

NIETZSCHE'S RECEPTION OF DARWINISM

by

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"The influence of evolution in fields far removed from biology has been documented almost to exhaustion (at least to mine)." S. J. Gould (1977: 115)

ABSTRACT

It has been generally assumed that the influence of Charles Darwin's theory of evolution on Friedrich Nietzsche (1844-1900) is to be understood in terms of Nietzsche's concept "Übermensch" (overman). Hardly any attention has been paid to the question of the status of Darwin's theory in Nietzsche's philosophy. It is the purpose of this essay to answer that question.

Nietzsche's initial approval, and later criticism, of Darwinism is not limited to a specific theme of his philosophy, but is a part of his central philosophical concern, viz. the relation between nature and culture. Nietzsche approved of Darwin's theory as a natural basis for the explanation of human values. Later he is concerned about the basis of Darwin's theory and criticizes it because of its anthropomorphic presuppositions. This criticism is relevant to the present debate on the status of Darwin's theory of evolution and that of Nietzsche's theory of "will to power".

INTRODUCTION

Although numerous essays have been written on the subject of Nietzsche and Darwin, especially at the turn of the century, in recent decennia such discussions have become rare. Has the reception of Darwinism been exhaustively mapped, including Darwin's influence on 19th-century philosophy? Glick (1972) for example, has edited a major work on the reception of Darwinism and Gould (1977, quoted above) appears exhausted.

It may also be that it has become unpopular to investigate philosophical ideas that were presumably a fertile source of social Darwinism and fascism. But actually the nature of the relation between Nietzsche's philosophy and these historical aberrations has not been established satisfactorily. A close relation between them cannot be accepted as self-evident. Before we will ever

be able to settle this delicate question, we should first assess the relation between Nietzsche and Darwinism.

It is noteworthy, however, that most discussants have taken it as self-evident that the possible influence of Darwin on Nietzsche should be investigated only within the concept of Nietzsche's "Übermensch" ("superman", or "overman") (cf. Bertaux, 1979). Concerning the reception of this concept, Bridgwater (1978: 257) says:

"The superman was understood as the culmination of nineteenth-century evolutionary thought for, if Darwinism points anywhere, it points to the problem of man's *continuing* evolution, that is, to the 'superman';..."

In the concept "Übermensch" Nietzsche tried to unite biological and moral aspects. In "Thus spoke Zarathustra", Zarathustra exclaims:

"I teach you the overman. Man is something that shall be overcome. What have you done to overcome him?" (First part, prologue.)

Nevertheless, there are no clear indications in Nietzsche's work that his "Übermensch" should be understood as the proper context of his relation to Darwinism. In "Ecce homo" (see appendix no. 52) Nietzsche even rejected a Darwinistic interpretation of the "Übermensch", not because it is bad biology, but because such an interpretation is based on false values of "an 'idealistic' type of a higher kind of man, half 'saint', half 'genius'." Therefore, the concept "Übermensch" is not a proper context of Nietzsche's relation to Darwinism, but is itself a part of Nietzsche's central concern: the relation between nature and culture.

In the investigation of the relation between

Nietzsche and Darwinism it is not fruitful to compare Nietzsche's philosophy and Darwin's theory of evolution and decide whether Nietzsche was a Darwinist or not. Such a comparison does not tell us much about Nietzsche's philosophy. Nor is it fruitful to put aside Nietzsche's comments on Darwin's theory, once it has been established that his knowledge of Darwin's theory is neither complete nor accurate. The question that I want to settle in this essay, and which leads us into Nietzsche's philosophy, is that of Nietzsche's reception of Darwinism: what did Nietzsche expect from Darwinism? What purpose did it serve for him?

BASIC LITERATURE ON NIETZSCHE AND DARWINISM

Some authors (e.g. Tille, 1894, 1895; Richter, 1913; Spengler, 1923, I: 476-483; Haas, 1932; Bertaux, 1979) consider Nietzsche to be a Darwinist. To them "Übermensch" is a Darwinian concept or a consequent moral application of Darwin's theory.

Other authors deny that Nietzsche is a Darwinist. They show that Nietzsche did not sympathize with Darwinism, because he presented only a caricature of Darwin's theory (e.g. Danto, 1965: 187-188). Or they claim that, although Nietzsche sympathized with Darwinism, he is not a Darwinist, because he denied Darwin's originality, in favour of the German "Naturphilosophen" and Lamarck (e.g. Förster-Nietzsche, 1904: 521-523; Mittasch, 1952: 174-181). In support of the view that Nietzsche is not a Darwinist they argue that Darwin's influence is not a detailed one, but is only visible in Nietzsche's philosophy as a general cultural idea of that time (e.g. Lublinski, 1914: 368; Grunke, 1932; Fink, 1973: 68-69); Nietzsche was only "roused" by Darwinism (Kaufmann, 1974: 167).

