Darwin has demonstrated a real cause that is of essential and perhaps hitherto overlooked significance for organic life, but he has not been able to prove that this cause contains the sufficient ground for the origin of the different species.

Will it now be difficult and long before a decisive answer is found to the question whether variation has definite limits or not? Darwin himself has set out on the path that alone can lead to an exact proof: the path of experiment. As is well known, it was domestic animals and cultivated plants to which Darwin turned his attention above all, and from which he drew his most important material. If one could produce sufficiently varied conditions, and for a sufficiently long time, the question might perhaps find its answer; but it is not at all certain that it lies within human power to bring about the conditions under which in free nature species must have developed from one another. This is therefore only a very indeterminate and remote possibility.

An essential—and, in Darwin's own judgment, the most essential— objection to his hypothesis is drawn from the fact that "although the geological investigations have undoubtedly taught us the existence of many previous links, which bring numerous life-forms much closer to one another, they have not given the infinitely many fine gradations that the theory requires, between extinct and now-living species." Here too an exact proof is a long way off—indeed, it is perhaps doubtful whether such a proof can ever be attained by this route, since every new intermediate link that is discovered can always be regarded as a new species to be inserted between two others; the very transition from one species to another cannot by the nature of the matter be found in the geological strata, which contain only the dead remains.

The probability of the hypothesis's truth will of course increase the more such intermediate links are demonstrated. One also sees that researchers who were previously opponents of the mutability of species give up their opposition under the impression of what new discoveries bring to light. "That a natural scientist who has for so long and so thoroughly studied the numerous remains and compared them so carefully and tirelessly, both with related remains from other places and with the skeletons of living species—such as Gaudry—has lost his faith in the absolute fixity of species and aligns himself with those who believe in their transformation over time, is under all circumstances a significant pointer, all the more so since he can hardly have been influenced in his judgment by the natural scientists in whose proximity he worked; for nowhere has Darwinism won less entry than in France."

But an exact proof, as said, does not appear to be within prospect, at least for a very long time. To that extent those who, for moral and religious reasons, believe they must combat Darwinism are right when they mockingly refer to the moment "when Darwinism will be proved." Yet their satisfaction may nonetheless be somewhat premature. For it is one thing that the factors by which one has hitherto sought to explain the origin of species are insufficient; it is quite another that the origin of species is at all regarded as a question belonging to natural science and not to theology. And this latter seems in any case to have been achieved through the Darwinian controversy. That species must have a natural origin, that the causes of their arising, whatever they may otherwise be, must be sought in the conditions given in nature—this is a presupposition that springs from the principles of all scientific inquiry, principles that are increasingly being applied even to domains from which they were previously excluded. The maxim that everything has its cause springs from the innermost law of human consciousness itself and cannot be forced back once it has been acknowledged. What the cause is, is another question. Many hypotheses of a kind similar to Darwin's may perhaps succeed one another before the true one is found. "It is," says Mill, "no valid reason for accepting a given hypothesis that we are unable to imagine any other that can explain the facts. There is no necessity for supposing that the true explanation must be one which, with our present experience, we are able to conceive." But in principle it remains fixed that there must be a natural cause. The skepticism of French positivism is only justified with respect to individual explanatory attempts, not with regard to the principle itself. It may be premature to wish to resolve this question already now, but it does not belong to those that in themselves lie beyond the limits of science.

[*To be concluded.*]

Second Part

Concluded.

II.

The logical examination of Darwinism thus leads to assigning it its rightful place as a brilliant hypothesis that has grown out of the principle of modern thought and science—the principle of the dominion of natural laws and natural causes in existence. This

principle did not wait for Darwinism in order to come into force; it has found its logical and metaphysical grounding in modern philosophy and its real implementation in modern natural science. It therefore does not stand or fall with Darwinism either. We cannot accordingly attribute to Darwinism so great a significance for the overall worldview as is often done; it is a valuable, if hypothetical, member of a larger connection.

Yet it can be said to have become, as it were, a watchword in the struggle between the supernaturalist and spiritualist conception and the humane and rational worldview. The objections directed against Darwinism from that conception would be directed against any other doctrine that sought to explain the origin of species in a natural way. It will therefore, entirely apart from Darwinism's hypothetical character, be of interest to examine what direction it points in when one draws its final consequences.

