

Wolf-Ekkehard Lönnig

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Evolution by Natural Selection – *Unlimited and Omnipotent?*

**Some ironic and factual comments on
today's main evolutionary hypothesis**

*“...we know the course of evolution on earth unambiguously shows
that Darwin was right.”*

Sir David Attenborough OM, CH, RVO, CBE, FRS
Attenborough has collected 32 honorary degrees from British universities¹

*“God's design and God's judgment [were replaced] by natural selection.”
“Darwinism is not a testable scientific theory, but a metaphysical research programme.”*

Sir Karl R. Popper CH, FBA, FRS
Popper was Professor of Logic and Scientific Method, University of London²

*“I had a chance to interview Popper myself. [...] I immediately
brought up the issue of natural selection. He told me that his opinion
had not changed³. He also said that he thought that natural selection had in fact been falsified
“by Darwin's own theory”. Distortions introduced by sexual selection sometimes
meant that offspring were not better adapted than their parents, he said.”*

Tom Bethell: Interview with Popper
Bethell is a senior editor of *The American Spectator* and was for 25 years a media fellow of the Hoover Institution.
He was formerly Washington editor of *Harper's*, and an editor of the *Washington Monthly*⁴

Natural selection has become the proverbial “untouchable holy cow” for almost all of evolutionary biology, starting substantially with Darwin's *Origin of Species* from 1859 onwards: For many biologists it appears to be totally “verboten” even to look at that largely imaginary female cattle critically, and the option that its god-like power could be doubted for scientific reasons is, in fact, absolutely beyond the vision of virtually all neo-Darwinian evolutionists. Metaphorically speaking: Instead of producing a range of valuable dairy products and for the carnivores some flesh and meat, this ingenious cow is thought to have created, unconditionally, without the slightest exception, hook, line, and sinker, completely/ totally/ utterly/ sure as hell, the entire world of life

¹ https://en.wikipedia.org/wiki/David_Attenborough (For the context, see, please, the brief supplement.)

² https://en.wikipedia.org/wiki/Karl_Popper (For the context, see, please, the text below.)

³ Bethell notes that his partial recantation in 1978 apparently happened under neo-Darwinian pressure. Bethells interview was in 1988. Cf. also <http://www.weloennig.de/NaturalSelection.html>

⁴ https://en.wikipedia.org/wiki/Tom_Bethell. I don't follow Bethell in his criticism about global warming and I'm not convinced of his views on AIDS.

forms ever existing on earth including man and thus, in the approving words of John C. Avise, *Distinguished Professor of Ecology & Evolution, University of California, Irvine* (1998, p. 208), "Natural selection comes **close to omnipotence**"⁵, and professor Christopher Exley (2009, p. 589) from Keele University is, indeed, convinced that "both the beauty and the brilliance of natural selection are reflected in its **omnipotence** to explain the myriad observations of life"⁶ (vitaly in agreement with Dawkins, Coyne, Futuyma, Todd, Ayala, Mayr and many other renowned evolutionary authors⁷; see below).

Interestingly, this is not a recent phenomenon, which presumably perhaps arose in the wake of the formation of the *Modern Synthesis* in the late 1930s/early 1940s. Rather, already at the end of the 19th century, August Weismann wrote a book titled "Die Allmacht der Naturzüchtung" [*The Omnipotence of Natural Selection*]⁸ (1893) and proclaimed that natural selection would be the "**only great principle**" allowing organisms to adapt and evolve, indeed the "**cardinal principle of alterations of the organisms**"⁹ (i.e. of all evolution), and "the greatest discovery ever made in the life sciences, which would guarantee the names of Darwin and Wallace "**immortality**" – in the context:

(Pp. 62/63) "[I] now think it is proved that all hereditary adaptation is based on natural selection, that natural selection is **the only great principle**¹⁰ that enables the organisms to follow their changing conditions to a certain high degree, building new ones on the old adaptations; it is not just a helpful principle, which is used where the supposed inheritance of functional changes leaves in the lurch, but it is the **cardinal principle of alterations of the organisms**, ... "

(P. 63) "I therefore consider the discovery of natural selection as one of the **most fundamental** [breakthroughs] ever made in the life sciences, a discovery which alone suffices to secure the name of Charles Darwin and Alfred Wallace immortality, and if my opponents call me an "ultra-Darwinist" who exaggerates the principle of that great scholar into one-sidedness, this perhaps makes an impression on many anxious minds who consider the "juste-milieu" to be the right thing in advance. But it seems to me that one never can say *a priori* how far an explanatory principle reaches, it must first be tried, and to have made this attempt, that is my crime or my merit."

Moreover, Weismann was not a lone voice crying out in the wilderness¹¹, but the leader of an entire school promoting the idea of omnipotent natural selection.

⁵ John C. Avise (1998): *The Genetic Gods. Evolution and Belief in Human Affairs*. Harvard University Press. Cambridge, Massachusetts and London.

⁶ Christopher Exley (2009): Darwin. Natural selection and the biological essentiality of aluminium and silicon. *Trends in Biochemical Sciences* **34**: 589-593.

⁷ More or less begrudgingly, some provide some subsidiary qualifications but the gist of their faith is given in the following sentences above.

⁸ Weismann A (1893): *Die Allmacht der Naturzüchtung. Eine Erwiderung an Herbert Spencer*. Gustav Fischer, Jena.

The original German text reads (p. 62; spelling according to Weismann 1893): "Ich halte deshalb die Entdeckung der Naturzüchtung für eine der **fundamentalsten**, die auf dem Gebiete des Lebens jemals gemacht worden ist, eine Entdeckung, die allein genügt, den Namen Charles Darwin und Alfred Wallace die **Unsterblichkeit** zu sichern, und wenn meine Gegner mich als "Ultra-Darwinisten" hinstellen, der das Princip des grossen Forschers ins Einseitige übertreibt, so macht das vielleicht auf manche ängstliche Gemüther Eindruck, welche das "juste-milieu" überall schon im voraus für das Richtige halten, allein mir scheint, dass man niemals schon a priori sagen kann, wie weit ein Erklärungsprincip reicht, es muss erst versucht werden, und diesen Versuch gemacht zu haben, das ist mein Verbrechen oder mein Verdienst."

⁹ Original German text (pp. 62/63): "Somit halte ich es jetzt für erwiesen, dass alle erbliche Anpassung auf Naturzüchtung beruht, dass Naturzüchtung das **einzig grosse Princip** ist, welches die Organismen befähigt, ihren wechselnden Lebensbedingungen bis zu einem gewissen hohen Grade zu folgen, indem es auf den alten Anapassungen neue aufbaut; es ist nicht ein Hilfsprincip, welches da einsetzt, wo die vermeintliche Vererbung functioneller Abänderungen im Stiche lässt, sondern es ist das **Hauptprincip der Abänderung der Organismen**..."

¹⁰ Similarly Darwin's followers like Theodosius Dobzhansky – although critiquing Weismann's "omnipotence of natural selection" as an "unfortunate exaggeration" – nevertheless asserted (1956, p. 597) that: "Natural selection is a remarkable enough phenomenon, since it is the **sole method** known at present which begets adaptedness to the environment in living matter."

<https://anthrosource.onlinelibrary.wiley.com/doi/pdf/10.1525/aa.1956.58.4.02a00020>.

Mark Ridley (2003, p. 256): "Natural Selection Is **The Only Known Explanation** For Adaptation." http://www.biologia.buap.mx/Evolution_3rd_Edition.pdf.

Julian Huxley (1953, p. 36) that natural selection "is **the only effective agency in evolution**" and the "**sole agency of major evolutionary change**". For the full sentence see, please <http://www.weloennig.de/NaturalSelection.html>

Jacobus J. Boomsma (2016, p. 1253): One of the key insights of G. C. Williams: "Natural selection is **the only explanation** for the origin and maintenance of adaptation." <https://www.sciencedirect.com/science/article/pii/S0960982216313872>

Paul Carus, who edited *The Monist* from 1890 to 1919, summarized the situation of his time by deducing the idea directly from Darwin, thus:

“Darwin [...] was not opposed to the Lamarckian explanation, but in the struggle of parties his name has become the exponent *of a school* which emphasized the *omnipotence of natural selection*.”¹²

Now, indeed, it was Darwin¹³ who had created that biologically omnipotent golden cattle in its juvenile form¹⁴ essentially in the *Origin of Species* (1859, p. 109, sixth and last edition 1872, p. 85), saying, among an enormous amount of other doubtful and false but psychologically most suggestive, subtle and sophisticated assertions, the following charming and seductive words:

“Slow though the process of selection may be, if feeble man can do much by his powers of artificial selection¹⁵, I can see *no limit to the amount of change*¹⁶, to the beauty and infinite complexity of the coadaptations between all organic beings, one with another and with their physical conditions of life, which may be effected in the long course of time by nature's power of selection [1872 added: ‘that is by the survival of the fittest’].”

And near the end of his book (1859, p. 469/1872, p. 412), he recapitulates on the insinuated power of natural selection:

“What limit can be put to this power, acting during long ages and rigidly scrutinising the whole constitution, structure, and habits of each creature, - favouring the good and rejecting the bad? I can see *no limit to this power*, in slowly and beautifully adapting each form to the most complex relations of life. The theory of natural selection, even if we looked no further than this, seems to me to be in itself probable.” [1872 modified: “...even if we look no farther than this, seems to be in the highest degree probable.”]¹⁷

Darwin's psychologically enticing “no limit” hypothesis (“ye shall be as God”¹⁸), substituting ingenious design in nature by infinite variation and omnipotent natural selection, can also be found at several other places of his extensive work, for example in *Domestication*¹⁹ 1868, Vol. I, p. 7 (the same in the second edition 1875):

“...as natural selection acts exclusively by the preservation of variations which are advantageous under the excessively complex conditions to which each being is exposed, *no limit* exists to the number, singularity, and perfection of the contrivances and co-adaptations which may thus be produced.”²⁰

Again, in *Cross and Self-Fertilization*²¹ (1876, p. 410):

¹¹ “English idiom for someone who expresses an idea or opinion that is not popular or that the individual is the sole person expressing that particular opinion with the suggestion that the opinion is then ignored.” For more, cf.: https://en.wikipedia.org/wiki/Voice_in_the_Wilderness.