Some authors argue that Nietzsche did not interpret literally Darwin's terms as "struggle for life" and "survival of the fittest", but merely employed them as analogies, and such use of these analogies did not mean agreement with Darwin's theory (e.g. Ewald, 1909).

Finally, some authors argue that Nietzsche's apparent agreement with Darwinism may be explained by Nietzsche's want for a proof of his own philosophical views (e.g. Janz, 1978, II: 275). This raises the question of Nietzsche's biologism, i.e. the question whether his philosophy is a reduction of all moral and mental phenomena to biological concepts (cf. Heidegger, 1961, I: 371-382, 517-527). In support of such a reduction is Nietzsche's criticism of David Strauss (see appendix nos. 8-15). But in later years of his philosophy Nietzsche criticized common biological concepts. This change reflects the development of his thoughts on the relation between nature and culture.

Recently a cautious attempt has been made to reopen the case of Nietzsche's alleged Darwinism (cf. Nietzsche Studien 7 (1978): 117-122; Müller-Lauter, 1971: 130-131; 1978: 191-193).

THE THEORY OF EVOLUTION

In order to investigate Nietzsche's relation to Darwin's theory it is necessary to clarify the status of that theory, particularly with respect to the views of the German "Naturphilosophen" who provided the general background within which Nietzsche developed his own views.

Darwin and the status of his theory

Visiting the Galápagos Islands, Darwin was still convinced that the species had been created separately, but his reading of Lyell's "Principles of geology" (1832-1833) and, some years later (1838), of Malthus' "An essay on the principle of population" (1798) prompted the solution of a problem that had struck him in the Galápagos Islands: the close resemblance of many species and yet significant differences between them. Another twenty years later, on July 1, 1858, Darwin & Wallace's paper "On the tendency of species to form varieties; and on the perpetuation of varieties and species by natural means of selection" was read for the Linnean Society of London (Darwin & Wallace, 1859).

From Malthus, Darwin took the concept of

struggle, though with some changes (cf. Bowler, 1976):

"A struggle for existence inevitably follows from the high rate at which all organic beings tend to increase. (...) As more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life. It is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms." (Darwin, 1859: 63.)

Much discussion has taken place on the status of Darwin's theory as a scientific theory in a modern sense (cf. Popper, 1974). Some aspects of Darwin's theory of evolution may be considered forward looking: to Darwin, struggle for existence did not simply mean struggle for (individual) survival, as in his day most Darwinists meant, but success in leaving progeny:

"I should premise that I use the term Struggle for Existence in a large and metaphorical sense, including dependence of one being on another, and including (which is more important) not only the life of the individual, but success in leaving progeny." (Darwin, 1859: 62; about Darwin's metaphors, cf. Manier, 1978: 172-186.)

Moreover, whereas Darwin was convinced that his theory explained, and did not merely restate the problem as other theories did, nevertheless he admitted that much was still unknown and that his theory suffered from serious difficulties, dealt with in chapters 6 & 7 of his book. For example, he did not know the cause of varieties and said that they were "due to chance" (Darwin, 1859: 131). Above all he considered his theory to be refutable:

"They [some naturalists] believe that very many structures have been created for beauty in the eyes of man, or for mere variety. This doctrine, if true, would be absolutely fatal to my theory.' (Darwin, 1859: 199.)

"If it could be proved that any part of the structure of any one species had been formed for the exclusive good of another species, it would annihilate my theory, for such could not have

been produced through natural selection." (Darwin, 1859: 201.)

There is disagreement whether Darwin's theory also shows some more traditional aspects. His image of nature may be called anthropomorphic when he wrote:

"I think it would be a most extraordinary fact if no variation had occurred useful to each being's welfare, in the same way as so many variations have occurred useful to man." (Darwin, 1859: 127, cf. 61, 80.)

"Natural selection will never produce in a being anything injurious to itself, for natural selection acts solely by and for the good of each." (Darwin, 1859: 201.)

In the discussion on "high" and "low" in nature, Darwin could not decide completely against the tradition:

"There has been much discussion whether recent forms are more highly developed than ancient. I will not here enter on this subject, for naturalists have not as yet defined to each other's satisfaction what is meant by high and low forms. But in one particular sense the more recent forms must, on my theory, be higher than the more ancient; for each new species is formed by having had some advantage in the struggle for life over other and preceding forms." (Darwin, 1859: 336-337, cf. 351, 441.)

The German "Naturphilosophen"

We emphasized the different aspects of the status of Darwin's theory. In order to be able to decide what, according to Nietzsche, the status of Darwin's theory was, we must look at the German Naturphilosophie which may be dealt with by considering Goethe's viewpoint. This German view of biology had a thorough influence on young Nietzsche.