The common charge is that Darwinism is a materialist doctrine that explains the inner from the outer, the spiritual from the corporeal, and conceives of the human being as an animal by letting him "descend from the apes." In place of the divine wisdom that, according to the old faith, guides everything in nature and in history to the good, one sees blind chance holding sway—the apparently purposive owing its existence only to a fortunate accident, or rather a series of fortunate accidents.

We take no account here of Darwin's personal views, even though they do not appear to tend in a materialist direction. In order to test the charge just stated, we hold to the cause from which he seeks to explain the origin of species: the struggle for existence. It is, first of all, clear that struggle presupposes a struggling being, and weapons and force in this struggling being. That is, there is presupposed an inner activity in the organism and an original endowment from which development can take its beginning. Without this, external influences accomplish nothing. Furthermore, the expression "struggle for existence" also contains the implication that existence is a good that the individual strives to preserve. For it is evidently not merely being as such but the enjoyment connected with existence and the value thereby accruing to it that is the object of the struggle. But these presuppositions do not point in a materialist direction. They lead on the contrary to the acknowledgment of ideal principles as what is truly decisive. Darwin himself has nonetheless probably laid too great a weight on external causes. The celebrated botanist Nägeli has, in opposition to this, stated as the result of his investigations that the formation of varieties and races is not a consequence and expression of external influences but is conditioned by inner causes; he accordingly attributes to the organism a "principle of perfection" that steadily leads to new forms—a process in which the external conditions play only the role of a regulator. We are thereby led back to the general law of

life, as formulated most sharply among the more recent philosophers by Herbert Spencer: an accommodation of the inner to the outer. The inner is thus always presupposed as an original factor that, through its interaction with the surrounding world, works its way forward to more perfect forms. According to Spencer, Darwin has laid too little weight on the direct accommodation that occurs through the influence of function on structure. Only when the organism is unable to accommodate itself to its surroundings and thereby overcome them does the indirect accommodation come into force, through the elimination of the weak.

What, then, is the worldview that would have to be derived from Darwinism, if it proved to be correct? None other than the one that follows from the whole philosophical and scientific consciousness of the modern age, which cannot admit of ideal powers that would operate in any way other than through the real conditions themselves and the laws that govern them. We can, as a witty thinker has said, believe in operative, but not in governing Ideas. The ideal is not in itself alien to the real conditions; these are elements of its being, and it demonstrates precisely its divinity by working its way forward through all obstacles. The Idea we believe in must be a struggling Idea.

It is so far from being the case that Darwinism leads to materialism that it must rather be said to point in the wholly opposite direction. It does certainly lay a strong emphasis on external conditions; but these conditions operate only through the organism's accommodation to them. And what one calls chance is only an instance of the infinitely ramified and involved connection of conditions—inner and outer conditions—that we cannot survey; in what are called contingently arisen forms we have precisely a testimony to the energy of life, which knows how to appropriate even the finest nuances of external conditions and employ them in its service.

But, it is said, Darwin's doctrine is comfortless, because it shows us that the weak perish and only the strong and fortunate survive. How dreadful to know oneself and everything else delivered over to such a dark and pitiless power! Darwin himself felt all the suffering and pain that the struggle for existence brings with it. "We behold the face of nature bright with gladness, we often see superabundance of food; we do not see, or we forget, that the birds which are idly singing round us mostly live on insects or seeds, and are thus constantly destroying life; or we forget how largely these songsters, or their eggs, or their nestlings, are destroyed by birds and beasts of prey; we do not always bear in mind, that though food may be now superabundant, it is not so at all seasons of each recurring year." But he consoles himself with the thought that "from the war of nature, from famine and death, the most exalted object which we are capable of conceiving" is

produced.

It is not easy to see what advantage the common belief in the "purposiveness of nature" has over Darwin's doctrine here. For what a sharp conflict there is between the all-powerful and provident wisdom that is supposed to have produced everything, and the pain and need, the suffering to which all living beings are subject—which neither Darwinists nor anti-Darwinists can overlook! Here is something that no theory, no worldview can explain. The highest we can attain is to fix our gaze on the goal achieved through these struggles, and to see how that pain is a consequence of development toward this goal. Alongside the assurance that this development goes on unchecked, the necessity of resignation shows itself; we see the definite, inexorable conditions without which nothing can be attained here in the world, and which our wishes and longings cannot in the end change. But this resignation any worldview whatsoever must necessarily demand, in one form or another.