¹² Zu Plate: Book review (1903) <https://search.proquest.com/openview/9fc6ae8286e132ffc43a245d105d5508/1?pq-origsite=gscholar&cbl=1817535> <https://archive.org/details/monistquart13heguoft/page/634> Signed C; Probably by Paul Carus, who edited *The Monist* 1890 ff.

¹³ Especially admired/venerated also for “how much he managed to get done” despite of poor physical health displaying “all sorts of horrible symptoms – constant vomiting, headaches, depression, fits of crying”. See <https://fivebooks.com/best-books/evolution-jerry-coyne/>

¹⁴ Although some authors seem to favor a female animal for Exodus 32:1-8 ff. deriving it from the Egyptian Hathor and related cults, in that case key data appear to point to a male, especially Psalm 106:19, 20 (“image of a bull”). Anyway, such worship, “which associated gods with cows, bulls, and other animals, likely had influenced the Israelites to a great extent, causing them to adopt calf worship so soon after being liberated from Egypt.” <https://wol.jw.org/en/wol/d/r1/lp-e/1200000867> Often the power and acts of יהוה were attributed/ascribed to such animals. (For the pronunciation of the Tetragram cf. Rolf Furuli (2018): *The Tetragramm – Its History ...* [Awatu Publishers, Norway].)

¹⁵ Well, “feeble man” has never been able to create a single entirely new species by artificial selection. In case of doubt, see, for example, the discussion in <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>, <http://www.weloennig.de/Artbegriff.html> and http://www.weloennig.de/ShortVersionofMutationsLawof_2006.pdf

¹⁶ Italics and/or bold here and in the following quotations, if not otherwise stated, by W.-E. L.

¹⁷ <http://darwin-online.org.uk/content/frameset?itemID=F373&viewtype=text&pageseq=1>

¹⁸ Reminds perhaps of this verse, quoted here according to the American Standard Version.

¹⁹ My abbreviation for the books' title *The Variation of Animals and Plants under Domestication*. Two Volumes. John Murray. London.

²⁰ <http://darwin-online.org.uk/content/frameset?itemID=F880.1&viewtype=text&pageseq=1>

“There seems to be *no limit* to the changes which organisms undergo under changing conditions of life;”²²

Or “no limit” in a letter to G.H.K. Thwaites (21 March 1860, p. 145):

“When any structure is of use (& I can show what curiously minute particulars are often of the *highest*²³ use) I can see with my prejudiced eyes *no limit* to the perfection of the coadaptations which could be effected by natural selection.”²⁴

Already in 1844, pp. 109/110, he had emphasized concerning the possible amount of variation – the foundation of omnipotent natural selection:

“That a limit to variation does exist in nature is assumed by most authors, though I am unable to discover a single fact on which this belief is grounded.”

“I repeat that *we know nothing of any limit to the possible amount of variation*, and therefore to the number and differences of the races, which might be produced by the natural means of selection, so infinitely more efficient than the agency of man.”²⁵

See also Darwin 1859, p. 125²⁶; 1868, pp. 7, 222²⁷; 1872, p. 31²⁸ and directly or implicitly at many other places of his publications²⁹

Furthermore, Darwin cast his imaginary conviction of a limitless amount of variation over time and his reverent faith in omnipotent natural selection into the following impelling words: “It may be said³⁰ that natural selection is *daily and hourly* scrutinising, *throughout the world, every variation, even the slightest*; rejecting that which is bad, preserving and adding up all that is good; silently and insensibly working, whenever and wherever opportunity offers, at the improvement of each organic being in relation to its organic and inorganic conditions of life” (Darwin 1859, p. 84).

Illustrating his ideas by the black bear and what he thought such an animal could possibly transform into, he stated in the first edition of the *Origin*, p. 184:

“In North America the black bear was seen by Hearne swimming for hours with widely open mouth, thus catching, like a whale, insects in the water. Even in so extreme a case as this, if the supply of insects were constant, and if better adapted competitors did not already exist in the country, I can see no difficulty in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, with larger and larger mouths, till a creature was produced as monstrous as a whale. I can see no difficulty in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, *with larger and larger mouths, till a creature was produced as monstrous as a whale.*”

²¹ Full title of the book: The Effects of Cross and Self-Fertilisation in the Vegetable Kingdom. John Murray. London.

²² <http://darwin-online.org.uk/content/frameset?pageseq=1&itemID=F1249&viewtype=text>

²³ Italics in the printed reproduction of the letter.

²⁴ <https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-2731.xml>

²⁵ <http://darwin-online.org.uk/content/frameset?pageseq=1&itemID=F1556&viewtype=text>

²⁶ “I see *no reason to limit* the process of modification, as now explained, to the formation of genera alone.”

²⁷ Domestication p. 7: “...as every part of the organization occasionally varies in some slight degree, and as natural selection acts exclusively by the preservation of variations which are advantageous under the excessively complex conditions to which each being is exposed, *no limit* exists to the number, singularity, and perfection of the contrivances and co-adaptations which may thus be produced.”

P. 222: “On the other hand, it is not surprising that during this same interval of time our highly-bred pigeons have undergone an astonishing amount of change; for in regard to them there is *no defined limit* to the wish of the fancier, and there is *no known limit* to the variability of their characters. What is there to stop the fancier desiring to give to his carrier a longer and longer beak, or to his tumbler a shorter and shorter beak? nor has the extreme limit of variability in the beak, if there be any such limit, as yet been reached.”

²⁸ Origin: “Some authors have maintained that the amount of variation in our domestic productions is soon reached, and can never afterwards be exceeded. It would be somewhat rash to assert that *the limit* has been attained in any one case; for almost all our animals and plants have been greatly improved in many ways within a recent period; and this implies variation. It would be equally rash to assert that characters now increased *to their utmost limit*, could not, after remaining fixed for many centuries, again vary under new conditions of life.

²⁹ <http://darwin-online.org.uk/>

³⁰ In later editions he added “metaphorically”: “It may metaphorically be said that...”

Rigorous, exact, testable science or rampant, limitless fiction? John N. Gittleman, then Associate Professor of Zoology, University of Tennessee Knoxville, commented on this statement (New York Times 16 May 1994):

"Darwin omitted this story in other editions³¹, but regretted his revision. "I still maintain that there is no special difficulty in a bear's mouth being enlarged to any degree useful to its changing habits" ("More Letters of Charles Darwin," 1903, page 162)."

Except, perhaps, for that fantastic bear story (which reminds me of the German idiom "jemandem einen Bären aufbinden" – in English perhaps something like "to tell somebody a cock and a bull story"³²), Darwin's modern disciples follow his "no limit" belief almost unrestrictedly. And what is more: they have produced much stronger stories dwarfing that bear illustration by far: Imagine, please, vividly one after the other of the following animal species: Giraffe, whale, tiger, elephant, squirrel, bat, man, and last not least, the bear family – and become fully aware that, in fact, all mammalian orders, families, genera and species – are derived by evolutionists from an extinct *shrew* by random micromutations and natural selection (for the details cf. <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf> pp. 353-368).

According to Richard Dawkins (2006/2008, p. 139), natural selection "explains *the whole of life* and how organized complexity can emerge without deliberate guidance. Darwinian evolution shatters the illusion of design"³³, and he further asserted (1986/2015, p. 5):

"Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form *of all life*, has no purpose in mind. It has no mind and no mind's eye. It does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the blind watchmaker."³⁴

Jerry Coyne, who "first read *The Origin* as an undergraduate" and "read it every year or two since then, so", he says, "I must have read it 20 times" and each time gets "something out of it"³⁵, commented (2009, p. XVI) just after quoting the last sentence of Darwin's *Origin* (that "from so simple a beginning [from a few forms or one] endless forms most beautiful and most wonderful have been, and are being evolved"): "But there is even more cause for wonder. For the *process*³⁶ of evolution – *natural selection*, the mechanism that drove the first naked, replication molecule into the diversity of millions of fossil and living forms – is a mechanism of staggering simplicity and beauty." He later qualifies

³¹ Except in the 2d ed. of 1860. In the following editions he stopped after the first sentence, including a slight modification: "... almost like a whale, insects in the water."

³² <https://www.merriam-webster.com/dictionary/cock-and-bull%20story>

³³ Dawkins R (2006/2008): *The God delusion*.

³⁴ Dawkins R (1986/2015): *The Blind Watchmaker*. Norton & Company. New York

³⁵ I must admit that I can sympathize with Coyne. Darwin's *Origin* (as well as further of his writings) constitute perhaps the most fascinating, creative, skillful, ingenious *illusion* ever produced in the name of science. In order not to become victim of that *delusion*, one cannot simply read it but has to carefully, meticulously, discreetly – hence biologically in depth – analyse almost every sentence of his sophisticated assertions, which have psychologically often been so cleverly formulated "that the reader is left with the feeling that *if the data do not support the theory they really ought to*" (W. R. Thompson 1967, p. xxi, in his Introduction to *The Origin*; Everyman's Library). Also, p. xxi: "The plausibility of the argument eliminates the need for proof and its very nature gives it a kind of immunity to disproof. Darwin *did not* show in the *Origin* that *species had originated by natural selection*; he merely showed, on the basis of certain facts and assumptions, *how this might have happened*, and as he had convinced himself he was able to convince others." And another crucial point for Darwin's enormous success (p. xi): "The reader *may be completely ignorant of the biological processes yet he feels that he really understands* and in a sense dominates the machinery by which the marvelous variety of living forms has been produced."

³⁶ "process": Italics by Coyne.

his pronouncements on natural selection (the term occurring some 112 times in his book) by also stating (pp. XIII/XIV): “And far from casting doubt on Darwinism, the evidence gathered by scientists over the past century and a half supports it [evolution] completely, showing that evolution happened largely [at least 99,999 per cent – note W.-E. L.] as Darwin proposed, through the workings of natural selection.”

