

Darwin and the Interpretation of Natural History

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I am not dealing with "Creationism" and "Intelligent design" but want to discuss the theory of evolution and its practical consequences. Was Darwin right to speak of "evolution by selection" and of selection because of a general "struggle for existence" and of this "struggle for life" because of a general "war of nature" in the world of plants and animals?

Was Darwin correct assuming the leading forces of the progress of humanity from halfhuman conditions to the now living primitives and to the higher civilized nations are competition, struggle and the selection of the fittest? Is it desirable to continue the process of natural selection by programs of artificial selection by eugenics and euthanasia in order to enhance the human idioplasm? Or would it be more appropriate and relevant to start with the principle of cooperation as the fundament of life on earth and the leading force of the building-up of complexity and the web of life, and with the principle of mutual acceptance, appreciation, respect and love for the development of humanity?

1. Darwin and the theory of evolution by selection

Charles Darwin was one of the greatest observers of natural phenomena. He collected and registered an immense amount of facts. His idea of a common genealogical tree of all the living beings on earth is convincing. But when he tried to read the language of nature and took the facts as "signs" he developed the theory of evolution by selection and selection because of a general struggle for life, and presupposed a universal "war of nature". And this is, if not wrong, so at least very one-sided. His theory of evolution can be understood as a reflexion of the political ideology of his time: the unregulated Manchester capitalism dominating the first industrial nation England, and the growing colonial British

empire ruling the world from Cairo via Capetown to Calcutta. The upper classes and the victorious white races ruled the world. Listen to the last sentences of his second book on "The descent of Man", and Selection in Relation to Sex, Vol. 2, London 1871.

Of course, Darwin observed and registered also the phenomena of cooperation of organisms, species and their individuals, he even recognized altruistic behavior in nature, but he understood them as secondary phenomena only. Basic in the natural and the human world is "the struggle for existence": The stronger must win, the weaker must die, the survivor procreates, the loser will vanish. This is the law of nature: Evolution by selection of the best. But are those who survive the best? In his second book Darwin himself argued like a "Social-Darwinist".

But with respect for the Christian tradition of love, he wrote: "The aid we give to the helpless is at most a result of our instinct of sympathy, and even if our reason says no, we must not repress the most noble part of our nature". We should praise him for this statement.

Some of his followers forgot this part of Darwin and propagated the "eugenic project" in the Ciba-Conference 1962 and the Hoffmann-LaRoche-Conference in 1971 (where I was participating with a lecture). The project was the enhancement of the human genetic outfit by AID, artificial insemination from a donor, to eliminate hereditary defects and to improve the genetic material of human kind. The further evolution of humanity demands a genetic progress in health, intelligence and fitness. Which woman would not be proud to receive the semen of Darwin or Einstein? Wondered Herman Muller. By prenatal operations we may increase the numbers of geniuses, promised Joshua Lederberg. (Unfortunately the children of geniuses were rarely brilliant themselves). Logically it remains obscure what "enhancement" of the human genetic material means, because you can't judge on good, better and evil on genetic terms only.

Evolutionary biology is continuing this line of social-Darwinism: Richards Dawkin's "selfish genes" (1978) are now the real agents of evolution because they already compete with each other and only the fittest genes multiply. This is used by the modern Political-Darwinism for the idea of a universal warfare. By chance I read the HERALD TRIBUNE of February 20, 2007, in an airplane and found an article of David Brooks. I quote: "From the content of our genes, the nature of our neurons and the lessons of evolutionary biology, it has become clear that nature is filled with competition and conflicts of interest. Humanity did not come before status contests, status contests come before humanity and are embedded deep in human relations." Brooks then argued: "Rousseau was wrong – Thomas Hobbes right", and concluded: "Because human nature is so aggressively designed for the struggle of power, we need a strong state, a hard education and a tragic world-view (Steven Pinker)." And he maintained: "Iraq has revealed what human beings do without a strong order-imposing state." He left open, whom he had in mind: Saddam Hussein or George Bush jr.? The "selfish gene" served as proof for the universal power struggle and the right of the stronger empire "to take it all".

2. Neurobiology and the significance of the human motivation-system and the mirror-neurons

The discovery of the human motivation-system is one of the recent achievements of neurobiology. Motivation-systems regulate our internal life and are at the same time our "social brain". Acceptance and appreciation we find in other human beings are the deepest grounds for our internal motivation. At the bottom of our motivations we find interpersonal and social recognition, esteemation, affection and love. From a neurobiological point of view we humans are beings dependent on cooperation and social resonance. Where we find this we become alive, where we miss this we become weak and sick. Not the struggle for existence of human life but mutual acceptance and cooperation drive on the evolution. This corresponds, of course, to life experiences everybody has made:

social isolation or exclusion hurts, makes apathetic and leads to "social death", and often enough to suicide. Appreciation motivates us to achievements we had never dreamed of before. And everybody knows that the building-up of a child's brain depends on the love of the mother, the family and the next. Why is so? Because the human being is a relational and social being.

