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(9 and 19 September 2019: For a short supplement on the article by Haile-Selassie et al. published in *Nature* 28 August 2019, see pp. 65-70)

The Evolution of Man: What do We Really Know? Testing the Theories of Gradualism, Saltationism and Intelligent Design

**First Some Intriguing Comments by
Distinguished Evolutionary Biologists:**

“Even with all the fossil evidence and analytical techniques from the past 50 years, a convincing hypothesis for the origin of *Homo* remains elusive.”

Bernard Wood (2014 in *Nature* 508:31)

Professor of Human Origins, The George Washington University

“There is certainly no evidence to support the notion that we gradually became what we inherently are over an extended period, in either the physical or the intellectual sense.”

Ian Tattersall (2012 in *Masters of the Planet* :207)

Professor and Head of the anthropological department of the American Museum of Natural History in New York City from 1971 to 2010 (now curator emeritus)

“[W]e should not expect to find a series of intermediate fossil forms with decreasingly divergent big toes and, at the same time, a decreasing number of apelike features and an increasing number of modern human features.”

Jeffrey H. Schwartz (1999 in *Sudden Origins* :378.

See also 2017: 78 “Sudden Origins” model)

Professor of Anthropology at the University of Pittsburg, Elected President of World Academy of Art and Science

“Has, what we have recognized as the human stage, been realized in just one tremendous event [in einem gewaltigen Geschehen]? Or has it become reality in several, many individual steps?”

Adolf Portmann (1956/2000 in *Biologie und Geist*:265)

Professor für Zoologie an der Universität Basel (Head of Zoological Institute for 37 years; studied comparative morphology and human biology in depth and published many groundbreaking findings in books and papers about the topic)

Also, several evolutionary biologists have used expressions for the origin of humans as “a Big Bang”, an “explosion”, “abrupt”, “dramatically different” from the australopithecines, “a genetic revolution” etc.

(For the references see Casey Luskin 2017)

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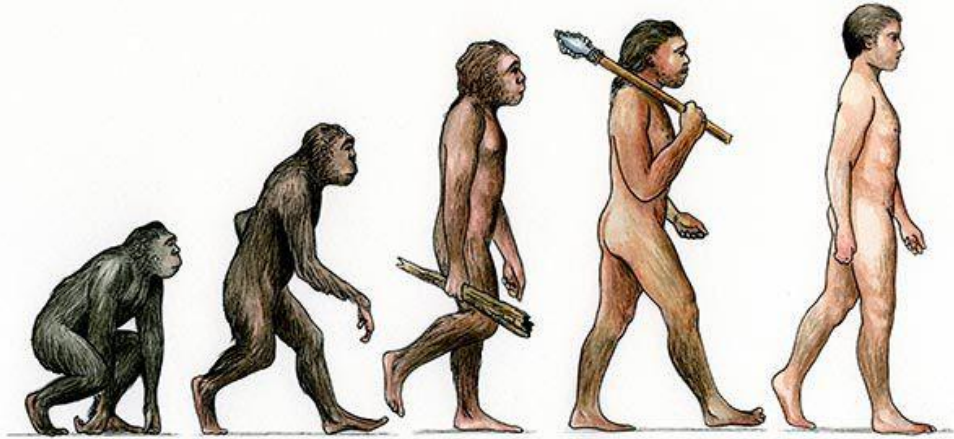
Introduction and Message Behind *The Icon* ‘From Extinct Apes to Humans’ (Points 1 to 10)

“Horses and clover are nice” – wrote Michael J. Behe commenting on some problems of these organisms for Darwinism in his most recent book *Darwin Devolves* (2019) – “but what we really care about is humans – ourselves.”¹

Now, I myself have published papers and books on the origin of carnivorous plants, orchids, giraffes, elephants and many other topics, also extensive discussions on species concepts and, last not least, as a transposon and mutation geneticist, papers on my own experimental work with 2.1 million plants (for an overview, see Lönning, 2019).² However, during the last more than 40 years I have touched the topic of the origin of humans only casually – although regularly kept in mind (“light will be thrown on the origin of man and his history”³) – so that the present essay will be my first perhaps not so cautious step to present my personal point of view on “what we really care about” – the origin and evolution of ourselves.