Also, on the question why Dawkins chose that particular title “*The Blind Watchmaker*” for one of his books (which I just quoted above), Coyne answered:

“I can’t speak for Richard, but it’s pretty clear that **natural selection**, which is what the book is about, is the blind watchmaker. It produces things as intricate as a watch and even more so. *Any animal is infinitely more complex than a watch is, but that animal has been produced by the simple, materialistic, blind, purposeless process of natural selection.* The whole point of Richard’s book is to show that we no longer need recourse to a celestial designer to explain the wonders of nature and the marvellous “design” of organisms.³⁷

For all these authors it is also of cardinal importance that absolutely no teleology³⁸ has been involved in the process of evolution. Accordingly, Jerry Coyne (2011)³⁹ emphasizes that “natural selection and evolution” are “material, blind, mindless, and purposeless” referring, among others, to the evolution textbook of Douglas J. Futuyma on “the completely mindless process of natural selection”⁴⁰, which “cannot have a goal, any more than erosion has the goal of forming canyons, for the future cannot cause material events in the present. Thus, the concepts of goals or purposes have no place in biology (or any other of the natural sciences), except in studies of human behavior (p. 282).”

Consequently, in the words of Scott Todd (1999, p. 419): “Even if all the data point to an intelligent designer, such a hypothesis is excluded from science because it is not naturalistic.”⁴¹

Reminds me of Lewontin’s often quoted statement that “we have a prior commitment, a commitment to materialism” and that “we cannot allow a Divine Foot in the door.”⁴²

³⁷ <https://fivebooks.com/best-books/evolution-jerry-coyne/>

³⁸ “A doctrine explaining phenomena by their ends or purposes.” <https://www.synonym.com/synonyms/teleology>

³⁹ <https://whyevolutionistrue.wordpress.com/2011/02/21/natural-selection-and-evolution-material-blind-mindless-and-purposeless/>

⁴⁰ Similarly Dawkins as quoted above, but now in a larger context: “All appearances to the contrary, the only watchmaker in nature is the blind forces of physics, albeit deployed in very special way. A true watchmaker has foresight: he designs his cogs springs, and plans their interconnections, with a future purpose in his mind’s eye. Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind’s eye. It does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the *blind* watchmaker.”

⁴¹ Todd S C (1999): A view from Kansas on that evolution debate- *Nature* **401**, p. 419.

⁴² For the reader who has not yet been acquainted with this quotation I reproduce it now in full: “Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take the side of science in spite of the patent absurdity of some of its constructs, in spite of its failure to fulfill many of its extravagant promises of health and life, in spite of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism.

It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.”

Now, “Even if all the data point to an intelligent designer, ...” – this hypothesis is excluded from science? So, the data, the actual evidence, the solid facts, don’t count anymore to scientifically find out the reality, the validity, the truth! – Reminds me also of Ben Stein’s film *Expelled: No Intelligence Allowed*⁴³ and the word of Lord Acton⁴⁴: “The worst use of theory is to make men insensible to fact.”

Francisco J. Ayala – distinguished evolutionary biologist and longtime faculty member at the University of California, Irvine, as well as the University of California, Davis – approvingly quotes Darwin’s verdict “I can see *no limit* to this power [natural selection] in slowly and beautifully *adapting*⁴⁵ each form to the most complex relations of life” in his PNAS paper of 2009 – the 100th anniversary or jubilee year of the publication of the *Origin* with the unmistakably revealing title “*Darwin’s greatest discovery: Design without designer*”.

Ayala, like Ernst Mayr before him (1991, p. 37), affirmatively continues to refer to Darwin’s rejection of an intelligent origin of species and/or higher systematic categories with unlimited approbation as follows:

“In his Autobiography, Darwin wrote, “*The old argument of design in nature*, as given by Paley, which formerly seemed to me so conclusive, falls, now that the law of natural selection has been discovered. We can no longer argue that, for instance, the beautiful hinge of a bivalve shell⁴⁶ must have been made by an intelligent being, like the hinge of a door by a man.”

And Mayr goes on to quote also Darwin’s following especially confirmatory sentence:

“There seems to be no more design in the variability of organic beings and in the action of natural selection, than in the course which the wind blows.”

Later (p. 139), Mayr refers to the “*triumph of natural selection*”. Not only Ayala but also many neo-Darwinians and further authors speak with Darwin pejoratively/detractively⁴⁷ of “*the old argument of design in nature*” – the depreciation in itself constituting a logical fallacy, an *ignoratio elenchi*: for “old” doesn’t say anything whether an argument is true or false, whether it has to be accepted or rejected. In fact, there are many “old arguments” that have not

⁴³ <https://www.youtube.com/watch?v=V5EPymcWp-g> (FILM: 10 October 2018, 12:35: 425,796 visitors)

⁴⁴ Quotation according to Seward A C (1931, p. 588): *Plant Life Through the Ages*. Cambridge University Press. Cambridge.

⁴⁵ http://www.pnas.org/content/104/suppl_1/8567 Italics by Ayala, yet in none of Darwin’s six original editions. Curiously enough Ayala quotes this “no limit” sentence directly after first referring to Darwin’s pigeon breeding example, followed by the accomplishments of animal breeders in general, asserting: “The success of pigeon fanciers and animal breeders clearly shows the occasional occurrence of useful hereditary variations.” – Absolutely none of all the many hereditary variations of the breeder’s more than one thousand pigeon races proved to be a “useful hereditary variation” *in nature*. As for animals in general (as well as plant breeding in particular), see, please, Lönnig: *Artbegriff* www.weloennig.de/Artbegriff.html especially pp. 325 ff.: <http://www.weloennig.de/AesV.html> and the results of mutation breeding <http://www.weloennig.de/AesV1.1.Erg.html>, quotations by Herre and Röhr concerning animal breeding in general <http://www.weloennig.de/AesIIaEnHu.html> (at the end of that chapter) and the law of recurrent variation: <http://www.weloennig.de/Loennig-Long-Version-of-Law-of-Recurrent-Variation.pdf> as well as http://www.weloennig.de/ShortVersionofMutationsLawof_2006.pdf and especially dog breeding (407 pp.) <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>

⁴⁶ Marcel Le Pennec (1980) <https://www.cambridge.org/core/journals/journal-of-the-marine-biological-association-of-the-united-kingdom/article/larval-and-postlarval-hinge-of-some-families-of-bivalve-molluscs/E28F47465144A02C4A58AD9B32CCAC37> see also Steven M. Stanley (1970): *Relation of Shell Form to Life Habits of the Bivalvia* (Molluca). P.6: “...certain conservative shell features, such as the hinge type . . . , have tended to remain constant within major lineages.”

⁴⁷ Most certainly not complementarily.

only stood the test of the time but their truth has also been continually deepened and extended and thus almost endlessly corroborated and validated during thousands of years of human history. And what is more – quite unexpectedly and wholly surprisingly – some old but long doubted and dogmatically rejected insights have, in fact, even proved to be true only rather recently.

On the historical background on which Darwin wrote, trying to invalidate not only Paley's argumentation in *Natural Theology*⁴⁸ but the design argument in general, foremost of the Jewish-Christian heritage (which had been accepted by most of the brilliant and ingenious founders of modern science, to name but a few in biology, like Linné, Cuvier, Agassiz, von Baer, as well as physicists, like Kepler, Newton, Maxwell, Faraday and many others – all arguing, directly or indirectly, from a biblical background), I would like to remind the reader of a few examples of very old but perfectly true arguments from the Bible and additionally also of some ancient Greek authors:

- (1) The universe had a **beginning** (Genesis 1:1) – a statement that is some 3,500 years old (validated eventually in the midst of the 20th century);
- (2) **Life appeared progressively**, i. e. in stages (Genesis 1: 1-28. Age: same as above, i.e. 3,500 years old). Somewhat similar ideas, but not as clearly and concisely as in the Genesis record, were held by several Greek philosophers beginning with Heraklit some 2500 years ago.⁴⁹
- (3) the universe is governed by **rational natural laws** (Job 38:33, Jeremia 33:25) – again written some 3,500 and respectively 2,500 years ago;
- (4) the **earth is a sphere** (Isaiah 40:22⁵⁰) – 2,700 years old. For the time of about the Classical and Hellenistic Greece – so up to 2,500 ago – historian J. B. Russel has to this to say (1991/1997, p. 24):
*“The Greeks’ knowledge of the earth’s roundness has never been disputed by any serious writers. [...] [A]fter the fifth century B.C. no Greek writer thought of the earth as anything but round. The only exceptions are the atomists Leucippus and Democritus, who seem to have imagined a flat disc surrounded by air. Pythagoras (c. 530 B. C.), Parmenides (c. 480 B.C.), Eudoxus (c. 375 B.C.), Plato (c. 428-348 B. C.), Aristotle (384-322 B.C.), Euclid (c. 300 B.C.), Aristarchus (c. 310-230 B.C.), and Archimedes (287-212 B.C.) all took the round view.”*⁵¹
- (5) The **earth is suspended “upon nothing”** (Job 26:7) – 3,500 years ago.

⁴⁸ Paley W. (1802); *Natural Theology or Evidences of the Existence and Attributes of the Deity, collected from the Appearances of Nature*. Printed for John Morgan. By H. Maxwell. Philadelphia.

⁴⁹ <https://www.iep.utm.edu/evolutio/>

⁵⁰ Hebrew scholar Hal Flemings, San Diego, USA, comments (September 2018):

“According to Biblical chronology the book of Isaiah was composed in the 8th century BCE. At Isaiah 40:22, the writer penned:

There is One who is dwelling above the circle of the earth, the dwellers in which are as grasshoppers, the One stretching out the heavens just as a fine gauze, who spreads them out like a tent in which to dwell. –The New World Translation of the Holy Scriptures

The Hebrew word translated “circle” is “hhug” (the two h’s representing a strong guttural sound). Since it could apply to a flat circle or a three-dimensional globe, how are we to understand it at Isaiah 40:22? A similar comment about the earth is found at Job 26:10 where we are viewing again the earth from the perspective of God, there we find: “He has inscribed a circle on the surface of the waters at the boundary of light and darkness.” If from any direction God sees the earth it appears as a circle it would have to be a globe and not a flat circle which would not maintain a circular image from some perspectives. In any event, the message that the earth is a circular entity is absolutely true along with its affirmation that it is a free body in space.”

⁵¹ Russel J B (1991/1997): *Inventing the Flat Earth. Columbus and Modern Historians*. Praeger Publishers. Westport. “Jeffrey Burton Russel is Professor of History at the University of California, Santa Barbara”(about the author, p. 119).