In Goethe's Naturphilosophie, the central concept is development, not in the well-known meaning of "evolution" as a lineal descent, but in the etymological meaning of an un-folding of that which is already present in the germ. Goethe considered nature to be developing, but this development remains within fixed limits of the laws of nature, set by the "type": the basic form of

which all organisms of a kind are variants. So nature as a whole does not develop nor makes progress. All changes take place within the natural system: the exterior influences that disperse a species are counterbalanced by an inner stable force that holds the type. Therefore differences among species cannot result into a new species. Examples of such an outlook on nature are "Athroismos" (Goethe, 1795), "Metamorphose der Pflanzen" (Goethe, 1817), and "Die Natur" (a fragment that after recent research seems to have been written by Christof Tobler, but that resembles Goethe's view in those days; Goethe, 1783).

In Goethe's view on nature, Nietzsche discovered several aspects with which he could agree: he borrowed the concepts "morphology" (coined by Goethe) and "metamorphosis"; he considered the type to be fixed and put emphasis on the inner force, not on the exterior influences. Both to Nietzsche and Goethe nature has no purpose except to express itself. In order to express itself, nature needs resistance, built up by the limits of each type. In its expression nature is not economical but wasteful.

These aspects of Goethe's view on nature were parts of Nietzsche's outlook, when the latter was acquainted with Darwin's theory for the first time through a very popular book at the time, viz. F. A. Lange's "History of materialism" (1866).

The debate on Darwinism

When Nietzsche read about Darwinism, German biologists had been debating Darwin's theory for some years. Pre-eminent among them was H. G. Bronn, a palaeontologist renowned at the time. He wrote a review of Darwin's "Origin of species", translated the book and added a critical epilogue to his translation (Bronn, 1860 a & b). In this review and epilogue we find all the arguments that play a part in the German debate on Darwinism. The central topic was "Darwinism and teleology", as the chapter on Darwinism was titled in Lange (1866). Bronn was highly critical of Darwin's theory. He accepted the mechanism of natural selection only as an explanation of non-essential changes in species. In order to bring forth essential changes, a goal-directed principle ("telos") was

necessary, a principle that leads to development in one direction. According to Bronn, nature would be a total chaos without such a principle and he was not convinced that a theory lacking such a principle should be taken seriously. He considered it an unproved hypothesis. Therefore accepting Darwin's theory or not was a matter of belief, and Bronn did not want to be converted. Moreover, he regarded Darwin's theory to be neither new nor revolutionary.

Darwin abolished the old goal-directed laws; to him they were superfluous, because he could explain nature without them. This appeared incredible to the German "Naturphilosophen" who were teleologists. They could not imagine that there was no goal to which nature aimed, nor one direction in which nature developed.

On the status of teleological explanations a long discussion has been held in the history of philosophy and science. Kant devoted the second part of his "critique of judgment" (1790) to this question and concluded that teleological explanations, in which one holds purposes in nature for causes of all events, do not supply us with true knowledge about nature. Modern authors on philosophy of biology deal with this problem extensively (e.g. Woodfield, 1973, 1976; Nagel, 1961, 1977). Their conclusion is that we should distinguish two kinds of teleology: the belief in "telos", i.e. a goal-directed principle that is active in a fixed plan of nature, and teleology as a functional analysis and an explanation of phenomena by their use or function. The first kind of teleology we should abolish, the second kind is not contrary to, but akin to causal explanation and is current in modern science.

Darwin is certainly not a teleologist in the first sense, but in the second sense he is: properties of certain species are explained by their function, their usefulness to these species. Although in this respect Darwin is a modern scientist I do not think it is justified to speak of "The triumph of the Darwinian method" (Ghiselin, 1969) and to separate Darwin's theory completely from the German tradition, labeled "metaphysics at its murkiest" (Hull, 1973: 125), because of the more traditional aspects of Darwin's theory that I have pointed out above. Contrary to Ghiselin's viewpoint, Croizat (1962) asserts that Darwin is a bad thinker,

because of his teleological concept "natural selection". But Croizat fails to distinguish between the two kinds of teleology and wants to eradicate all teleology, which would be a deathblow to large sections of modern science.

The main opposition in the debate on Darwinism is about teleology: Darwin is convinced that his theory offers a sufficient explanation and makes teleological explanations in the first sense superfluous. The German "Naturphilosophen" are convinced that Darwin's theory of evolution is one-sided and incomplete, because his theory cannot explain the order and system of nature. Their belief in the fixed natural system was unshakable.