In medias res: The ensuing figure (*The Icon*) represents the answer of the evolutionary elite of the present scientific world summed up for the public by

Robert Dunn, professor in the Department of Biological Sciences at North Carolina State University, starting with a widely known icon of human evolution in the *Smithsonian Magazine* under the topic *The Top Ten Daily Consequences of Having evolved*:⁴



“There is a popular image of human evolution that you’ll find all over the place, from the backs of cereal packets to the advertisement for expensive scientific equipment. On the left of the picture there’s an ape – On the right, a man ... Between the two is a succession of figures that become ever more like humans, ... Our progress from ape to human looks so smooth, so tidy. It’s such a beguiling image that even the experts are loath to let it go. But it is an illusion.”⁵

Bernard Wood

The first message behind this almost universally known icon, originally consisting of 14 connecting links leading to modern man (surprisingly at that time including 5 probably only partially lost ‘races’ of *Homo sapiens*⁶), is that humans have evolved *gradually* from extinct apes – exactly as Darwin from 1859 onwards up to the protagonists of the *Modern Synthesis* (neo-Darwinism) of the present day have unanimously proclaimed for the origin of all life forms and taught worldwide – by omnipotent natural selection⁷ of mutations “with slight or even invisible effects on the phenotype”⁸ (Mayr) or in Darwin’s formulations, of:

“...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].”⁹

Possibly you may ask whether this could really be the same message today. The unambiguous answer *Yes* is given by several key statements of leading modern evolutionary biologists quoted in the endnotes.¹⁰

So much for the first message. However, much more is involved:

(2) Humans are assumed to have evolved not only gradually but also, in the final analysis of the present materialistic world view (being generally behind the icon just shown), *without any design*: “Man is the result of a purposeless and material process that did not have him in mind. He was not planned. He is a state of matter, a form of life, a sort of animal, and a species of the Order Primates.” Also, “Man was certainly not the goal of evolution, which evidently had no goal. He was not planned, in an operation wholly planless” (George Gaylord Simpson who has established the *Modern Synthesis* in paleontology).¹¹ However, the question may be raised whether Simpson’s statements are really representing testable positive scientific knowledge or rather belong to materialistic philosophy.

(3) Moreover, the entire process is thought to have been absolutely unique and hence unrepeatable. Or, in the words of Stephen Jay Gould (launching a vivid discussion lasting up to the present): “[T]he “pageant” of evolution as a staggeringly improbable series of events, [is] sensible enough in retrospect and subject to rigorous explanation, but *utterly unpredictable and quite unrepeatable*. Wind back the tape of life to the early days of the Burgess Shale; let it play again from an identical starting point, and *the chance becomes vanishingly small that anything like human intelligence would grace the replay*” (emphasis added).¹²

Thus, according to Gould, as well as a large majority of biologists, if the presupposed evolutionary process could ever be started anew, it most probably wouldn’t result in human intelligence “or of any self-conscious life on earth” a second time.¹³ And this “staggeringly improbable series of events” includes both (so the tale runs) of millions of entirely undirected random mutations as well as mainly unpredictable natural selection (often depending on hundreds of haphazardly variable environmental factors). So, natural selection – in spite of all hefty assertions to the contrary – also includes a substantial element of chance/randomness, which fact, however, is not only rarely addressed in evolutionary TV shows and textbooks, but also often emphatically denied by prominent Darwinians (see, please, below).