- (6) Instructions on **disease control and hygiene** in a primitive society, quarantining of the sick, treatment of dead bodies, and disposal of waste (Leviticus 13:1-5, Deuteronomy 23:12,13) – also some 3,500 years ago.
- (7) Highly up-to-date the admonition: **Not to ruin the earth** (Revelation 11:18) – 2,000 years old.
- (8) In a war-torn world (and personally) the perfectly modern advice: “**seek peace and pursue it**” (Psalm 34:14) – 3,500 years ago.

This list of old but true arguments could be enlarged almost infinitely, including mathematics, geography, biology, history, archaeology, psychosomatic medicine, ethics, and others. Hence, “old” is not necessarily outdated, outmoded and wrong. On the contrary, “old” can be completely concordant with the facts, can be valid and true, and, what is more, in contrast: something “new” can be utterly wrong – any examples needed? Well, “fraud and deceit in the halls of science”⁵², each year’s list of retracted scientific papers⁵³, pharmacy scandals, fake fossils, “fake news”/“alternative facts”, or just an endless series of plain errors forwarded as true discoveries in science⁵⁴.)

In clear contrast to what Darwin and his followers thought to be the entirely outdated and false “old argument from design in nature”, now their putative discovery, their revelation of “the law of natural selection”, which could not only give the correct cause – to use Darwin’s example – for the origin of “the beautiful hinge of a bivalve shell”, but also “explains *the whole of life*”, “*any known form of life*” etc. by “the completely mindless process” *omnipotent natural selection* triumphing infinitely over ingenious design.

The Limits of Natural Selection

First, a basic challenge by Nils Heribert Nilsson (professor of botany and genetics at Lund University, Sweden) who formulated one of the most important objections highlighting the limits of natural selection as follows (1953, p. 246): “[T]he opponents of his [Darwin’s] evolutionary theory could not be blinded by this selection theory for long. They soon asked: Can the struggle for existence create? It can and must eradicate, hence kill. But it can't create anything. *Just as a sieve can not create new grains, but can only sift the existing ones.*”⁵⁵

Paleontologist Oskar Kuhn⁵⁶ agrees:

⁵² https://en.wikipedia.org/wiki/Betrayers_of_the_Truth

⁵³ <https://www.the-scientist.com/research-round-up/top-10-retractions-of-2017-29834>

“It seems that every year, an old record falls. This year saw the shattering of the record for the most retractions issued by one journal in a single day, when Springer retracted 107 papers from *Tumor Biology* after discovering all had been tainted by fake peer reviews. You read that right—107 papers. In one day.”

See also <https://retractionwatch.com/>

⁵⁴ <https://www.livescience.com/61275-scientific-retractions-2017.html> “This past year, hundreds of scientific papers were retracted from professional journals. In the majority of cases involving these retractions, the reason was an innocent, yet sloppy, error in the methodology of the experiment that the authors themselves caught. But for quite a few papers, the retractions reflected scientific misconduct and a not-so-innocent attempt to tweak the data — or make it up entirely.”

⁵⁵ Heribert Nilsson (1953): *Synthetische Artbildung. Grundlinien einer exakten Biologie*. Two Volumes, together 1303 pp. (quotation from Vol 1.) Verlag CWK Gleerup. Lund.

⁵⁶ https://de.wikipedia.org/wiki/Oskar_Kuhn

“The assertion that certain characteristics are explained by selection, is just as naïve as if someone wanted to answer the question of why a tree has leaves, because they have not been cut off by the gardener (Nägeli). *Therefore, selection only starts where useful and harmful variants already exists, but does not explain them.* ... In case of a railway accident, it will not be the one who has the strongest bones who will not survive, but who takes the most favorable seat.”

Famous Hugo de Vries, Professor of Botany at the University of Amsterdam⁵⁷, celebrated not only as one of the rediscoverers of Mendel’s laws but also for his mutation theory, refers approvingly to a “friendly criticism” by Carnegie Institution botanist Arthur Harris, stating de Vries’ views thus (1904/1905/1906, p. 826/827): “Natural selection may explain the survival of the fittest, *but it cannot explain the arrival of the fittest.*”⁵⁸

However, in the usage, application and presentation of the term by most neo-Darwinian evolutionists, natural selection has adopted a life of its own, has become a *deus ex machina* who can do, achieve, accomplish and explain everything – even entirely excluding the question of the origin of the putatively endless amount of the indispensably synorganized mutations generating the necessary complex information for any new intricate instincts and structures on all levels: DNA, physiology, anatomy and morphology. The untested presupposition of these authors: otherwise life in all its forms wouldn’t exist.

When I once asked the celebrated cofounder of the *Modern Synthesis*, Ernst Mayr, where the intelligence is for the origin of the enormously complex structures of the organisms, he answered: “[Natural] Selection is the intelligence.”⁵⁹

Sir Julian Huxley, also eminently involved in launching the neo-Darwinian theory of evolution – the title of his book of 1942 was “*Evolution The Modern Synthesis*”⁶⁰ – asserted that natural selection could explain virtually every known form of life (“Darwin pointed out that no supernatural designer was needed: since *natural selection could account for any known form of life*, there was no room for a supernatural agency in its evolution”⁶¹).

One could continue almost *ad infinitum* to quote and document famous as well as lesser known neo-Darwinian authors from the past to the present stating their unwavering faith in virtually unlimited variation and omnipotent natural selection having created all life forms on earth (*cf.* for example <http://www.weloennig.de/AesV3.html>) and, speculating, perhaps also on similar planets in the universe.

The completely successful goal reached by natural selection in the eyes of Darwin’s followers, not least the proponents of the modern Synthetic Theory,

⁵⁷ https://en.wikipedia.org/wiki/Hugo_de_Vries

⁵⁸ https://en.wikiquote.org/wiki/Hugo_De_Vries.

The original book can be checked at <https://www.biodiversitylibrary.org/item/76963#page/847/mode/1up>

For the history of the phrase, traced back to Jacob Gould Schurman, Cornell University’s president (from 1892 to 1920) *cf.* Glenn Branch of the NCSE blog: <https://ncse.com/blog/2015/05/whence-arrival-fittest-0016357>

⁵⁹ Literally in German: “Die Selektion ist die Intelligenz“ (16 March 1981 in Tübingen).

⁶⁰ https://en.wikipedia.org/wiki/Evolution:_The_Modern_Synthesis

⁶¹ Issues of Evolution, edited by Sol Tax (1960, p. 46),

has been aptly summed up in the words of German oncologist and university professor Ferdinand Schmidt⁶² (1925-2006):

“Neo-Darwinism has replaced a divine Creator only by the God of chance, who is equally omnipotent, omniscient and omnipresent. He can do everything: he makes countless of the most amazing inventions. He knows everything: He masters all biochemical, biophysical and biological laws confidently and outclasses all scientific achievements in these fields. He is in action everywhere and yet invisible – invisible and incomprehensible in the truest sense of the word. Even his origin is like that of a god: he too is immortal and has always been there.”⁶³

Correspondingly several critics of the totalitarian neo-Darwinian faith like Gould and Lewontin (1979) also spoke: “[of] the *near omnipotence* of natural selection in forging organic design.”⁶⁴

In more general terms, Popper (1963/2002, p. 340) summed up the usually subconscious philosophy of many contemporary scientists (*cf.* also first quotation above):

"The earlier, naturalistic revolution against God replaced the name God by the name Nature. Almost everything else was left unchanged. Theology, the science of God, was replaced by the science of nature. God's laws by the laws of nature. God's will and power by the will and power of nature (the natural forces) and later *God's design and God's judgment by natural selection*. Theological determinism was replaced by naturalistic determinism, that is. God's omnipotence and omniscience were replaced by the omnipotence of nature and the omniscience of science.”⁶⁵

Nevertheless, as to the point hinted above concerning critics of neo-Darwinism might already have suggested, the question has never come to rest, but despite many attempts to find an alternative materialistic theory (emication theory, punctuated equilibrium, self-organization, neutral evolution, evo-devo, evolution

⁶² <http://www.kipnis.de/index.php/alexander/kurzbiografien/208-schmidt-ferdinand-1923-2006-mediziner-krebsforscher>

Cf. also <https://www.nichtraucherschutz.de/NRI/23/nrinfo23-Medienpr.html>

⁶³ Schmidt F. (1989): Gott Zufall. Biologie heute. August 1989, p. 3.

⁶⁴ <https://faculty.washington.edu/lynnhank/GouldLewontin.pdf>

Arthur M. Shapiro: Darwinism: Science or Philosophy (1992): “All of this is evidence for the creativity of natural selection, but it does not add up to *the claim of omnipotence* that Wilcox thinks is required by the “Darwinian paradigm.”

<http://www.leaderu.com/orgs/fte/darwinism/chapter13a.html>

Cf. also older authors like:

D. H. Scott (1921): <https://www.nature.com/articles/108153a0> “It has long been evident that all those ideas of evolution in which the older generation of naturalists grew up have been disturbed, or, indeed, transformed, since the re-discovery of Mendel's work and the consequent development of the new science of genetics. Not only is the “*omnipotence of natural selection*” gravely impugned, but also variation itself, the foundation on which the Darwinian theory seemed to rest so securely, is now in question.”

Pavlov (1928/1941), corroborating Popper's and Schmidt's verdict, speaks of *the omnipotent scientific method*: “Only science, exact science about human nature itself, and the most sincere approach to it by the aid of *the omnipotent scientific method*, will deliver man from his present gloom and will purge him from his contemporary share in the sphere of interhuman relations.” https://todayinsci.com/QuotationsCategories/O_Cat/Omnipotent-Quotations.htm

Spirin, A S (2002) Omnipotent RNA: “The capability of polyribonucleotide chains to form unique, compactly folded structures is considered the basis for diverse non-genetic functions of RNA, including the function of recognition of various ligands and the catalytic function. Together with well-known genetic functions of RNA – coding and complementary replication – this has led to the concept of the functional omnipotence of RNA and the hypothesis that an ancient RNA world supposedly preceded the contemporary DNA–RNA–protein life. It is proposed that the Woese universal precursor in the ancient RNA world could be a cell-free community of mixed RNA colonies growing and multiplying on solid surfaces.” <https://www.sciencedirect.com/science/article/pii/S0014579302034348>

Prum R. O. *The Evolution of Beauty* (2017), pp. 18/19; Doubleday): “Aesthetic evolution by mate choice is an idea so dangerous that it had to be laundered out of Darwinism itself in order to preserve *the omnipotence of the explanatory power of natural selection*. Only when Darwin's aesthetic view of evolution is restored to the biological and cultural mainstream will we have a science capable of explaining the diversity of beauty in nature.” W.-E. L.: This hypothesis of sexual selection is also insufficient, inadequate and unsatisfying to explain the origin of beauty – see, for example pp. 58-60 in Lönnig (2011): http://ad-multimedia.de/evo/long-necked-giraffe_mU.pdf

3R. M. G. Wells (1990, Bookchapter): “The apparent “goodness of fit” of animals to environments brings into focus immediate adaptations to local conditions. This interaction of organism and environment has led us into a particular way of thinking about the role of hemoglobin in oxygen transport, in which *the near omnipotence of natural selection is acknowledged in the design of the protein* for function under particular circumstances (e.g., Powers 1980; Perutz 1983).