NIETZSCHE AND DARWINISM

Nietzsche became acquainted with Darwinism for the first time in the above-mentioned book by Lange (1866).¹⁾ This book made a deep impression on him during the years 1866-1868 and may be called his manual of philosophy (Bernoulli, 1908, I: 142-143).

A few years later, when Nietzsche was a professor in Basle, he became involved in the debate on Darwinism. Rütimeyer, a professor in anatomy and zoology, had a serious argument with Ernst Haeckel, whose "History of natural creation" (1868) presented a very schematic picture of nature, as if all the riddles of the universe had been solved. Nietzsche supported Rütimeyer, because he rejected any simplification and popularization of science. To Nietzsche's abhorrence, Darwinism too was subject to such a popular dogmatism (cf. KGW III/3, 9 (66) and III/4, 29 (57)).²⁾

¹⁾ Janz's assertion that it is clear that two of Nietzsche's early essays from 1862 were written under the influence of Darwinism is mistaken. Both essays were written before the German discussion on Darwinism had become nationwide (cf. Janz, 1978, I: 23).

²⁾ I quote from the *Kritische Gesamtausgabe Werke* (abbreviated KGW in the present paper = Nietzsche, 1967→), edited by G. Colli & M. Montinari, W. de Gruyter, Berlin 1967→. This critical edition has advanced far enough to be considered the best edition for reference. Unfortunately, although published in German, French, Italian and Japanese, an English edition has not yet appeared. "III/4" means the fourth volume of the third section, "9" is the number of the manuscript, "66" is the number of the aphorism or note. All translations are my own, except when translations by Walter Kaufmann are available.

In the debate on Darwinism, Nietzsche actually remained an outsider. Only Darwin's essay "Biographical sketch of an infant" (1877) has evidently been read by him (cf. his letter to Paul Rée, August 3/4, 1877). There seems to be no further evidence that Nietzsche ever read any of Darwin's works. But as an outsider, he was not resigned to the general opinion that Darwin's theory was the new creed. Nietzsche was not interested in Darwinism as a new popular belief, but as a science, i.e. a creative, renewing force in culture.

During the seventies and eighties Nietzsche's opinion on Darwinism was becoming more negative. But to us, more important than this change is the question why Nietzsche was interested in Darwinism and from which perspective he considered Darwinism. Nietzsche's interest and perspective in these years during his stay in Basle were influenced by several books on natural science, viz. Lange (1866), Boscovich (1759), Kopp (1843-1847), Spir (1873) and Zöllner (1872). These books showed him that contemporary science considered its basic concepts (e.g. atom, will, force, instinct) as the eternal and most fundamental elements of nature. Nietzsche became convinced that these concepts were not the basic elements of nature, but concepts that frame our knowledge of nature. According to him, we should aim at even more basic terms, that are yet unfamiliar to us. He considered Darwinism to be such an attempt to eliminate current biological concepts and to replace them by more basic, less anthropomorphic ones. Later he would criticize Darwinism for having failed in this attempt. In the eighties, Von Nägeli (1884), Rolph (1882, 1884) and Roux (1881) enabled Nietzsche to criticize Darwinism vehemently. Roux emphasized the inner struggle in an organism instead of the external influence, Rolph argued that it is the abundance of nature that makes all progress possible (about Nietzsche's study of natural science, cf. Mittasch, 1950, 1952, and Schlechta & Anders, 1962).

Nietzsche's writings on Darwinism

Generally, authors on Nietzsche and Darwinism deal with about ten to twenty of Nietzsche's

aphorisms. Thus far, the critical edition of Nietzsche's work being not yet complete, fifty-two aphorisms mentioning Darwin(ism) have been counted (see appendix). It is an acknowledged problem in the interpretation of Nietzsche's work, mainly consisting of rather independent aphorisms, that an interpretation of a theme in his philosophy is not proved simply by referring to some aphorism. His philosophy of contradictions is a source of contradictory interpretations. My interpretation is based on a chronological order of all the texts that mention Darwin(ism). This chronological order shows a development in Nietzsche's evaluation of Darwinism. In this development one text, no. 18 in the appendix, has a crucial place, although it is hardly ever quoted or referred to.

Nietzsche mentioned Darwin for the first time in a letter to his friend Carl von Gersdorff (1868), in which he wrote very enthusiastically about Lange (1866). Nietzsche called this book "a true treasure". Lange rejected the teleological interpretation of nature and considered Darwinism in support of his view. But Lange did not abandon teleology completely. He defended a kind of teleology that, although very modest, is a severe criticism of Darwin's theory. But Lange did not realize this (about Lange's influence on Nietzsche, cf. Salaquarda, 1978).