Leading philosophers of science appear to largely agree on the non-repeatability of evolution (at the very least for high level intelligence). For example, of those professors “who set out to establish the philosophy of cosmology as a new field of study within the philosophy of physics” from America’s top philosophy departments (like Rutgers, Columbia, Yale, and NYU), one of its founding members, Tim Maudlin of NYU, answered in an interview with Ross Andersen *What Happened Before the Big Bang? The New Philosophy of Cosmology*, on the probability of an independent origin of “intelligent life capable of making technology”:

“What people haven’t seemed to notice is that on earth, of all the billions of species that have evolved, only one has developed intelligence to the level of

producing technology. Which means that kind of intelligence is really not very useful. It's not actually, in the general case, of much evolutionary value. ... Obviously, it doesn't matter that much if you're a beetle, that you be really smart. If it were, evolution would have produced much more intelligent beetles. *We have no empirical data to suggest that there's a high probability that evolution on another planet would lead to technological intelligence.* There is just too much we don't know.”¹⁴

However, because of the widespread phenomenon of convergence (the development of similar or virtually identical anatomical and physiological features in otherwise often totally different organisms far apart of each other in any evolutionary scheme), a minority of biologists is not so sure about the general thesis of non-repeatability of evolution. Nevertheless, even the most optimistic researchers of this faction would hardly apply the possibility of convergence to a second independent origin of man by random mutations and natural selection.

(4) The time frame of the evolutionary process from the presently favored somewhat gorilla-like but smaller apes like *Sahelanthropus tchadensis*¹⁵ to *Homo sapiens* is currently thought to have lasted at least 7 million years.

(5) A series of candidates as transitional links between man and his supposed ancestors is presented in almost every textbook and museum display, not to speak of the presentations in today's most often consulted Wikipedia (but, of course, also in other encyclopedias) – *Homo erectus*, *Homo habilis*, *Australopithecus afarensis*, *Ardipithecus ramidus*, *Orrorin tugenensis*, and others.

(6) “The whole thing is of course incomplete. Nonetheless, it is possible to present a plausible¹⁶ account of the fossil record as well as of DNA sequence analyses ... on the human ancestry of an ape-like *Urform* that lived in the African jungle 6 to 8 million years ago. *There is absolutely no doubt whatsoever*, unless ideological concerns are brought in.”¹⁷

And in this connection of “ideological concerns”, I'm especially fond not only of Richard Dawkins' often quoted verdict that those who do not accept his lines of logic and evidences for gradual macroevolution (and let's please keep in mind that he virtually always speaks of *macroevolution*¹⁸) are “ignorant, stupid or insane (or wicked, but I'd rather not consider that)”¹⁹, but also of his later qualifications of this assessment: “I don't withdraw a word of my initial statement. But I do now think it may have been incomplete. There is perhaps a fifth category, which may belong under “insane” but which can be more sympathetically characterized by a word like tormented, bullied, or brainwashed.”²⁰

Moreover, according to Dawkins (“named world's top thinker in pol” 2013²¹) “...history deniers who doubt the fact of evolution are ignorant of biology”.

Topping his formidably amusing ratings of his scientific critics – in the context of assigning them to a worst category than holocaust deniers – he, moreover, exploded in the following barrage of assertions (dwarfing the rhetoric of preachers like the late Billy Graham almost beyond recognition):

“Evolution is a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt evolution is a fact. The evidence for evolution is at least as strong as the evidence for the Holocaust, even allowing for eye witnesses of the Holocaust. It is the plain truth that we are cousins of chimpanzees, somewhat more distant of monkeys, more distant cousins still of aardvarks and manatees, yet more distant cousins of bananas and turnips... continue the list as long as desired.”²² Or: “The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that evolution is true.”²³ Well, sounds as if a hypnotist tries his very best to “sledgehammeringly” spellbind his ignorant/unenlightened patients by an infinite repetition of suggestive “beyond doubt” Darwinian mantras.

(7) As to one of the most often raised basic objections against the neo-Darwinian theory of evolution, namely that it has been built to an overwhelming amount on chance, the “world’s top thinker” commented (in full chorus with the large majority of like-minded evolutionary biologists): “Where *did* this ridiculous idea come from that evolution has something to do with randomness?”²⁴

(8) And, of course, there is also the never-ending repetition of the – to make it clear from the start – completely false but propagandistically utterly effective number of >98.5 % identity of the chimp and human DNA that has to be mentioned in this context. It is thought to be proving the phylogenetic relationship to our next ‘siblings’ undeniably and once and for all. Astonishingly, however, the argument stops here and the next question whence the chimps obtained their DNA is usually not addressed. All too often it seems that the Darwinian mind has been happily set at rest by this seemingly correct overall genetic similarity.