Hemoglobin Physiology in Vertebrate Animals: a Cautionary Approach to Adaptationist Thinking. Available from:

https://www.researchgate.net/publication/289755675_Hemoglobin_Physiology_in_Vertebrate_Animals_a_Cautionary_Approach_to_Adaptationist_Thinking

⁶⁵ <https://www.springer.com/de/book/9781461411130> / Karl Popper (1972): *Conjectures and Refutation*. London: Routledge & Keegan Paul, p. 340.

by TEs, Lamarckism *redivivus*, natural genetic engineering, and several others⁶⁶), – intelligent design being rigidly excluded, of course – there seems to be absolutely no adequate naturalistic alternative for a general theory on the origin and evolution of species than the already rather imperfect/unsatisfactory neo-Darwinian so-called Modern Synthesis.

See also: *Artbegriff*, pp. 399 (<http://www.weloennig.de/AesV1.1.Indi.html>, last paragraphs), 442 (again <http://www.weloennig.de/AesV3.html>).

Also, this is what David Einhorn called the *Achilles heel of Darwinism* in his book *Erfahrung und Deszendenztheorie (Experience and the Theory of Evolution)*, 1924, pp. 182/183)⁶⁷:

“It is very often claimed by the theory of descent, especially by the followers of Darwin and Haeckel [and now by the neo-Darwinians], that limits of variability can hardly be established by experience. But this is principally wrong, because variability detected by experience is definitely not boundless, enormously wide, but only enormously rich. But regarding all the enormous wealth of the variations actually present, no one has yet seen or believed a mammal or a bird species in the range of variations of an amphibian. And much less can we imagine that, in spite of the laborious and artificial influences from the outside, it would be possible to find – instead of another unicellular organism – a vertebrate in the range of the variants of a unicellular organism. *The principal confusion of the tremendous wealth of variability with its immense expanse is the Achilles heel, the "proton pseudos" of Darwin-Haeckel's theory of descent.* It is only because of this almost inexhaustible wealth, but not the vastness, that it is not possible to arrive at the morphological and physiological delineation of a species and to a constant non-variable entity.

It's only because of the almost indescribable richness of the variants that do we not know where in the sphere of our experience we have to set the last fixed limits of variability for a given being. But this

⁶⁶ Cf. please the thorough up-to-date analysis and convincing critique of most of these suggested alternatives by Stephen C. Meyer (2013/2014): *Darwin's Doubt*. HarperOne.

⁶⁷ Einhorn, D.: *Erfahrung und Deszendenztheorie* (Verlag W. Braumüller). Wien und Leipzig 1924. A preliminary translation of the original German text of the following quotation: Man behauptet sehr häufig von deszendenztheoretischer, speziell Darwin-Haeckelscher Seite, daß die Grenzen der Variabilität im Bereich der Erfahrung ungemein weit gezogen sind. Das ist aber prinzipiell falsch, denn die Variabilität erscheint uns in der Erfahrung gar nicht grenzenlos, ungemein weit, sondern lediglich ungemein reich, doch bei allem tatsächlich vorhandenen ungeheuren Reichtum der Variationen hat noch niemand etwa eine Säugetierform oder eine Vogelspezies im Bereiche der Variationen eines Amphibiums gesehen und geglaubt - und viel weniger können wir uns vorstellen, daß trotz noch so mühe- und kunstvoller Einwirkung von außen nicht wieder ein anderer Moner, sondern ein Wirbeltier im Bereiche der Varianten eines Moneren zu finden wäre. Die prinzipielle Verwechslung des ungeheuren Reichtums der Variabilität mit der unermeßlichen Weite derselben ist die Achillesferse, das "Proton Pseudos" der Darwin-Haeckelschen Deszendenztheorie.

Nur wegen dieses fast unerschöpflichen Reichtums, nicht aber der Weite, ist es nicht möglich, auf diesem Wege der morphologischen und physiologischen Artabgrenzung zu einer konstanten, nicht mehr variablen organischen Größe vorzudringen, nur wegen der beinahe unbeschreiblichen Fülle der Varianten wissen wir nicht, wo wir im Bereiche unserer Erfahrung die letzten festen Grenzen der Variabilität für ein gegebenes Wesen abzustecken haben. Diese Schwierigkeit aber, die Grenzen zu bestimmen, dieses Nichtwissen um die letzten Grenzen eines Organismus verwandelt sich sofort der Deszendenztheorie in ein sicheres Wissen um die Grenzenlosigkeit der Variabilität.

Ein Beispiel aus dem Gebiete der Mathematik kann die Sache noch besser veranschaulichen und erklären: Zwischen 1 und 2 liegt eine unfaßbare Fülle und Mannigfaltigkeit von Werten und Formen, wie $1 \frac{1}{2}$, $1 \frac{1}{3}$, $1 \frac{1}{4}$, ..., $1 \frac{1}{100}$, ..., $1 \frac{2}{100}$ 000 usw. ins Unendliche, also eine Unendlichkeit im kleinen, die aber immer in den unverrückbaren Grenzen von 1 und 2 eingeschlossen verbleibt und nie zu 3, 4, zur Unendlichkeit im großen werden kann. Nun stellen wir uns vor, daß wir etwa vom Werte $1 \frac{1}{2}$ ausgehen, die einzelnen verschiedensten kleinen und verschwindend kleinsten Werte und Formen genau sichten und mustern, sowohl in der einen Richtung als auch in der anderen uns bewegen und uns durchaus bemühen, zu den letzten Grenzen, zu 1 und 2 vorzudringen, so werden wir gewiß eine unbeschreibliche Fülle von Werten und Formen kennen lernen, ohne doch die letzten Grenzen selber feststellen zu können; ja, je mehr Unterschiede wir beachten werden und je genauer, ein um so größerer Reichtum wird sich unseren Augen offenbaren, um so weiter werden wir von den letzten Grenzen entfernt sein, um so mehr werden wir geneigt sein zu glauben, daß es überhaupt keine Grenze gebe - denn das ist die eigentliche Natur der Unendlichkeit im kleinen, daß, je mehr Zwischenstufen wir kennen, je präziser, um so mehr noch zu erkennen bleibt, um so weiter von uns die letzte Grenze zu rücken scheint -, und wir dürfen doch wohl nicht ernstlich glauben, daß wir darum bereits längst über alle Grenzen hinauskommen und uns im anderen Grenzenlosen, im Unendlichen im großen befinden. So ist es auch mit der Variabilität.

Daraus, daß wir eine gewaltige Formenfülle eines bestimmten organischen Wesens erleben können, folgt noch keineswegs, daß die Variabilität dieses Wesens bereits gar keine Grenzen habe, daß sie in progressiver Richtung grenzenlos, absolut unendlich sei, daß wir im Umkreis der unendlichen Varianten etwa eines Marsupialiers (der unendlichen Varianten zwischen 1 und 2 auch tatsächlich die unzähligen Varianten einer Fledermaus (der unzähligen Varianten zwischen "5 und 6", $5 \frac{1}{2}$, $5 \frac{1}{3}$...), eines Wales usw. finden könnten, daß es für diese Variabilität überhaupt gar keine Grenzen gebe, daß wir von der Unendlichkeit im kleinen (1 und 2) aus wirklich die ganze Unendlichkeit aller organischen Formen, die Unendlichkeit im großen (1 - unendlich) hervorbringen könnten. Diesen Schluß zieht nun aber die Deszendenztheorie.

difficulty in determining the limits, this ignorance of the ultimate limits of an organism, immediately is transformed by the theory of evolution into a sure knowledge of limitless variability.

An example from mathematics can better illustrate and explain the matter: Between 1 and 2 lies an incomprehensible abundance and variety of values and forms, such as $1 \frac{1}{2}$, $1 \frac{1}{3}$, $1 \frac{1}{4}$, ... $1 \frac{1}{100}$, ... $1 \frac{2}{100}$ 000 etc. ad infinitum, i.e. an infinity on a small scale, but which always remains trapped within the immovable limits of 1 and 2 and can never become 3, 4, to infinity on the large scale. Now let us imagine that we start from the value of $1 \frac{1}{2}$, that we carefully examine and study the various very small and vanishingly smallest values and forms, and that we move in one direction and in the other and on our way strive to reach the last limits, 1 and 2, – we will certainly become acquainted with an indescribable abundance of values and forms, yet without being able to ascertain the very limits themselves; yes, the more differences we will notice and the more precise, the greater the wealth that will be revealed to our eyes, the further we will be from the last limits, and the more we will be inclined to believe that there is no limit at all – for that is the very nature of infinity on the small scale, that the more intermediate stages we know, the more precise, the more still remains to be recognized, the farther the limit seems to be away from us. Nevertheless, we are not allowed to seriously believe that we have therefore long surpassed all limits and are in the other infinity, the infinity on the large scale. Likewise, it is with the variability of biological forms.

From the fact that we can experience a tremendous abundance of forms of a particular organic being it does not follow that the variability of this being has no limits, that it is boundless, absolutely infinite in the progressive direction, that within the infinite variations of, say, a Marsupialian (of the infinite variations between 1 and 2, the innumerable variations of a bat (of innumerable variants between "5 and 6", $5 \frac{1}{2}$, $5 \frac{1}{3}$...), a whale etc. could be found and that there would not be any limits, absolutely no bounds for this variability, that we could produce from the infinity on the small scale (1 and 2) the entire infinity of all organic forms, the infinity on the great scale (1 - infinite). Nevertheless, this conclusion is drawn by the theory of evolution."