Just as the astronomical theory of Kant and Laplace and the geological theory of Lyell, so Darwin's biological theory teaches us that the same forces that at every moment operate imperceptibly around us have, through their constant, never-interrupted operation, produced the forms in nature that we admire to such a degree that we are inclined to conceive of them as produced in an instant, by an almighty act of creation. Just as Copernicus opened up the infinity of the universe to our gaze, put an end to the old opposition between heaven and earth, and led us to regard our globe as a vanishing point in the infinity of worlds, so these more recent theories lead us into the infinity and eternity of forces. The most decisive oppositions are only relative stages in the infinite process. We cannot encompass the infinite; but all the differences our thought seeks to establish perpetually dissolve anew, prove to be relative. In the infinity of force and space, the infinity of mind finds its symbol. The highest Idea we can form is the thought of an infinite world-harmony in which every individual, in its place and at its time, plays its role and through its struggle and suffering makes a real contribution to the great life-process.

When one sees what enthusiasm the Copernican system aroused and how it gave rise to the first application of the results of natural science to the outlook on life, one may also expect similar consequences from these more recent theories—as surely as the infinity of forces is no less elevating than the infinity of cosmic space. The inherited doctrines of faith oppose Copernicus and Newton as they now oppose Lyell and Darwin; but as they had to yield before the former, so they will also come to make terms with the latter. We are now simply compelled to form our highest ideas in accordance with

the way in which the universe presents itself to us. Our outlook on life is a worldview. Just as the discoveries of Copernicus and Newton compel thought to let its highest Idea encompass the infinity of the universe—which Giordano Bruno already breathed in with a conviction and enthusiasm that did not even fail him on the Inquisition's funeral pyre—so, in accordance with the theory of development, the conception of the mode of operation of the highest Idea must now undergo a corresponding change. Not by sudden intervention, not through unprepared catastrophes and revolutions, but quietly and imperceptibly operates the eternal force, in whose being all conditions, all real causes, are elements.

I have heard a talented woman say that if Darwin were right, and we really descended from the apes, life would lose all worth and significance for her. This is perhaps the point that stands as most forbidding for most people. But one who sees that even the highest and noblest nevertheless has its definite conditions, that it cannot exist without them and subsists only by appropriating them—one who recognizes that the apparently absolute differences dissolve in the infinite connection—will see the matter differently. He will also in the human mind see a form of the struggling Idea, and will see no necessity for the spiritual to be breathed into matter from outside or from above; the spiritual does not stand as an alien element in existence; it emerges at its determinate stage in development, works its way forward out of matter itself, and provides in the final instance the only explanation of matter. The disconcerting quality of the representation that human beings are supposed to descend from the apes has its simple ground in the fact that here two developmental stages are immediately juxtaposed that lie infinitely far apart; what is essential is thereby skipped over—development itself. How great a chasm lies between the cannibals from whom we perhaps descend and the civilized human beings of our age!

We see the mind of the individual human being develop from a modest beginning; we see in history the human race develop from animal crudeness to spiritual cultivation and humane social life. What Darwinism asks is therefore only that one conceive the lines that this course of development describes as extended in a downward direction, just as in all our ideal dreams, in our striving for progress and higher development, we conceive of them as extended in an upward direction. This leads us to the last point we shall bring forward in elucidating Darwinism: its ethical character. But before we leave the domain of the general worldview, I would like, as an *argumentum ad hominem*, to recall that a Danish philosopher who stands for all of us as a singularly noble and humane thinker, and whose outlook on life had a particular warmth and depth of feeling— that the late

F. C. Sibbern held the same view of the origin of the human being that one is now so highly offended to encounter in Darwinist authors. For it says in his work *Speculative Cosmology*
(Copenhagen 1846), pp. 20–21: "If the first human being came into existence in a different way from us, then it is still not created in any other sense of the word 'created' than we are. How then did the first human being come to be? Without doubt in this way: that a certain animal formation, from an initial modest beginning, through a series of generations or offspring—inasmuch as in the progeny the process of development continually went further and further—arrived at the point where its last offspring became a being who, so to speak, opened the eye of spiritual life, saying 'I' to itself and feeling itself in its selfhood, but now also feeling the drive in itself to name all animals, that is, to impress its stamp upon them, and to regard itself as standing in relation to them all, and even above them all. Herewith humanity arose out of animality."

III.