(9) From “the top ten daily consequences of having evolved” according to Robert Dunn mentioned above, I would like to briefly discuss below first only the perhaps three most topical ones affecting larger populations: (a) wisdom teeth²⁵, (b) backaches²⁶, (c) obesity²⁷, and second (d) a still very often quoted bone structure: (d) the coccyx.

Incidentally, in 1887 Robert Wiedersheim, professor of anatomy at the Albert Ludwigs University of Freiburg, enumerated 86 rudimentary organs in humans in the first edition of his book *Der Bau des Menschen als Zeugnis für seine Vergangenheit*²⁸, but in the following editions (1893 and 1902) a hundred

or so more – assuming and discussing in the last edition of his book (pp. 223-228) some 180 to 222²⁹ such structures and organs in man hypothetically derived from animals down to the sharks, most of which he thought now to be “wholly or in part functionless”³⁰ – among them such vital organs like the hypophysis (p. 226), the thyroid gland (p. 182), the adrenal gland (pp. 216/228) – in fact, almost the entire system of internal/ductless secretory glands were addressed by him under the topic of vestigial organs and rudimentation (“als Zeugnis für seine Vergangenheit”) – also many other systems and organs of which the vital functions were fully discovered only later on. On the whole, during the last more than 130 years, virtually none of the 86 to 222 candidates has been exactly established to be definitely rudimentary by any rigorous scientific criteria, definitions and investigations.³¹ On the contrary, in the wake of further painstakingly precise scientific research, the number of rudimentary organs has steadily declined so that at present there are hardly any serious candidates left.

(10) Nevertheless, the evolutionary show must go on and many of these long outdated claims concerning vestigial organs – surprisingly still often including usually fully functioning organs/anatomical structures as the tonsils, the appendix, the coccyx (the “tailbone”), the branchial clefts etc. and the ones mentioned by Dunn in his article (as well as the erroneous idea of embryonic recapitulation of different evolutionary stages in man) – are anyway put forward not only for the public but also often in otherwise serious biology textbooks. Yet “false facts are highly injurious to the progress of science, for they often endure long” (Darwin). Nowadays one may also apply the term “fake news” to such erroneous presentations.

In retrospect one may speak of the history of such assumed vestigial structures as the “rudimentary organs of the gaps”, the gaps in the scientific knowledge of their usually subsequently discovered crucial anatomical, physiological, genetical and often also further biological functions.

So, perhaps here one can also talk of long obsolete “rudimentary ideas”, boosting the acceptance of neo-Darwinism, thus likewise being fully (and extraordinarily well) functional for the promotion of materialistic philosophy, which cannot survive without a naturalistic explanation for the origin of species including humans – no matter how anachronistic and moth-eaten the arguments may be.

To briefly sum up:

Thus, according to the present state of the assumptions based fundamentally on the materialistic faith of the scientific and philosophic elites around the world:

- (1) Man arose from extinct apes by natural selection of “innumerable slight variations”, “infinitesimally small inherited variations,” (‘micromutations’), i.e. millions of non-designed events.
- (2) The process was absolutely aimless and purposeless; man was not planned.
- (3) In line with (2) The process was utterly unpredictable and is unrepeatable.
- (4) Evolution’s time frame from ape-like forms like *Sahelanthropus* to humans was about 7 million years.
- (5) Among the several candidates for connecting links are *Homo erectus*, *Homo habilis*, *Australopithecus afarensis*, *Ardipithecus ramidus*, *Orrorin tugenensis* and others.
- (6) Evolution – including man from extinct apes as a cousin of the chimpanzee – is a fact, “beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt”. “The evidence for evolution is at least as strong as the evidence for the Holocaust.”
- (7) Evolution has nothing to do with chance. “Where did this ridiculous idea come from that evolution has something to do with randomness?”
- (8) There is 98.5 % identity of chimp and human DNA (see, for example, Kutschera 2019, but also many other authors).
- (9) Included in “the top ten daily consequences of having evolved” are such widespread phenomena like the wisdom teeth, backaches, obesity, also most often mentioned is the coccyx.
- (10) In spite of the strong loss of almost all of the original arguments for non-function of vestigial organs and embryonic recapitulation of different evolutionary stages in man presented by Darwin, Haeckel, Wiedersheim and others, and later also by their neo-Darwinian followers, the evolutionary show must go on, so that – at least for the public – often long refuted lines of false evidences are still presented as scientific facts, in essence being “false facts” mindlessly or irresponsibly being recycled *ad infinitum* in the absence of better arguments.

However, this is only a very small part of the overall evolutionary message, as summed up, for example, by Francisco J. Ayala and Camilo J. Cela-Conde (2018, p. 1): “*Humans* and other mammals *descended from shrew-like creatures* that lived more than 150 million years ago; mammals, birds, reptiles, amphibians, and fishes share as aquatic ancestors aquatic worms that lived 600 million years ago; and all plants and animals derive from bacteria-like microorganisms that originated more than 3 billion years ago” (emphasis added).³²

Investigating Points (1) to (10) More Closely:

- (1) Man arose from extinct apes by selection of innumerable slight variations (mutations with “slight or even invisible effects on the phenotype”)**

These slight phenomena usually belong to the neutral range of genetic differences, which remain virtually unrecognized by natural selection. Even mutants with a selective advantage of 1% have – according to population genetics – to occur at least 50 times independently of each other in order to have a chance to spread in a population.³³ Hence, because neutral mutations are not ‘seen’ by natural selection and since for the rest of the slightly advantageous variations the

waiting time problem is generally so gigantic that the time frames usually stipulated for human evolution are definitely much too small to have any realistic chances to transform apes into man via many transitional stages, neo-Darwinism cannot account for the origin of man.³⁴

For such and additional reasons, some renowned evolutionists have doubted or abandoned their faith in gradualism. Austria's noted biologist Adolf Portmann (1897- 1982), for example, who has studied comparative morphology and human biology in depth and published many books and papers about the topic, raised the following (for any Darwinist outrageous) questions:

“Has, what we have recognized as the human stage, been realized in just one tremendous event [in einem gewaltigen Geschehen]? Or has it become reality in several, many individual steps? Are such steps comparable to what laboratory research calls mutations, i. e. are they small-scale transformations [Wandlungen], but accumulating over millions of years? Or does knowledge of these experimentally realized modes of transformation merely open our eyes to a phenomenon of a special kind, next to which completely different modes of type transformation have existed and still exist, of which we have no experimental knowledge yet?”³⁵ He cautiously left these questions open.

British born American primatologist and paleoanthropologist Ian Tattersall, head of the anthropological department of the American Museum of Natural History in New York City from 1971 to 2010 (now curator emeritus) formulated his non-Darwinian reflections as follows:

“We differ from our closest known relatives in numerous features of the skull and of the postcranial skeleton, in important features of brain growth, and almost certainly in critical features of internal brain organization as well. *These differences exist on an unusual scale. At least to the human eye, most primate species don't differ very much from their closest relatives. Differences tend to be largely in external features such as coat color, or ear size, or even just in vocalizations; and variations in bony structure tend to be minor. In contrast, and even allowing for the poor record we have of our closest extinct kin, Homo sapiens appears as distinctive and unprecedented.* Still, we evidently came by our unusual anatomical structure and capacities very recently: *There is certainly no evidence to support the notion that we gradually became what we inherently are over an extended period, in either the physical or the intellectual sense*” (emphasis added).³⁶ For similar reflections, see also Jeffrey H. Schwartz 1999 and 2017.³⁷