There are many biologists who – by their intensive/thoroughgoing/painstaking investigations of biological phenomena, i.e. by their experience – have drawn the conclusion that Darwinism was false. One of them was the Nobel Laureate Santiago Ramón y Cajal⁶⁸, also called "the father of modern neuroscience", who first believed in Darwinism but later wrote, for instance (1901/1917/1989, p. 576):

"I must not conceal the fact that in the study of this membrane [the retina] I for the first time felt my faith in Darwinism (hypothesis of natural selection)⁶⁹ weakened, being amazed and confounded by the supreme constructive ingenuity revealed not only in the retina and in the dioptric apparatus of the vertebrates but even in the meanest insect eye. There, in fine, I felt more profoundly than in any other subject of study the shuddering sensation of the unfathomable mystery of life."

And Cajal added in a footnote to this paragraph:

"By the well-known *principles of gradual variation and selection of useful modifications it is not possible to explain satisfactorily many arrangements*, for example: the transition in mammals from panoramic vision of a common field, with the sudden formation of a homolateral optic tract so as to avoid diplopia; the abandonment in the lower mammals of the excellences of the central fovea of the retina of reptiles and birds; the singular correspondences in the structure of the eye and of the retina in animals without phylogenetic relationship, for example, cephalopods and mammals; and in general, all the sudden and surprising correlations of the nerve centres which take place with each new adaptation of the sensory and motor organs to the environment."

Also, from the *Sesquicentenario de Santiago Ramon y Cajal*, pp. 39-40⁷⁰:

⁶⁸ https://en.wikipedia.org/wiki/Santiago_Ram%C3%B3n_y_Cajal

Ramon y Cajal (1989): *Recollections of my Life*. 1st MIT Press paperback ed. ("Originally published as *Recuerdos de Mi Vida* in Madrid, 1901-1917. First published in English as Volume 8 of *Memoirs of the American Philosophical Society*, 1937. Reprinted, 1966 by The MIT Press.")

⁶⁹ Explanation in brackets in the original paper.

⁷⁰ <http://www.rac.es/ficheros/doc/00207.pdf>: "Y a los que te dicen que la Ciencia apaga toda poesía, secando las fuentes del sentimiento y el ansia de misterio que late en el fondo del alma humana, contéstales que á la vana poesía del vulgo, basada en una noción errónea del Universo, noción tan mezquina como pueril, tú sustituyes otra mucho más grandiosa y sublime, *que es la poesía de la verdad, la incomparable belleza de la obra de Dios y de las leyes eternas por Él establecidas*. [...] Él acierta exclusivamente á comprender algo de ese

“To those who tell you that Science quenches all poetry, drying up the sources of feeling and the longing for mystery that pulses in the depths of the human soul, tell them that in the vain poetry of the people, based on an erroneous notion of Universe, as petty as it is puerile, you substitute a much more grandiose and sublime one, which is *the poetry of truth, the incomparable beauty of the work of God and the eternal laws established by him*. He is only able to understand something of that mysterious language that God has written in the phenomena of Nature [like the language written in DNA]⁷¹; and he has only been able to unravel the wonderful work of Creation *to render to the Divinity one of the most grateful and accepted cults to a supreme understanding, to study his portentous works, for them and for them to know, to admire and to revere him.*”

For more Nobel Laureates accepting intelligent design for the origin of life and the universe, see, please Lönning 2007: <http://www.weloennig.de/Nobelpreistraeger.pdf> (60 pp.). Concerning the “father of modern genetics” Gregor Mendel, see, please <http://www.els.net/WileyCDA/ElsArticle/refId-a0026823.html> and <http://www.weloennig.de/mendel01.htm> <https://evolutionnews.org/2017/03/geneticist-wolf-ekkehard-lonning-on-darwinism-and-gregor-mendels-sleeping-beauty/>

As for *The Reproductive Powers of Living Beings and the Survival of the Fittest* and further topics on natural selection I would like to refer the reader to <http://www.weloennig.de/NaturalSelection.html> – of which I’m going to reproduce the following few paragraphs:

Dobzhansky’s 1937 work *Genetics and the Origin of Species* is generally viewed as the crystallization point for the origin and growth of the modern synthesis or neo-Darwinian theory of evolution (Lönning, 1999a). There is hardly a better example to illustrate the key message (and, at the same time, the weaknesses) of the modern theory of natural selection than the following quotation from this pioneering work of Dobzhansky (p. 149):

With consummate mastery Darwin shows natural selection to be a direct consequence of the appallingly great reproductive powers of living beings. A single individual of the fungus *Lycoperdon bovista* produces 7 x 10¹¹ spores; *Sisymbrium sophia* and *Nicotiana tabacum*, respectively, 730,000 and 360,000 seed; salmon, 28,000,000 eggs per season; and the American oyster up to 114,000,000 eggs in a single spawning. Even the slowest breeding forms produce more offspring than can survive if the population is to remain numerically stationary. Death and destruction of a majority of the individuals produced undoubtedly takes place. If, then, the population is composed of a mixture of hereditary types, some of which are more and others less well adapted to the environment, a greater proportion of the former than of the latter would be expected to survive. In modern language this means that, among the survivors, a greater frequency of carriers of certain genes or chromosome structures would be present than among the ancestors...

For agreement on and further documentation of the principle of natural selection, see the group of authors cited above, beginning with Bell (1997). However, in the 1950s, French biologists, such as Cuénot, Téry, and Chauvin, who did not follow the modern synthesis, raised the following objection to this kind of reasoning (according to Litynski, 1961, p. 63):

Out of 120,000 fertilized eggs of the green frog only two individuals survive. Are we to conclude that these two frogs out of 120,000 were selected by nature because they were the fittest ones; or rather - as Cuenot said - that natural selection is nothing but blind mortality which selects nothing at all?

Similar questions may be raised for the 700 billion spores of *Lycoperdon*, the 114 million eggs multiplied with the number of spawning seasons of the American oyster, for the 28 million eggs of salmon and so on. King Solomon wrote around 1000 BC: "I returned, and saw under the sun, that the race is not to the swift, nor the battle to the strong, [...] but time and chance happeneth to all of them" (KJV 1611)⁷².

If only a few out of millions and even billions of individuals are to survive and reproduce, then there is some difficulty believing that it should really be the fittest who would do so.

lenguaje misterioso que Dios ha escrito en los fenómenos de la Naturaleza; y a él solamente le ha sido dado desentrañar la maravillosa obra de la Creación *para rendir a la Divinidad uno de los cultos más gratos y aceptos a un Supremo entendimiento, el de estudiar sus portentosas obras, para en ellas y por ellas conocerle, admirarle y reverenciarle.*

⁷¹ My comment.

⁷² Ecclesiastes 9:11.

Strongly different abilities and varying environmental conditions can turn up during different phases of ontogenesis. Hiding places of predator and prey, the distances between them, local differences of biotopes and geographical circumstances, weather conditions and microclimates all belong to the repertoire of infinitely varying parameters. Coincidences, accidents, and chance occurrences are strongly significant in the lives of all individuals and species. Moreover, the effects of modifications, which are nonheritable by definition, may be much more powerful than the effects of mutations which have only "slight or even invisible effects on the phenotype" (Mayr 1970, p. 169, similarly 1976/1997; see also Dawkins, 1995, 1998), specifying that kind of mutational effects most strongly favored for natural selection and evolution by the neo-Darwinian school. Confronting the enormous numbers of descendants and the neverending changes of various environmental parameters, it seems to be much more probable that instead of the very rare "fittest" of the mutants or recombinants, the average ones will survive and reproduce.

For the entire argumentation, as well as further discussions see, please, <http://www.weloennig.de/NaturalSelection.html> and (2016): <http://www.weloennig.de/jfterrorchipmunks.pdf>

The Limits of Variation

As for the idea of unlimited variation, I have summed up the last more than one hundred years of intensive mutation research, which has been investigating thousands of different plant and animal species almost worldwide, in the *Law of Recurrent Variation*. Condensing first the experimental research, it states that

“treating homozygous lines with mutagenic agents generates large, but clearly finite, spectra of mutants. This consistently occurs when the experiments are on a scale adequate to isolate the potential of alleles causing phenotypic and functional deviations (saturation mutagenesis). However, due to almost invisible residual effects of changes in redundant sequences and/or of further chromosome rearrangements, the corresponding saturation curve is asymptotically approaching its limit for the micro-quantitative part of variation.”

For the details, see, please:

<http://www.weloennig.de/Loennig-Long-Version-of-Law-of-Recurrent-Variation.pdf>

http://www.weloennig.de/ShortVersionofMutationsLawof_2006.pdf

http://www.weloennig.de/Gesetz_Rekurrennte_Variation.html

<http://www.weloennig.de/Dollo-1a.pdf>

<http://www.weloennig.de/evolution/PhysalisOriginalPaper.pdf>

Tom Bethell has given a good overview on the topic of variation in his excellent book *Darwin's House of Cards* (2017, pp. 93-103, Chapter 8: *Is Variation Indefinite or Limitless?*), quoting among others Luther Burbank who was called “the most competent breeder of all time” as follows (p. 97):

“I know from my experience that I can develop a plum half an inch as long or one two and a half inches long, with every possible length in between, but I am willing to admit that that it is hopeless to try to get a plum the size of a small pea or one as big as a grapefruit. I have daisies on my farms little larger than my fingernail and some that measure six inches across, but I have none as big as a sunflower and never expect to have. I have roses that bloom pretty steadily for six months in the year, but I have none that will bloom twelve, and I will not have. In short there are limits to the developments possible, **and these limits follow a law**. But what law and why?”⁷³

⁷³ See also: https://evolutionnews.org/2012/04/natural_limits/ The first sentence in the quotation according to T. Bethell (2005): “The Politically Incorrect Guide to Science. Slight corrections and additions according to Soil and Health Library (2017): *Partner of Nature* by Luther Burbank. Edited and transcribed by Wilbur Hall. D. Appleton-Century Company incorporated in New York London 1939. <http://s3.amazonaws.com/arena-attachments/970202/56ae246a7741a236739273a038d7a1c0.pdf?1491931502> (retrieved 24 October 2018). See also: <https://dokumentix.com/partner-of-nature.html>

On the basis of mutation genetics – saturation mutagenesis, DNA sequencing results and mathematical probabilities (not to speak of physiological and anatomical barriers) – I have called the regularity showing the limits “The law of recurrent variation” (see links and the argumentation there above).