In text app(endix) 5, Nietzsche shows us what in his view are "the dreadful consequences of Darwinism, which I hold true otherwise", when we expand the revolution of Darwin's theory to science in general. The concepts we consider eternal and fundamental, as instinct, purposiveness, will, force, should in fact be divided into several more basic, yet unfamiliar elements. The simplicity of explanation, shown to us by science until now, is an illusion. In its utmost consequence, Darwinism is an exposure of this illusion. ³⁾

David Strauss' "The old and the new faith" (1872) had become an unheard-of success. To

Strauss, the old faith was christianity, the new one Darwin's theory. Nietzsche was very disturbed about the success of this book and wrote his first "Untimely meditation" (1873) in which he accused Strauss of being inconsistent: Strauss pretended to take Darwinism as the foundation of his cultural programme, but he did not draw the ethical consequences from Darwinism. If Strauss were consistent, he would come to the conclusion that Darwin's "struggle for existence" means a society in a permanent state of war, a "bellum omnium contra omnes" (Thomas Hobbes), i.e. a war among all, in which the strongest who have won the struggle have the power to determine the moral rules. But Strauss shrinks from explaining the moral phenomena by Darwin's theory of natural selection through a struggle for life and defends the traditional christian values. Nietzsche was very harsh with Strauss for reconciling Darwinism and christianity, instead of erecting new values, based on Darwinism. Later Nietzsche would criticize the values upon which Darwinism is based.

In his first large aphorism on Darwinism, Nietzsche exposed his "theory of life". He did not consider himself a Darwinist nor a strong opponent; he wanted to develop his view on (neither "for" nor "against") Darwinism. This aphorism has served as a first draft of aph. 224 of "Human, all-too-human". Because of its importance I quote the full text in my own translation; all italics are Nietzsche's.

"On *Darwinism* [app. 18]

The more a man had a communal sense, sympathetic affections, the more he stuck to his tribe; and the tribe survived best, where the most sacrificing individuals existed. Here the good sound habit became *stronger*, here the subordination of the individual was learnt and the character received firmness and educated in this [firmness]. However the danger of stability, of becoming dull, is great.

It is on unrestrained, much more uncertain and *weaker* individuals, who attempt new and various things, that progress depends; innumerable ones of this kind go under without effect, but generally *they become looser* and in this way from time to time they inflict a *weakening*

³⁾ In his view on science, Nietzsche was clearly influenced by the philosophy of the Presocratics about whom he lectured in 1872, 1873 and 1876. Cf. Schlechta & Anders (1962) about Nietzsche's interest in natural science in relation to presocratic philosophy. In the early aphorisms on Darwin there is no evidence that Nietzsche was roused from his dogmatic slumber by Darwin (cf. Kaufmann, 1974: 167).

to the stable elements, introduce something new at some weakened spot. This new [thing] is gradually assimilated by the whole being ['Gesamtwesen'], that as a whole is unimpaired.

The *degenerating natures*, the light degenerations are of the highest importance. Wherever progress must result, a weakening has to precede.

The strongest natures have got hold of the type and stick to it.

Degeneration is always mutilation: but seldom is there a loss without a gain somewhere else. The sicker man for example becomes calmer and wiser; the one-eyed man will have one stronger eye, the blind man will see more deeply within.

Struggle for life is not the important principle! Increase of stable force is possible, through a communal sense in individuals, reaching higher goals is possible, through degenerate natures and partial weakening of stable force. The weaker nature that, as the more delicate, is at least freer, makes all progress possible.

A people that becomes weak somewhere and crumbles away, but on the whole is still strong, such a people is able to absorb the infection of the new and to assimilate it.

In the same way the individual man: the *problem of education* is, to set down somebody so sturdy and pithy, that as a whole he cannot be sidetracked anymore. *But then the educator must inflict injuries upon him*: and when in this way pain, need has arisen, something new and noble can be inoculated there. The over-all force ['Gesamtkraft'] will absorb it now and will become nobler.

The Germans were not only wounded, but almost bled to death, [their] habit, religion, language, freedom were taken from them. They have not gone under: but that they are a deeply *suffering* nation, they have proved, by inventing *music*; they have experienced the blessing of illness.

Contrary to this theory Darwinism is a philosophy for butcher's boys. And the place they give to cultivation, to the wife! Is it true, that wives have sense and inclination only for the strongest butcher's boys! Even among animals this is not true.

Otherwise in my contemplation I want to confine myself to man and to refrain from drawing conclusions on animal development from the laws of human improvement, based on the weaker, degenerated natures. Even though it would be much more permitted to do so than to systematize man bestially from bestiality and its laws: as Mr. Haeckel does, and his peers as D. Strauss."

