

# «DARWINISM» AND THE FUTURE OF A GLOBALIZED WORLD

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## «Дарвинизм» и будущее глобализованного мира

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The given political situation is dominated on a loss of predictability and of the validity of signed contracts. Classic Darwinist can justify this with the evolutionary principle of natural selection that the fittest will/ should survive. But Darwin relativized this position for the understanding of the evolution of humans as social beings. He introduced «sympathy distinct from love». Both principles seem to exclude each another as mechanics and electromagnetism seemed to be incompatible. Einstein developed the technique of hypothetic-deductive theories of principle and could interlink both with the Relativity Theories. This technique is used to interlink both positions of Darwin. The joint basis of both evolutionary principles is surprisingly «win-win». Its principles are demonstrated on the metaphor of chess. It is explained why also the genetically based evolution can be understood as a special case of «win-win». Therefore, evolution on the basis of «sympathy» is understandable as the next step of evolution with natural selection as the precursor principle. All the demands of precursor levels have to be taken further on in consideration. «Sympathy» is never sufficient to deal adequately with the challenges of the globalized world. Responsibility would be a possible solution.

*Keywords: evolution, survival of the fittest, sympathy distinct of love, WIN-WIN strategy, responsibility, loss of credibility, sense of coherence*

В современной политической ситуации преобладает потеря предсказуемости и действительности подписанных соглашений. Классический дарвинист может обосновать это эволюционным принципом естественного отбора, согласно которому сильнейший будет/должен выжить. Но Дарвин обосновал эту позицию для понимания эволюции людей как социальных существ. Он ввел термин «симпатии, отличной от любви». Оба принципа, по-видимому, исключают друг друга, точно также, как механика и электромагнетизм кажутся несовместимыми. Эйнштейн разработал технику гипотетически-дедуктивных теорий принципа и мог связать как теорию относительности. Этот метод используется, чтобы связать обе позиции Дарвина. Совместная основа обоих эволюционных принципов удивительно соответствует «win-win» стратегии. Его принципы продемонстрированы на метафоре шахмат. Объясняется, почему генетическая эволюция также может рассматриваться как особый случай «win-win». Исходя из этого, эволюция на основе «сочувствия» понятна как следующий шаг эволюции на основе естественного отбора как принципа — предшественника. Все требования уровней предшественников должны быть приняты во внимание в дальнейшем. «Сочувствия» никогда не бывает достаточно, чтобы адекватно справиться с вызовами глобализованного мира. Принцип «ответственность» может стать возможным решением обозначенной проблемы.

*Ключевые слова: эволюция, выживание сильнейших, симпатия, отличная от любви, стратегия «вин-вин» (выиграл — выиграл), ответственность, потеря доверия, чувство согласованности*

Our world is a ball — This is a fact. But how can we handle this with responsibility for global peace and welfare in ecology, economy and culture? The analysis of the starting point is disillusioning: The predictability of political processes is reducing especially because of the loss of the power of signed agreements. Given contracts seem negligible if the assumption is given to be able to make more national or personal win thanks to physical, economic or political power. The consequences on the global economy are not to oversee, especially for the «less powerful» economies. But the economists predict for the long term also a loss for all, even the «short term winner».

Similar consequences are to expect in ecology and socio-cultural short-term effects. This demonstrates: Balanced agreements are in the interests of each single country — any responsibility for ecosystems and any social-cultural dynamic too. It makes capacities free for future oriented wins and creative alternatives. Individual wins are to expect just in short term calculation.

What could be feared if agreements would be recalled in the interest of unilateral protectionism which is relevant for the ecological or economic stability of the world? This could cause a loss of confidence in the predictability of all instruments, which should prevent the

individual against future risks. The effects for health are known since decades: The so called «sense of coherence» is accepted as one of the best confirmed factors for health promotion and salutogenesis [9].

Classic Darwinists can support the focus on the individual surplus: «I follow just Darwin's principle of evolution: The fittest should survive!». But was this really the position of Darwin? You can come to this conclusion if you read only his first main book: «On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life» [1]. But Darwin published in 1871 a second fundamental work: «The Descent of Man» [3, 4]. The most relevant part of this book — in my understanding — was overlooked: Darwin relativized his concept of natural selection based on self-oriented application of power for the evolutionary progress to humans as social beings: «No tribe could hold together if murder, robbery, treachery, etc. were common; consequently such crimes within the limits of the same tribe are branded with everlasting infamy. He proposed for the evolution of the primate to the person an additional evolutionary principle: The «sympathy — distinct from love: «A human who possessed no trace of such instincts would be an unnatural monster».

Darwin predicted a further evolutionary process to an eco-socio-cultural-sustainable word: «As man advances in civilization, and small tribes are united into larger communities, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation, though personally unknown to him. This point being once reached, there is only an artificial barrier to prevent his sympathies extending to the men of all nations and races... Sympathy beyond the confines of man, that is, humanity to the lower animals, seems to be one of the latest moral acquisitions.... but to the humblest living creature».