However, if the origin of man did not occur by gradual evolution – what could Tattersall's alternative hypothesis be? Well, he clearly favors “a short-term event of major developmental reorganization” ...“driven by a rather minor structural innovation at the DNA level”.³⁸ – Nonetheless, “...a rather minor structural

innovation at the DNA level” appears to be, for all that can be known at present, a rather unsatisfactory proposal for a comparable origin of some 696 new features (out of 1065) which distinguish man from chimpanzees, 711 from orang, 680 from gorilla, 948 from Gibbon (*Hylobathes*)³⁹, presupposing a similar magnitude of different anatomical and other features (“distinctive and unprecedented”) from his supposed animal ancestor, “our closest extinct kin”, not to speak of 15.6 % differences on the DNA level between man and his alleged closest cousin, the chimpanzee, which means, in actual numbers, more than 450 million bp differences of the some 3 billion bp constituting the genomes overall (see below).

So, considering the fact that best-informed, honest and honorable scientists like Portmann, Tattersall, Schwartz and also many other excellent researchers like Bechly, Brandt, Scherer, Hartwig-Scherer, Sanford, not to mention outstanding biologists from the 20th century like Goldschmidt, Nilsson, Kerkut, Kuhn, Beurlen, Dacque, Schindewolf, either explicitly rejecting the neo-Darwinian theory of (macro-) evolution, some favoring some kind of saltationism, others ID, or have left the question open so far, – so, what do we really know about (a) the gradual origin of man in accordance with the icon shown above? Or, referring to Dawkins, to what extent must somebody be “tormented, bullied, or brainwashed” or even “ignorant, stupid or insane”, a “history denier” etc. by applying Socrates’ notorious *scio me nihil scire* to the origin of man by “innumerable slight variations”, “extremely slight variations” and “infinitesimally small inherited variations” etc. to answer this question in the negative?

(b) In contrast to Darwin’s verdict that natural selection “can never take a leap” (see above), now – staying within naturalism – let’s consider some more or less corroborating points for some kind of saltational evolution of humans from extinct apes: If natural selection does not function by “infinitesimally small inherited variations” (constituting instead the basis for neutral evolution), and if mutations do not generate entirely new functional DNA sequences (as an educated guess there are at least one thousand entirely new genes in humans as compared to chimps⁴⁰ – not to speak of thousands of different expression patterns) and if the time frame for gradualism is insufficient (see, please, below) – well, then (without any further materialistic alternatives so far) one may develop a sympathy for something like a saltational event as hinted at by Portmann and Tattersall and others.

Nevertheless, the nagging/troublesome question remains: What do we really know? Or a bit stronger: What can we know *for sure* of such an event? Does not the postulate or assumption that all the differences between the hypothetical extinct ape ancestor species and man were generated in one (or very few) gigantic step(s) appear to be an unreasonable (not to say a phantastic) demand in the face

of staggering improbabilities on closer inspection just considering the genetical and anatomical questions alone?

(c) And there is, of course, intelligent design (ID) including – apart from the only rarely suggested possibility of *directed* and hence purposeful continuous transformations as well as concerted mutations for genetical and morphological (perhaps pre-programmed) saltations from one lifeform to another – the potentiality of direct transformation of matter into living beings, thus transcending naturalism on all levels of any possible materialistic frameworks and limits. Incidentally, the latter thesis is, most probably, the most difficult to imagine, but in the last say 120 years we have had to get used to the fact that our capabilities and limits of imagination are not a measure of the possibility or impossibility of an event in space and time – neither in the most terrible (absolutely unimaginable) abysses of world history nor in the greatest triumphs of experimental and reproducible science. Moreover, materialists themselves *believe* that matter gave rise to the first life/the first cell (in the opinion of some theorists even repeatedly so on the earth and other planets) and all that without any design – although a testable scientific theory is completely missing.⁴¹

Nonetheless, as Scott Todd firmly reminded the scientific community in *Science* magazine “even if all the data point to an intelligent designer, such a hypothesis is excluded from science because it is not naturalistic.”⁴² Sounds like a *Denkverbot* (a ban on thinking/pondering) through certain natural possibilities. Yet, cannot key aspects of an intelligent design research program – like the inquiry for the emergence of new specified and irreducibly complex systems in humans – be applied to the overall beginnings of ourselves? The basic question is, of course, whether such an approach could be really “scientific” (involving the question for a definition of science).