Nietzsche was in doubt about Darwin's theory. According to him there is no struggle for life in nature, but a struggle for progress by means of weakening. Therefore, although the strongest are physically the best, they are not able to achieve progress; the "weaker" are indispensable. The concepts "weak" and "strong" play a major part in Nietzsche's criticism of Darwinism. In the text quoted above, those who are strong have "a communal sense" and are "the most sacrificing individuals". They "have got hold of the type and stick to it" (an expression borrowed from Goethe), they are the stable force. The opposite is weak. Nietzsche speaks of "unrestrained, much more uncertain and weaker individuals", "light degenerations". Although they can be considered "weak" they have a positive value, because they are indispensable for making progress: only wherever a weakening preceded something new can be incorporated and assimilated. [Nietzsche used the word "assimilate" in its etymological meaning of "making *similis* (= Latin, equal to itself)".]

In the last paragraph of his text, Nietzsche says that he wants to confine himself to man. He does not want "to systematize man bestially from bestiality", but attempts to show the laws of progress in man. Darwinism failed to do so, because it only thought the strong to be indispensable. In this text, Nietzsche does not explain what he means by progress, but at least we can say that to him progress has a natural and a cultural aspect. The natural aspect is the higher complexity of a being, the cultural aspect is the absorption of the new.

Gradually in Nietzsche's philosophy, the meaning of "weak" and "strong" changed. The indispensable characteristics of what was called "weak" in app. 18, later became essential features of the concept "strong":

"What surprises me most when I survey the broad destinies of man is that I always see before me the opposite of that which Darwin and his school see or *want* to see today: selection in favor of the stronger, better-constituted, and the progress of the species. Precisely the opposite is palpable: the elimination of the lucky strokes, the uselessness of the more highly developed types, the inevitable dominion of the average, even the *sub-average* types. If we are not shown why man should be an exception among creatures, I incline to the prejudice that the school of Darwin has been deluded everywhere." (App. 47; translation by Walter Kaufmann: Nietzsche, 1968b: 364.)

The "degenerate natures" of app. 18 are the same as the "stronger" of app. 47. They are "better-constituted" (app. 47), in which expression "better" means "making all progress possible" (app. 18) by assimilation of the new.

According to Nietzsche, nature is wasteful: there is no want but full abundance in nature. Nietzsche was supported in his view on nature by Rolph (1882, 1884). The necessity of a weakening fits in this view of a squandering nature. Progress is not achieved through a struggle for life, but by means of a weakening without destroying the "over-all force".

Nietzsche was convinced that Darwin's theory is not a neutral analysis of nature, but an interpretation and evaluation. Speaking of nature in terms of advantages and disadvantages, fitness and usefulness implies the fixation of a standard. Without such a standard these concepts are empty. Nietzsche criticized Darwin's teleological explanation (in the second sense, of functional explanation), because he rejected Darwin's standard of measuring functionality. According to Nietzsche, the standard in Darwin's theory is survival, derived from a Malthusian image of nature. Nietzsche rejected this standard and tried to fix his own one: "But a natural scientist should come out of his human nook; and in nature it is not conditions of distress ['Notlage'] that are *dominant* but overflow and squandering, even to the point of absurdity. The struggle for existence is only an *exception*, a temporary restriction of the will to life". (App. 40; translation by Walter Kaufmann: Nietzsche, 1974: 292.)

In Nietzsche's view nature is abundant and wasteful. It is destructive in so far that it weakens without destruction of the "over-all force". That is the gist of aphorism app. 18 and, generally, of his concern about Darwinism.

Some of Nietzsche's aphorisms on Darwinism were still positive in the years between 1875 and 1880 (e.g. app. 23), but gradually Nietzsche's doubts grew stronger. To him Darwinism had served its turn: in confrontation to Darwinism he had been able to develop his own view on man and nature. Soon these doubts changed into a severe criticism. From 1885/6 on Nietzsche claimed that Darwin's theory was not original, but an effect of Hegel's philosophy of history, in which historical development was emphasized (cf. app. 30 and 41). Moreover, according to Nietzsche, Darwin's theory, and in fact any scientific theory, does not explain at all, but only interprets from the human perspective (cf. app. 33).

Nietzsche admitted that he had had feelings of sympathy to an attempt of reducing moral phenomena to natural ones, as David Strauss tried, starting from Darwin's theory. He even criticized Strauss for not being consistent in his moral application of Darwin's theory. But Nietzsche turned away from Darwinism when it became clear to him how many human values are hidden in Darwin's explanation of nature. The concept "survival" was his stone of offence: Nietzsche was convinced that the struggle for life, merely in order to survive, was an exception:

"Physiologists should think again before positing the 'instinct of preservation' as the cardinal drive in an organic creature. A living thing wants above all to *discharge* its force: 'preservation' is only a consequence of this. Beware of *superfluous* teleological principles! The entire concept 'instinct of preservation' is one of them." (KGW VIII/1, 2 (63); translation by Walter Kaufmann: Nietzsche, 1968b: 344; cf. "Beyond good and evil", aph. 13.)