### Epistemological Incompatibility — Handled Thanks to Einstein's Hypothetic-Deductive Technique for Theories of Principles

But we have to see the different epistemological positions of the principle of evolution thanks to natural selection and thanks to the principle of sympathy: They seem to exclude each other — similar as Newton's theory of mechanics and Maxwell's theory of electromagnetism seemed to exclude each another.

Einstein developed a technique to link such indispensable but theoretically not conclusive frames [6]. He named it «theories of principles». It is known in philosophy as «hypothetic-deductive». Einstein concluded from the fact that electromagnetism and mechanics are two parts from the same scientific discipline (physics) that joint principles must «behind» both parts of physics. Otherwise they would not be parts of the same. Therefore

it was conclusive to invent an idea of a hypothetic universe «behind» the fundamental entities of the universe, which were known 1905 and 1915: Only gravitation, electromagnetic fields, quantum and «solid bodies including the electron» were known. Therefore he hypothesized an universe without electromagnetic fields and without solid bodies but consisting of physical entities with the potential for the occurrence of electromagnetic fields and solid bodies: The energetical field. The attributed principles allowed him the conclusion of  $E=mc^2$  — which fits as well to the formulas for mechanics as to the formulas of electromagnetism — if electromagnetic fields are handled «as they would have a mass equivalent to Planck's quantum multiplied with their frequency». Then he could neglect the energetical field — as a scaffold can be removed after finishing the house. So the Special Relativity Theory is indispensable for physics including cosmology. But the standard model of cosmology does not cover energetical field. The invention of the energetical field was only a «helping construction». The SRT does falsify neither «Newton» nor «Maxwell». Only their applicability is restricted on their classic problems.

Now it is stay of knowledge that electromagnetic fields are the ancestors of atoms and electrons. So it is conclusive to interpret Einstein's «behind» as «evolutionary earlier».

The hypothetic-deductive technique can be used e.g. to develop such a theory of principles for medicine and other health related scientific disciplines [7]. The applicability should be demonstrated on the integration of «Darwin 1» (the evolutionary model on the basis of natural selection) and of «Darwin 2» (the principle for the next evolutionary step on the basis of «sympathy») within one extended view of bio-socio evolution. Darwin developed his theories just for permanent multicellular. He assumed an ancient precursor cell for animals and plants — similar as Einstein assumed the energetical field. But Darwin did not make a hypothetic proposal about its nature [1]. Darwin accepted the assumption of just one evolutionary process for inanimate and animates [4]. But he avoided operational statements about that: «What manner the mental powers were first developed in the lowest organisms, is as hopeless an enquiry as how life itself first originated. These are problems of the distant future, if they are even to be solved by man.» and: «It is mere rubbish thinking, at present, of origin of life; one might as well think of origin of matter [2].

Starting point for the attempt to link «Darwin 1» and «Darwin 2» is the hypothetic assumption of a world without as well multicellular which guide their activities to survive thanks to the use of natural selection as without of humans which use sympathy as tool for an evolutionary progress. Both proposals of Darwin can be integrated into an extended view of biological and socio-cultural evolution thanks to the WINWIN-concept.

The model can be explained with the metaphor of chess [8]: This game is based on agreements about the

attribution of meaning to structures: Such agreements restrict the freedom of the users: One type of agreement deals with the restrictions about the directly observable structures. It has to be accepted that the field is just 8 to 8 squares in black and white, and there are black and white characteristic figures: pawns, horses, the king etc. The other type of agreement is not directly observable: The rules for the allowed processes. So a horse has to be moved two steps forward and one step to the side or vice versa. Therefore a chess-player can predict what kind of movements has to be expected.

Why the players are willing to accept the logically not deducible rules? Because of the possibility of two types of win:

a) to have the classic (evolutionary old) chance to win the game. But the loser is not losing his life: The falling of the king is just a symbol for the death.

b) to have to emergent option for a new type of fun thanks to the unpredictable and individual use of the now possible options for individual creative movements.

But this is only possible if there is a partner who knows and accepts the consents. Therefore the rules must be distributed to others — better not only to family members. The prerequisite for the persistence of emergent win was to share the chance to win with others. The prerequisite is WINWIN.

This explains fundamental aspects of the evolutionary progress:

a) The new emergent level is based just on the characteristics of the precursors: Wood and stone can be used adequately to their nature for many applications. To use for figurers is just one. There would be an endless number of possible figures from wood or stone. But the joint agreement focuses just on the six.

b) These six are relevant only because of the attribution of meaning in agreement. The same is to observe in live: Only 20 amino acids are essential for live — 20 from nearly endless theoretically possible ones.

c) There are aspects, which can predict thanks to observation: the different structures, obviously from the forms and the process, consents conclusively from the systematic analysis of observations of plays.

d) There are aspects, which are in principle hidden for the outside observer: In which way and why the individual player will use the allowed movements. Usually to win the game.

e) But sometimes the father makes a «wrong» step: Maybe to let win the son. Then the son has pleasure and is willing to learn chess as source for pleasure for his life: So emergent new applications can be created for new evolutionary levels but again based just on the evolutionary precursor.

f) There is no need on influence from «outside»: The creators of chess were able to invent the game just on the basis of their creativity.