(2) The process was absolutely aimless and purposeless; man was not planned.

According to the rule of recurrent variation⁴³ the range of possible alterations is limited due to the fact that there are only a limited number of genes, which, upon mutation, can produce only a finite number of alleles with measurable effects on the phenotype. The rule states that "treating homozygous lines with mutagenic agents generates large, but clearly finite, spectra of mutants. This consistently occurs when the experiments are carried out 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." No clear exceptions in the form of mutations

resulting in entirely new positively functioning DNA-sequences generating correspondingly new complex physiological and anatomical and further biological features have ever been found by such aimless and purposeless mutational processes. So, man was indeed not planned by them nor could they ever have given rise to humans (or to any other “self-conscious life on earth”).

(3) In line with (2) the process was utterly unpredictable and is unrepeatable.

In accordance with point (2) let us perhaps a bit more cautiously raise the ensuing question: Could it be, then, that in the form envisioned, the process might never have happened at all because the range of possible variations is limited by the genetical constitution of each and any organism? Also, to repeat the statement just given above now including a new aspect: The probability of mutations to generate new complex functional DNA sequences is so vanishingly small that it has not been shown to occur regularly (if at all) in any species investigated. That is why all the millions of mutations induced in *Drosophila melanogaster*, for example, or the billions of mutations induced for mutation breeding in animals and especially in plants, have never resulted in an entirely new species, which would be able to survive and thrive in the wild (as was originally expected by Nobel laureate Hermann Muller and most other biologists working on mutation research). In the interim, mutation breeding in animals has been totally abandoned after only a few years and in plants (possibly apart from very few exceptions) it has also been generally discontinued after some forty years of intensive research and large-scale funding in many countries around the world. As far as I am aware, no research foundation on earth promotes and subsidizes pure mutation breeding anymore and anywhere.

Also, as for continuous evolution in general, the late biologist and member of the National Academy of Sciences Lynn Margulis stated, “I have seen no evidence whatsoever that these changes can occur through the accumulation of gradual mutations.”⁴⁴ Also: “New mutations don’t create new species; they create offspring that are impaired.”⁴⁵ Or: “[N]eo-Darwinists say that new species emerge when mutations occur and modify an organism. I was taught over and over again that the accumulation of random mutations led to evolutionary change – led to new species. I believed it until I looked for evidence.” As well as: “Mutations, in summary, tend to induce sickness, death, or deficiencies. No evidence in the vast literature of heredity changes shows unambiguous evidence that random mutation itself, even with geographical isolation of populations, leads to speciation.”⁴⁶

Similarly, the past president of the French Academy of Sciences, Pierre-Paul Grassé, contended that “[m]utations have a very limited ‘constructive capacity’”

because “[n]o matter how numerous they may be, mutations do not produce any kind of evolution.”

(4) Evolution’s time frame from ape-like forms like *Sahelanthropus* to humans was about 7 million years

The time frame is far too short to allow for the possibility of the assumed transformation. “Biologically realistic numerical simulations revealed that a population of this type required inordinately long waiting times to establish even the shortest nucleotide strings. To establish a string of two nucleotides required on average 84 million years. To establish a string of five nucleotides required on average 2 billion years. We found that waiting times were reduced by higher mutation rates, stronger fitness benefits, and larger population sizes. However, even using the most generous feasible parameters settings, the waiting time required to establish any specific nucleotide string within this type of population was consistently prohibitive.” Also, “Behe and Snoke and Behe have made the argument that when more than two specific mutations are required to create a specific new biological function, the waiting time problem can become prohibitive. ... Virtually all of the papers subsequent to the work of Behe and Snoke have confirmed that waiting times can be prohibitive – depending upon the exact circumstances. Some of the subsequent papers have been critical. Yet even those papers show that establishing just two specific co-dependent mutations within a hominin population of 10,000 can require waiting times that exceed 100 million years (see discussion). So, there is little debate that waiting time can be a serious problem, and can be a limiting factor in macroevolution.”⁴⁷

Thus, the necessary hundreds of coordinated mutations would occur not even in billions of years of random mutagenesis.