Just as it is commonly held that the metaphysics of Darwinism is materialism, so it is held that its ethics must amount to animal sensualism. "Let us eat and drink, for tomorrow we die!"—this is the train of thought one generally regards as the natural one for a Darwinist. Many go still further and hold that suicide is the natural end for one who entertains such views. "Every suicide," wrote an American clergyman to Tyndall, "every suicide in our country (and they occur daily) is an indirect consequence of the bestial doctrines that you, Darwin, Spencer, Huxley, et id omne genus, are preaching."[1]

There is scarcely greater proof of the narrow spiritual horizon that most people still possess than the great difficulty they have in conceiving that a moral and noble human life can be lived on the basis of a worldview other than their own. For most people, someone who believes differently is an immoral being. And behind the accusation of immorality lies something worse: the hatred of fanaticism. Thus the American clergyman continues in his letter: "Shall I not hate those who hate Thee, Lord!"

In contrast to the passions that the conflict sets in motion, we must hold to the matter itself and examine it. Darwinism is only a particular form or application of the universal law of development, which before Darwin's time had already been recognized as applying not only in the domain of nature (Kant, Laplace, Lyell) but also in the domain of history. Already in Bacon of Verulam we find the idea of the development and progress

[1]The letter is reprinted in H. Spencer's *The Study of Sociology*, p. 419.

of humanity. Pascal and Leibniz expressed this idea more precisely. But it is in the last century that the first steps toward its realization are taken, by Turgot and Condorcet, Lessing and Kant. Ethics, which had previously fixed its gaze only on the development of the individual personality, now had to come to see that this development can only take place as a member of the general development of the race. Development of personal life through participation in cultural-historical work—this is the moral principle whose source lies in the Idea of development.

Darwinism shares the same ethical motives as the entire worldview built upon this Idea. The very great role that development plays in Darwin's hypothesis points in an ethical direction. Rest and stasis are not ethical; it is work, becoming, struggle, and progress that matter, and Darwinism leads us directly to this by impressing upon us that one who does not fight with all his strength will succumb, and that life itself is a struggle for existence. Viewed immediately, it is certainly the blind, egoistic drive of self-preservation that comes to play the greatest role; but it will gradually open up, so to speak, the more the course of development brings individuals together and teaches them to conceive of the common higher law to which the individual wills must bow. The drive of self-preservation is thereby refined into an ideal striving to preserve and develop the true human existence both in others and in oneself. Thus the highest ethical striving remains still a struggle for existence, and the natural law that Darwin has demonstrated acquires its validity in the ethical domain as well.

If Darwin were right in his assumption that variation has no limits, this would open up an even more magnificent and inspiring prospect for all higher striving. The human being would then not encounter limits to his ideal longing; what he could not himself attain, he would be able to lay the foundation of for the generations after him. And every advance however small, every effort however inconspicuous and apparently insignificant, would still make its contribution to development; for it is through an infinite number of infinitely small operations that the great results are achieved.

On the other hand, Darwinism contains a teaching that the earlier spiritualist ethics often overlooked: the great significance of external conditions. The work for the advancement of the human race consists not least in the improvement of its material circumstances. Darwinism shows us what significance these circumstances have for the development of a species—and therefore also for humanity's. It therefore becomes an ethical task to provide the necessary conditions of development for all. Darwinism's ethical consequences point thus in the direction of social reform. It shows us what wildness and what horror arise when the struggle turns on material self-preservation,

and impresses upon us the necessity of bringing it about that the struggle—without which human life would stagnate and be extinguished —can more and more be carried on in a manner worthy of humanity, and for ends that rise above the blind animal drives, which operate only because need calls them forth and because they are not forced back by higher ideas.

Our conclusion, then, is as follows. Darwinism is a hypothesis, and it is illogical and unscientific to regard it as more. But it does not merely appeal to a real and significant cause; it has itself grown out of the necessary presupposition that, in the case of the origin of species as well, it must have been natural causes that were operative. The unfortunate theoretical and practical consequences that have been assumed to follow necessarily from it are unfounded, and the resistance to Darwinism in fact concerns the entire rational and humane worldview, which does not stand or fall with Darwinism. This worldview had been developed in its decisive outlines before Darwinism appeared, and will continue to develop even if Darwinism should be refuted. But on the other hand, its truth would provide that worldview with a significant accretion, enriching it with new perspectives and ideas. — But, as has been said: one who knows does not hurry!