In app. 42 Nietzsche summarized his main arguments: It is impossible to speak of "usefulness" when not has been determined to what it is useful. Nietzsche disagreed with Darwin's theory, that it is survival to which some characteristic is useful. It is not a struggle for survival, but a struggle for

power. In this struggle the weak element is truly useful (cf. app. 18):

"If only that had been preserved which proved useful *all the time*, then above all the noxious, destructive, disintegrating capacities, the senseless, accidental..." (App. 42; translation by Walter Kaufmann: Nietzsche, 1968b: 344.)

In the last years of his philosophical thinking (until January, 1889) Nietzsche fulminated against Darwinism (cf. app. 42, 47, 48). It even seems that Nietzsche was on the side of the "Naturphilosophen", arguing against Darwin's theory. Nietzsche ignored that his own case was totally different from that of the "Naturphilosophen". Their arguments that organisms do not adapt to changes in nature, that there is no evidence that the higher species have been developed from the lower ones and that the effect of domestication on the characteristics of a being is superficial, these arguments did not in fact matter at all. Nietzsche had borrowed them in order to strengthen his own voice against Darwin's theory; he wanted to shout down Darwin. We should not be misled by these arguments and keep in mind what is the actual level at which Nietzsche criticized Darwin's theory: Darwin's explanation of nature is anthropomorphic. It cannot be considered a true explanation, but only an interpretation from the human perspective.

In his last aphorisms on Darwinism, the change in the concepts "weak" and "strong" has been completed:

"One should always arm the strong against the weak" (app. 47).

In app. 51 Nietzsche explained how it is possible that the weak have the upper hand: the strongest squander so much that they are too weak to resist the weak, who have developed their minds in order to survive at the lowest risk possible. Natural selection leads to the opposite result as what the Darwinists said: the best adapted that survive are the "most sacrificing" ones (cf. app. 18), and not those who should be considered the best, viz. those who use their will to power to grow in perfection:

"Darwin forgot the spirit (that is English!); *the weak have more spirit*. One must need spirit to acquire spirit; one loses it when one no longer needs it. Whoever has strength dispenses with

the spirit." (App. 51; translation by Walter Kaufmann: Nietzsche, 1968a, 523.)

In his last aphorism on Darwinism (app. 52) Nietzsche rejected a Darwinian interpretation of the "Übermensch": the "Übermensch" as a new, higher human species. Nietzsche clearly said, that it is not a matter of a new species, but of a new, totally different order within the human species.

Nietzsche's assessment of Darwinism

In the eighteen-seventies it was Nietzsche's point of view that German culture was in need of a thorough and rational analysis. The origin of all the generally accepted cultural values should be explored. Attempts as made by David Strauss did not go far enough. Acquaintance with presocratic philosophy and natural science convinced him that it should be possible to invent a "chemistry of concepts", i.e. a reduction of all concepts and values to their most basic, natural elements. In these years Nietzsche considered Darwin's theory as a good example of a true science, i.e. a social force that showed the natural origin of all human values in man's view of himself and nature.

In the eighteen-eighties Nietzsche came to the conclusion that Darwin's theory, too, contained some human values as presuppositions: Darwin's theory was an outlook on nature from the human perspective. Therefore Nietzsche criticized this theory. In Nietzsche's criticism we should distinguish two levels: his main theses, derived from his own philosophy and his auxiliary theses, derived from the German "Naturphilosophen". The latter theses actually were not relevant to his viewpoint. Nietzsche's viewpoint consisted of a few philosophical theses which opposed Darwin's. These theses are of great importance and determine the level of Nietzsche's criticism: Nietzsche was convinced that there is abundance in nature, that there is no struggle for survival but a struggle for power and that the "fittest" are not the best and should not be preferred.

Rejecting the "telos" or standard in Darwin's theory, Nietzsche tried to clarify his own one. It led to a change in the concepts "weak" and "strong". According to Nietzsche, those who are strong do not necessarily survive, and those who

survive are not necessarily strong. His meaning of "weak" and "strong" dissociated itself from the chances of survival. The new meaning of these concepts is derived from the concept "will to power" and is linked to the ability of bringing progress. "Physiologically strong" and "strong according to the 'will to power'" can be the same, but are not necessarily so (cf. my explanation of app. 18). The actual content of the concept "will to power" has not yet been determined. It is not the purpose of this essay to do so, but generally it is acknowledged that there is a basic contradiction in this concept: a physical force to extend the power of a being and a will to assimilate as much material as possible, which depends on a previous weakening (cf. Müller-Lauter, 1971).