This should focus the interest on two indispensable and independent steps for the evolutionary progress:

1) The creation and realization of the emergent: Just two maharajas should have been created chess. So individual wishes, fears and options and the special environmental possibilities are the starting points. They created the rules not with the intention to start an evolutionary process: The personal surplus was the reason: To share the knowledge was the prerequisite to have interesting partners to play and to have fun.

2) The worldwide distribution was also not based on the intention to push an evolutionary process: Again individuals were interested to have an individual surplus. So the idea is spread out unconsciously and with extreme speed in comparison to evolution on the basis of genes and reproduction. Richard Dawkins has seen the need of an evolutionary principle beside the genes. He proposed the idea of Meme [5].

So the evolutionary process can be understood often as an unintended process thanks to intended actions.

### **The Compatibility with the Classic Evolutionary Process Based on Genes and Biological Reproduction**

This seems to be in contradiction to the evolutionary process of multicellular. But the experiences with chess helps to understand the obvious differences as the expression of a very complex follow up of emergent steps just on the basis of the different ancestor levels. The emergent new has to be based on the options, which are given by the previous evolutionary level and therefore restricted on the compatibility of the intentions of the precursors. The options are also restricted by influences from the given environments: The applicability of wood and stone had to be respected for the figures of chess and their possible movements. This has to be respected even in the case of the father who is interested to support the development of the personality of the son thanks to stimulating the son to like chess. The restrictions of the precursors and the environments are easy to understand and not relevant in the case of father and son. But this is changing with the number of levels of precursors, which have to be integrated.

As higher the related living being is as longer is the cascade of precursors with their specific intentions and prerequisites up to the level of the single fertilized cell with its rules thanks to the genetic code. The high evolved individual has neither real information about the meaning of the own genes and the genes of potential sexual partners nor from the demands of the levels, which are based on the level of the single cellular. The individu-

als can only estimate about that from obvious characteristics. Therefore the individual influence is restricted to the selection of sexual partners according to better genes. And the genetic code is based on immaterial structures, which can be influenced physically and chemically. Not a surprise that the emergence of new needs so long time in high animals but is so quick e.g. in virus and microbes.

### Speculations for the Future: From Sympathy to Responsibility

The proposed extended view of the biological and social evolution thanks to combining «Darwin 1 and Darwin 2» allows additional assumptions of possible further evolutionary steps «after Darwin2». Darwin 2 deals just with the evolutionary process of humans, which are interested on their individual surplus. «Sympathy» is not «altruism». It can be seen as close to game theory: Sympathy is a tool for individual, but not immediate surplus. But is this sufficient within the given situation? The knowledge is known since «Darwin» that evolutionary process is not predictable but permanent running. Some visionaries have recognized even in the 20<sup>th</sup> century that this process can be influenced especially thanks to activities of humans. But our generation is the first in which this knowledge is widespread. First political consequences have been to integrate eco-social market economy. But this was focused only on sustainability with the intention that the next generations of humans will have also the needed resources.

We have learned that there is no more automatic feedback of processes, which are never compatible with the further needed cascade of demands up to the stability of natural ecosystems. The pictures of Chinese farmers demonstrate this interdependency: They have to pollinate the blossoms of their apple trees with brushes because of the lack of bees. UN's Global Assessment Report 2018 is giving alarm that 1 million species are endangered in their persistence — and with them the human mankind.

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You can see this also with a focus on the surplus and survival of our children and grandchildren and therefore on «sympathy according to Darwin 2». What would have been taken in the 20<sup>th</sup> century if politics would have focused on the «simplest reason [which] would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation, though personally unknown to him»?

What kind of positive effects could be expected in the 21<sup>st</sup> century if the principles of WINWIN would be applied just on logic arguments to extend «sympathy beyond the confines of man, that is, humanity to the lower animals, seems to be one of the latest moral acquisitions...and to the humblest living creature» — as Darwin predicted as ecological oriented visionary.

But the actual knowledge about the processes within a more and more globalized world makes it obvious: self-oriented sympathy even including to nature conservation is never enough. The activities of mankind influence very complex eco-socio-cultural nets. An option would be to use the principle of WINWIN as starting point for the next evolutionary step: From sympathy to responsibility. But the experiences of chess demonstrate: We should not expect a worldwide spreading out if this is based just on orders of the political, economic and cultural authorities. The solution could be the personal experience that the individual decision to act and to abstain from given options in a weighting valuation process according to the individual responsibility is an individual surplus, an instrument to be part of community and society in a dynamic cultural and ecological setting. This should be experienced as a resource for sense of coherence, additional to the options of «sympathy» and the needed «survival». There are some processes especially of so many young people all over the world, which give hope. But the political situation is dominated actually from a loss on confidence even on the level of «Darwin 1». But is there really another option than responsibility?

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