Yet, Burbank (1939, pp. 98/99) was speaking of another law, “The Law of the Reversion to the Average” (at his time largely without the possibilities of scientific in-depth studies of molecular genetic research given at present) and he continued:

"Experiments carried on extensively have given us scientific proof of what we already guessed by observation: namely, that [domesticated] plants and animals all tend to revert, in successive generations, toward a given mean, or average [in the wild]. Men grow to be seven feet tall, and over, but never to ten; there are dwarfs not higher than twenty-four inches, but none that you can carry in your hand. [...]⁷⁴ In short, there is undoubtedly a pull toward the mean which keeps all living things within more or less fixed limitations, but there is also a strong pull toward what we sometimes call “a family trait”.⁷⁵

In his contribution of 2017, Bethell stated that “Julian Huxley, the grandson of Darwin’s “bulldog”, also found that breeders encounter limits (p. 97):

“In spite of intensive and long continued efforts, breeders have failed to give the world blue roses and black tulips. A bluish purple and a deep bronze in the tulip are the limits reached. True blue and jet black have proved impossible. [J. Huxley, *Evolution: The Modern Synthesis*, London, Allen and Unwin, 1942, p. 519]”

And Tom Bethell continues (also p. 97):

“Huxley attributed this limited variability to “lack of modificational plasticity” – a polysyllabic restatement of the problem: variation can go only so far.”

“Different species of plants differ greatly in this respect, Huxley added. Some remain “extremely constant” in a wide range of environments. As for animals, “we have less information on the subject.””

In his essay on *Natural Limits to Variation, or Reversion to the Mean: Is Evolution Just Extrapolation by Another Name?* (2012)⁷⁶ Bethell added:

“In his recent book *The Greatest Show on Earth: The Evidence for Evolution*, Richard Dawkins observes airily that human beings are “distant cousins of bananas and turnips.” Yet minutely observant plant breeders, “daily and hourly scrutinizing” their productions (to quote Darwin on natural selection), are unable to turn purple roses into blue ones⁷⁷.

It is as though species are surrounded by a “plateau” of limited variability. By artificial selection, varieties can be pushed to the edge of that plateau, but they cannot be pushed off it and into the terrain of adjacent species. We might go so far as to say that evolution as a theory has been falsified by these observations; and will remain so until we can demonstrate the “indefinite departure” that Wallace heralded.”

⁷⁴ The text in between reads: “You know those things from observation; if you will think of it a moment you also know that the children of exceptionally tall parents tend to be shorter than either father or mother, while the progeny of dwarfs are seldom, if ever, themselves dwarfed [depends on the genetical constitution of the dwarfs: see <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf> pp. 60 (footnote), 63, 69-72, 83, 230, 373] The tendency in both cases, of course, is toward the parental heredity in size, rather than toward the perfect average, but yet that heredity in size does not keep increasing, either toward greater tallness or toward a more dwarfed state.”

⁷⁵ <http://s3.amazonaws.com/arena-attachments/970202/56ae246a7741a236739273a038d7a1c0.pdf?1491931502>

⁷⁶ https://evolutionnews.org/2012/04/natural_limits/

⁷⁷ “A blue rose is a flower of the genus *Rosa* (family Rosaceae) that presents blue-to-violet pigmentation instead of the more common red, white, or yellow. Blue roses are often portrayed in literature and art as symbols of love, prosperity, or immortality. However, *because of genetic limitations, they do not exist in nature*. In 2004 researchers used genetic modification to create roses that contain the blue pigment delphinidin. So-called “blue roses” have been bred by conventional hybridization methods, but the results, such as “Blue Moon”, are more accurately described as lilac in color.” https://en.wikipedia.org/wiki/Blue_rose (retrieved 24 October 2018).

As to plateaus alluded to by Tom Bethell, they have, in fact, been detected by studies on “population improvement by means of artificial selection” that “cannot continue indefinitely” (Hartl and Jones). See, please, Lönnig (2006), especially pp.58/59: <http://www.weloennig.de/Loennig-Long-Version-of-Law-of-Recurrent-Variation.pdf> and 2003 http://www.weloennig.de/Gesetz_Rekurrente_Variation.html as well as further details in <http://www.weloennig.de/AesV1.1.Droa.html> – in the latter case especially how natural selection has already been presupposed and suggestively conveyed to the reader as being the “only effective agency in evolution”, the “sole agency of major evolutionary change”, “the only explanation for the origin and maintenance of adaptation” (cf. quotations above), i. e. as omnipotent, as it were, by the authors Garcia-Dorado und López-Fanjul of their paper *by the very wording of their investigations and results*, stating, for example, that “The increasing opposition of natural selection often causes a cessation of response in artificial selection experiments”. More precisely they could have written: “The increasing opposition of the finite/constrained/bounded possibilities and limits *of the genetical constitution* of a plant or animal often causes a cessation of response in artificial selection experiments.”

Darwin’s Falsification Criteria

In spite of his irrational/fantastical belief in infinite progressive variation and omnipotent natural selection, Charles Robert Darwin, in contrast to most of his disciples, honestly and boldly formulated several clear falsification criteria to test his theory⁷⁸, the most important of which appear to be the following ones (1859, p. 189)⁷⁹:

- (1) “If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down. But I can find no such case.”

In the interim this falsification criterium has been fulfilled by many such cases. Check please rigorously the candidates and examples (like the electric rotary motor in bacteria und the trap of *Utricularia* and many others) discussed by Axe, Behe, Bethell, Dembski, Denton, Fabre, Kahle, Kuhn, Johnson, Leisola, Lönnig, Meyer, Moreland et al. (eds.), ReMine, Sanford, Scherer, Schmidt, Sewell, Swift, Wells, and many other qualified authors. For references, see, for example <https://evolutionnews.org/>; <http://www.weloennig.de/internetlibrary.html>

⁷⁸ Fully applicable also to the modern neo-Darwinian versions of the theory. Gerd B. Müller notes (2017): *Why an extended evolutionary synthesis is necessary*: “Even though claims have been made that classical evolutionary biology has continuously incorporated aspects from new conceptual domains, the majority of tenets and explanations that appear in characterizations of the current theory are still derived from the MS [Modern Synthesis] account and its population genetic principles. In a condensed form, these tenets are as follows: (i) all evolutionary explanation requires the study of populations of organisms; (ii) populations contain genetic variation that arises randomly from mutation and recombination; (iii) populations evolve by changes in gene frequency brought about by natural selection, gene flow and drift; (iv) genetic variants generate slight phenotypic effects and the resulting phenotypic variation is gradual and continuous; (v) genetic inheritance alone accounts for the transmission of selectable variation; (vi) new species arise by a prevention of gene flow between populations that evolve differently; (vii) the phenotypic differences that distinguish higher taxa result from the incremental accumulation of genetic variation; (viii) natural selection represents the only directional factor in evolution.” “...Criticisms of the shortcomings of the MS framework have a long history. One of them concerns the profoundly gradualist conception the MS has inherited from the Darwinian account of evolution.” “...Connected with the gradualist requirement of the MS theory is the deeply entrenched notion of adaptation.” Interface Focus: <http://rsfs.royalsocietypublishing.org/content/7/5/20170015>

⁷⁹ As well as in all the ensuing editions: <http://darwin-online.org.uk/contents.html>

- (2) “Natural selection cannot possibly produce any modification in any one species exclusively for the good of another species; “... 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.”

Apart from many examples of the animal kingdom (discussed by several of the authors just mentioned), it has been proved for thousands of plant species⁸⁰, which produce entirely new organs (complex, refined, sophisticated, “high tech” galls), for the exclusive good of their animal guests (“fremddienliche Zweckmäßigkeit” (Erich Becher) – not easily translated, but something like ‘extrinsic usefulness’, ‘disinterested suitability’, ‘well-directed extraneous utility’, closely akin to altruism; cf. p. 16). See Lönnig (2017, 63 pp.): *Plant Galls and Evolution. How More than Twelve Thousand Ugly Facts are Slaying a Beautiful Hypothesis: Darwinism*. <http://www.weloennig.de/PlantGalls.pdf>

- (3) “Natural selection can produce nothing in one species for the exclusive good or injury of another; though it may well produce parts, organs, and excretions highly useful or even indispensable, or again highly injurious to another species, *but in all cases at the same time useful to the possessor.*”

For many cases of features, yet now produced for exclusive good of the plants displaying them, and for the disadvantage/injury of the animal guests, see, please, Lönnig (2018, 119 pp.): *The Deceptive Flowers of Orchids and Evolution by Natural Selection. Or How More than Eight Thousand Beautiful Facts are Slaying an Ugly Hypothesis: Darwinism*. In contrast, the dandelions and other apomictic plant species display (again) characteristics for the exclusive good of their animal visitors. Two Parts: <http://www.weloennig.de/BeautifulFactsPartI.pdf> & <http://www.weloennig.de/BeautifulFactsPartII.pdf> (Cf. pp. 9-13 in Part II for the apomictic species.)

Thus, among many other examples, there are at least four plant groups, in fact, literally thousands of plant species in many hundreds of genera, displaying features, which should definitely not exist according to Darwin’s falsification criteria for evolution by natural selection: (1) (at least) certain carnivorous plants, (2) plants generating complex galls resulting in their disadvantage but in the exclusive good of their animal guests, (3) in contrast, orchids displaying features now for the exclusive good of themselves but for the disadvantage/detriment of their pollinators, and (4) dandelions as well as more than 400 further apomictic plant species, including thousands of microspecies⁸¹ generating features (again) for the exclusive good of the animals visiting them, all of which characters are fulfilling the falsification criteria mentioned above by Darwin himself.