Nietzsche's critical reception of Darwin's theory is a proof that his philosophy is not a biologism: Nietzsche did not accept biological standards without criticism. In fact he criticized common biological standards. Darwin's theory did not serve as a proof of his own ideas, but as an opponent on an equal level. Not only nature but Nietzsche, too, needed resistance in order to express himself. The resistance did not consist of a thorough knowledge of Darwin's theory. Nietzsche in fact hardly ever studied a scientific theory thoroughly.

As an opponent on equal level, Darwin's theory was an important aspect of Nietzsche's philosophy. His interest in Darwin's theory was not restricted to a certain period of his life, but was part of a major dilemma in his philosophy: First Nietzsche wanted to reduce all human values to natural, basic terms, but later he had to conclude that all the basic terms in natural science are thoroughly human. They are reflections from the human perspective. In this dilemma the status of Nietzsche's concept "will to power" is ambiguous.

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APPENDIX

A chronological list of Nietzsche's texts on Darwinism

(KGB = Kritische Gesamtausgabe Briefe = Nietzsche, 1975→; KGW = Kritische Gesamtausgabe Werke = Nietzsche, 1967→; Musarion = Musarion edition = Nietzsche, 1922-1929; cf. note 2; (3) and (26) have not yet appeared in the KGW edition; (20), (21), (22) and (39) have not yet appeared in the KGB edition.)

- (1) KGB I/2, no. 562, February 16, 1868
- (2) KGW III/3, 8 (119), beginning 1872
- (3) Musarion, IV: 324, spring — summer 1872
- (4) KGW III/4, 19 (87), summer 1872 — beginning 1873
- (5) KGW III/4, 19 (132), summer 1872 — beginning 1873
- (6) KGB II/3, no. 296, February 21, 1873
- (7) KGB II/3, no. 301, April 5, 1873
- (8) KGW III/4, 27 (2), spring — autumn 1873
- (9) KGW III/4, 27 (17), id.
- (10) KGW III/4, 27 (20), id.
- (11) KGW III/4, 27 (37), id.
- (12) KGW III/1, "Untimely meditations" I (7), April — August 1873
- (13) KGW III/1, "Untimely meditations" I (8), id.
- (14) KGW III/1, "Untimely meditations" I (9), id.
- (15) KGW III/1, "Untimely meditations" I (11), id.
- (16) KGW III/4, 29 (52), summer — autumn 1873
- (17) KGW IV/1, 9 (1), summer 1875
- (18) KGW IV/1, 12 (22), summer — September 1875
- (19) KGW IV/2, 17 (5), summer 1876
- (20) Letter to P. Rée, August 3/4, 1877
- (21) Letter to M. von Meysenbug, August 4, 1877
- (22) Letter to E. Förster-Nietzsche, August 6, 1877
- (23) KGW IV/3, 36 (1), autumn 1878
- (24) KGW V/1, 6 (184), autumn 1880
- (25) KGW V/2, 11 (177), spring — autumn 1881
- (26) Musarion, XIV: 121-122, 1883
- (27) KGW VII/1, 24 (25), winter 1883-1884
- (28) KGW VII/3, 28 (45), autumn 1884
- (29) KGW VII/3, 28 (46), autumn 1884
- (30) KGW VII/3, 34 (73), April — June 1885
- (31) KGW VII/3, 35 (34), May — July 1885
- (32) KGW VII/3, 35 (44), May — July 1885
- (33) KGW VI/2, "Beyond good and evil" (14), summer — winter 1885
- (34) KGW VI/2, "Beyond good and evil" (253), summer — winter 1885
- (35) KGW VIII/1, 2 (131), autumn 1885 — autumn 1886
- (36) KGW VIII/1, 2 (161), id.
- (37) KGW VIII/1, 2 (165), id.
- (38) KGW VIII/1, 2 (203), id.
- (39) Letter to F. Overbeck, June 1886
- (40) KGW V/2, "The gay science" (349), summer 1886 — spring 1887
- (41) KGW V/2, "The gay science" (357), id.
- (42) KGW VIII/1, 7 (25), end of 1886 — spring 1887
- (43) KGW VIII/1, 7 (44), id.
- (44) KGW VI/2, "On the genealogy of morals", Prologue (7), July 1887
- (45) KGW VIII/2, 10 (7), autumn 1887
- (46) KGW VIII/2, 12 (1), beginning 1888
- (47) KGW VIII/3, 14 (123), spring 1888
- (48) KGW VIII/3, 14 (133), id.
- (49) KGW VIII/3, 14 (137), id.
- (50) KGW VIII/3, 15 (120), id.
- (51) KGW VI/3, "Twilight of the idols", ch. 9 (14), August — September 1888
- (52) KGW VI/3, "Ecce homo", ch. 3 (1), October 1888 — January 1889

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