The discovery of the mirror-neurons (Giacomo Rizzolati 2006) proves how much we humans react and respond already unconsciously to signs and signals from the outside. Mirror-neurons are responsible for empathy, emotion sharing and many other cognitive capacities on which social life is based. While the mind and the motivation-system may be seen as a case of intrapersonal cooperation, the mirror neurons lead us to consider the interpersonal cooperations. Intact networks of mirror-neurons protect our health and increase our love of life, unwanted loneliness shortens our life time.

The result: In neurobiological perspective we human beings rely on trust and social resonance, on mutual acceptance and appreciation. Social binding is not a sign of weakness, but the element of life without which we cannot exist and develop our humanity.

Because our selfunderstanding and our understanding of nature outside correspond, I draw the conclusion that Darwin's hermeneutics of nature was very one-sided. Not struggle but cooperation is the fundamental principle for the building-up of life-systems. Not a "war of nature" drives on the evolution of life but peace in nature and the performative realization of new possibilities. In Darwin's time already the Russian socialist Pjotr Kropotkin brought this idea into the discussion with his book "Mutual aid in the human and the animal world". The biologist Jacob von Uexkuell said the same: "At the beginning was the relationship". The modern biologist Lynn Margulis speaks of a "symbiogenesis": All life is symbiotic. All forms of life work together in bulding-up of more complex forms of life by sharing not by fighting.

3. Theological Hermeneutics of Natural History

Every theology of nature interprets nature not only in special and temporal terms, but also in the transcendent dimension, that is to say: "Before God". This larger framework of reference can integrate the immanent dimensions of sciences. In the transcendent dimension we see nature in higher forms of complexity and potentialities. Does this change the theory of evolution? Yes.

1. The wonder of Being. We recognize the contingency of being, and answer the otherwise unanswerable question: Why is there anything at all, and not nothing? With the understanding of nature as creation of a transcendent God. Nature is not divine and not nothing. Nature is there because God created everything and preserves all the creature through his indwelling spirit. All finite things exist in the presence of ^Vinfinite God and are in their very being a resonance of the pure being of God. Their being-here (Dasein) is a reflection of the eternal being of God. This is the "wonder of being". All created things have a transcendent dimension. In their transcendent dimension also transcendence becomes immanent. There is a immanent transcendence in everything. Whatever is, wants to be and not not to be, wants to stay, and not vanish. All finite things long and drive towards the infinite ~~be~~ being. There is self-transcendence in all things, if we understand them as created things. V the

"The wonder of being" is also the beginning of science. Since Plato the beginning of knowledge is astonishing (thaumazein).

2. The wonder of Life. Seeing life in the transcendent dimension we have to correct the theory of evolution at 2 points:
 - a) Every stage of life is immediate to God, and its value depends not only on what emerges from it, but on its own existence, on its own

self. This is true for dinosaurs and for all the life-forms preceding humankind. This is also true for embryos, fetuses and children. They are not only steps on the long march of progress, but also have their eternal value in themselves.

- b) Humankind is not, as the theory of evolution and the general belief in progress maintains the goal or the crown of the history life. We humans are late-comers in the community of the living on earth, and have, as late-comers, to respect our ancestors, our older sisters and brothers in life. We have to learn wisdom from them, because of their older life-experience.
 - c) The "struggle for existence" knows only survivors and victims, but the God of the crucified and risen Christ is a savior of victims and a judge of survivors.
 - d) Astonishment over life, forms of life and communities of life is the beginning of all life-sciences. Life is more than a computer. Life shows the immanent transcendence of the divine spirit.
3. The wonder of the Spirit. First of all it is astonishing how much the human intellect and the intelligibility of nature correspond. We can know more than we need for our survival. We can know the structures of matter and life and understand what we know. 1a
- a) If we try to understand nature with the interest of understanding and participating, we enter with respect into her community. If we try to know nature with the interest of dominating and exploiting nature, we separate ourselves from her community. Human are not the gods of nature, but part of nature and members of her community of life.

- b) In natural sciences and the hermeneutics of nature nature is not only object but also subject of knowledge: In human knowledge nature – at least the known part of nature – comes to a consciousness of itself. Human recognition of nature must therefore remain in accord and peaceable with nature, not destroying its subject.

- c) "God's Spirit
sleeps in things
dreams in animals
awakens in human beings"

With this old saying, we change from struggle for life to peace in life, and from a one-sided domination of nature to sharing and caring community with nature.

PS. There is also a logical problem with the term "evolution". In the latin origin it means unwrapping of what is enveloped in something.. Evolution is de-velopment. Nothing new can happen. Future is the potentiality of the past. The concept of evolution or development doesn't fit for the description of human history, and is of limited use only in understanding natural history. I would recommend the term "history", because history (in German "Geschichte") takes place between the old and the new, the end and the beginning, the catastrophe and the new start. For understanding history we need to see the future in the category of the new.