Inference: An enormous amount of biological facts detected during the last more than 159 years of intensive biological research have shown that both of

⁸⁰ http://labs.icb.ufmg.br/leeb/publicacoes/2007_EspiritoSanto_&_Fernandes.pdf

⁸¹ <http://www.weloennig.de/BeautifulFactsPartII.pdf> pp. 11-13

Darwin's fundamental hypotheses are definitely wrong – unlimited progressive variation and infallible omnipotent natural selection

Brief Supplement

Sir David Attenborough⁸² was quoted as follows in the article *How Darwin won the evolution race* by Robin McKie for *THE GUARDIAN*, published 22 June 2008:

“Opponents say natural selection is not a theory supported by observation or experiment; that it is not based on fact; and that it cannot be proved. Well, no, you cannot prove the theory to people who won't believe in it any more than you can prove that the Battle of Hastings took place in 1066. However, we know the battle happened then, just as we know the course of evolution on earth unambiguously shows that Darwin was right.”⁸³

Now let's analyze that quotation:

“Opponents say natural selection is not a theory supported by observation or experiment; that it is not based on fact; and that it cannot be proved.”

Well, there are hardly any opponents that deny that natural selection is supported by observation or experiment etc. *to a certain degree, i. e. to a limited extent*, but there are absolutely no facts that prove its omnipotence. I myself wrote in my *Encyclopaedia* article about *Natural Selection* under the subheading *DOES NATURAL SELECTION EXIST AT ALL?*

“The remarks made so far, however, do not refute the occurrence of natural selection. In spite of the problems just mentioned, it is self-evident that physiologically, anatomically, and ethologically damaged mutants and recombinants (to speak again in the contemporary genetic language of these individuals) will be at a disadvantage in many situations (lame prey in relation to their predators and *vice versa*). It is only on islands with loss or diminution of stabilizing selection that processes of degeneration may occur quickly (for further discussion of the topic, see Lönnig, 1993, 1998; Kunze et al., 1997). Furthermore, survival of the fittest evidently takes place, for example, in cases of alleles and plasmids with strongly selective advantages, as in the cases of multiple resistance in bacteria and resistance to DDT in many insect species. After pointing out that Darwin knew hardly any cases of natural selection, Mayr asserts (1998, p. 191): "Now, there are hundreds, if not thousands, of well-established proofs, including such well-known instances as insecticide resistance of agricultural pests, antibiotic resistance of bacteria, industrial melanism, the attenuation of the myxomatosis virus in Australia, the sickle-cell gene and other blood genes and malaria, to mention only a few spectacular cases.”⁸⁴

So, the decisive question is not whether natural selection exists at all, but whether it is unlimited and omnipotent, whether it is the “*only great principle*” allowing organisms to adapt and evolve”, indeed the “*cardinal principle of alterations of the organisms*”, “the *sole method* known at present which begets adaptedness to the environment in living matter”, “*the only known explanation* for adaptation”, “*the only effective agency in evolution*” and the “*sole agency of major evolutionary change*”, and “*the only explanation* for the origin and maintenance of adaptation” (*cf.* references above), whether natural selection is

⁸² The following brief critique of his Darwinism (and much more could be said) does not in any way diminish my appreciation for his usually excellent/outstanding documentaries about reproducible biological facts and processes. (This note was added 1 November 2018.)

⁸³ <https://www.theguardian.com/science/2008/jun/22/darwinbicentenary.evolution>

⁸⁴ <http://www.weloennig.de/NaturalSelection.html> A few paragraphs below, I added the following comment in this article: “...as for the inherent limitations of one of the prime examples for natural selection, to wit the sickle cell allele and malaria resistance, see ReMine (1993). Moreover, one may ask whether Mayr's first four instances for natural selection mentioned above ("insecticide resistance of agricultural pests, antibiotic resistance of bacteria, industrial melanism, the attenuation of the myxomatosis virus in Australia") are really cases of natural selection or more "man-made" or "man-caused" selection.”

really “*daily and hourly* scrutinising, *throughout the world, every variation, even the slightest*; rejecting that which is bad, preserving and adding up all that is good; silently and insensibly working, whenever and wherever opportunity offers, at the improvement of each organic being in relation to its organic and inorganic conditions of life”, whether it can transform not only a black bear into a whale-like creature but also a species of a shrew into all the mammalian orders, families, genera and species that have ever lived on earth (see reference above), whether it is, in fact, *unlimited and omnipotent* to explain “the whole of life”, “all of life”, as well as “any known form of life” etc. and whether it really shows “how organized complexity can emerge without deliberate guidance”, whether it was able to “drove the first naked, replication molecule [if it ever existed] into the diversity of millions of fossil and living forms” and whether once and for all “Darwinian evolution shatters the illusion of design” i.e. whether “*Design without designer*” was, in fact, “*Darwin’s greatest discovery*”.

Now, an enormous amount of biological facts have been amassed from 1859 onwards that natural selection is neither unlimited nor omnipotent (see, please, discussion and links above).

Attenborough continues:

“Well, no, you cannot prove the theory to people who won't believe in it any more than you can prove that the Battle of Hastings took place in 1066.”

Seems to imply whether the Battle happened at all. Well, there were thousands of human eye witnesses and there are also many contemporary documents passed down to us about the Battle of Hastings. Wikipedia lists 142 citations⁸⁵. See also the Encyclopaedia Britannica article on the topic (2018⁸⁶). And/or Hewitt (2016, 328 pp.) *The Battle of Hastings: A Geographic Perspective*.⁸⁷ Especially for the *Primary Sources* cf. <https://www.english-heritage.org.uk/visit/places/1066-battle-of-hastings-abbey-and-battlefield/history-and-stories/history/sources/>

I would like to emphasize that I don't know of any intelligent researcher who has denied that the Battle of Hastings really occurred and/or that it happened in 1066 C.E.

In contrast, however, there are literally thousands of scientists and researchers, including several *Nobel Laureates who doubt – for rational reasons and scientific evidences – the omnipotence of natural selection*⁸⁸.

Attenborough goes on to say:

“However, we know the battle happened then, just as we know the course of evolution on earth unambiguously shows that Darwin was right.”

The date of the Battle of Hastings and the question of the omnipotence of natural selection are really incomparable, unmatched and poles apart.

⁸⁵ https://en.wikipedia.org/wiki/Battle_of_Hastings (retrieved 24 October 2018)

⁸⁶ <https://www.britannica.com/event/Battle-of-Hastings>

⁸⁷ <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?referer=https://www.google.de/&httpsredir=1&article=5146&context=etd>

⁸⁸ <http://www.weloennig.de/Nobelpreistraeger.pdf>

Also, we know in the interim that the course of evolution on earth unambiguously shows that *Darwin was wrong*. Check, please, carefully Lönning (2018): *Paleontology and the Explosive Origins of Plant and Animal Life. A Dialogue with an Evolutionary Geologist on Gradualism and Intelligent Design* <http://www.weloennig.de/ExplosiveOrigins.pdf>

Just to convey to the interested reader a few quotations of the discussion to stimulate his mental appetite:

According to the Darwinian concept, minor racial differences are to be gradually increased to become species traits, and then, by adding more and more small alterations, become generic, family differences, etc.⁸⁹ The variety of forms would then increase towards the end of the individual phyla, and there would be the greatest abundance of orders, families and genera, that is to say, differences of a higher degree. **The opposite is the case.**

A new Bauplan (body plan) of the systematic range of a class or order *normally appears absolutely abruptly* in the fossil record, without long rows/successions of links that would show us a gradual formation from another order forming its root.”

Distinguished German paleontologist Otto H. Schindewolf⁹⁰

The fossil record suggests that the major pulses of diversification of phyla occurs before that of classes, classes before that of orders, and orders before that of families”, say Erwin and his colleagues. "This is not to say that higher taxa have originated before species..., **but the higher taxa do not seem to have diverged through an accumulation of lower taxa.** ...[The paleontologists] Jablonsky and Bottjer were able to show that the pattern is *not an artifact of preservation: it is real* and therefore must be saying something about evolutionary mechanisms. The most obvious message is that a simple extrapolation from one level to another is an unlikely explanation of evolutionary innovation.

Roger Lewin in *Science*

As this pattern [of abrupt appearances of new life forms] has become more and more pronounced, it has **become ever more improbable that the absence of intermediate forms reflects a sampling bias.**

Mike Foote and John J. Sepkoski Jr

Thus, it is not only the question on the omnipotence of natural selection, but also the entire process of (macro-)evolution that is at odds with the hypotheses of Darwin and the neo-Darwinians. To check this statement, you may also listen to https://mediathek-hessen.de/medienview_18233_Hans-R.-Portner-OK-Kassel-Portners-Presseshow--Pal%C3%A4ontologie-und-Evolution.html or with English subtitles <https://www.youtube.com/watch?v=9HxcaXDWELE> ('For the English subtitles, make sure CC (closed captions, at the bottom of the screen) is turned on.')

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⁸⁹ Darwin had postulated continuous evolution by “innumerable slight variations”, “extremely slight variations” and “infinitesimally small inherited variations” (he also spoke of “infinitesimally small changes”, “infinitesimally slight variations” and “slow degrees”) and hence imagined “steps not greater than those separating fine varieties”, “insensibly fine steps” and “insensibly fine gradations”, “for natural selection can act only by taking advantage of slight successive variations; **she can never take a leap**, but must advance by the shortest and slowest steps” or “the transition [between species] could, according to my theory, be effected only by numberless small gradations” (emphasis added, see <http://darwin-online.org.uk/>).

⁹⁰ The text of the original German article reads: "Nach darwinistischer Vorstellung sollen geringfügige Rassenunterschiede sich allmählich zu Artmerkmalen verstärken und diese dann durch Addition immer neuer kleiner Abänderungen zu Gattungs-, Familienunterschieden und so weiter werden. Die Formenmannigfaltigkeit müsste alsdann gegen Ende der einzelnen Stämme zunehmen; dort wäre die größte Fülle von Ordnungen, Familien und Gattungen, das heißt von Unterschieden höheren Grades zu erwarten. **Das Gegenteil ist der Fall.** Ein neuer Bauplan von dem systematischen Range etwa einer Klasse oder Ordnung erscheint **gewöhnlich völlig unvermittelt auf der Bildfläche**, ohne lange Reihen von Bindegliedern, die uns eine allmähliche Herausgestaltung aus einer anderen, seine Wurzel bildende Ordnung vor Augen führen würden."