(5) Among the several candidates for connecting links are *Homo erectus*, *Homo habilis*, *Australopithecus afarensis*, *Ardipithecus ramidus*, *Orrorin tugenensis* and others.

None of these forms have been uncontested or unchallenged by leading researchers within the paleoanthropological community. *Homo erectus* – long thought to be one of the links between *Homo sapiens* and perhaps one of the species of *Australopithecus* – definitely belongs to *Homo sapiens*. After a careful examination of the evidence (pp. 55-74), Rupe and Sanford present the following table of the artifacts and skills of this group of intelligent humans (2019, p. 74):

- Watercraft assembly and sailing against an ocean current
- Language, speech, communication
- Reasoning, foresight, planning, ingenuity
- Bead and pendant manufacture/necklaces
- Cordage/knot-making

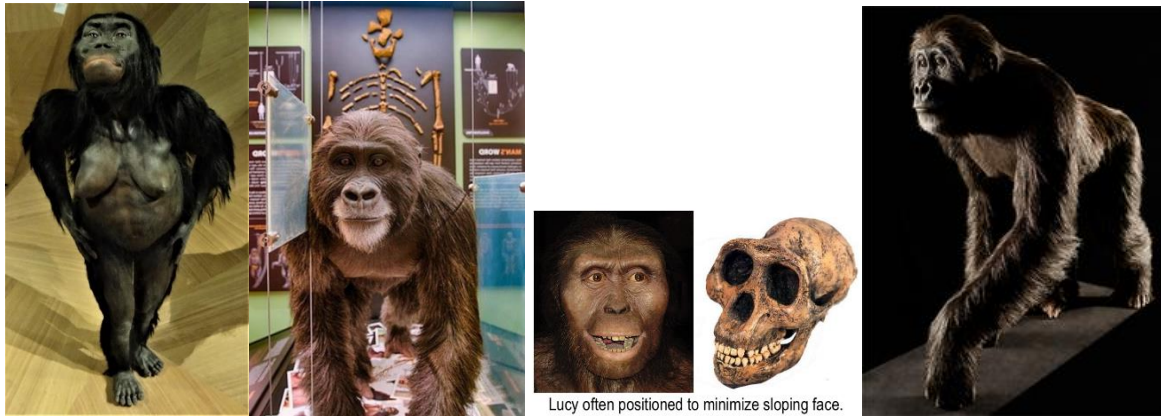
- Manufacture of diverse stone and bone implements
- Controlled use of fire and hearths of stones (fire places)
- Catching, skinning, and cleaning fish
- Cooking food
- Occupational floors/living spaces
- Petroglyphs, figurines, paint (red ochre), art
- Woodworking
- Coordinated hunting
- Butchering, skinning, and transporting large game
- Manufacturing clothing from skins (possibly sewing)
- Production of fibers and resins
- Kinship/family structure
- Care for old and weak individuals⁴⁸

Just a note on the often quoted lower brain size of *Homo sapiens erectus* (as I prefer to call these groups of human beings): His cranial capacities range from 727 to more than 1,200 cc⁴⁹ – average 940 cc. Interestingly, his brain size is fully overlapped by that of normal (non-pathological) adult modern humans, which ranges from 624 cc (Daniel Lyon) to 2012 cc (Ivan Turgenev) – average 1345 cc (gender and age not considered). Cranial capacity of literature Nobel laureate Anatole France was 933 cc.

Although there are still some evolutionary voices ranking *Homo erectus* as a link between the controversial *Homo habilis* (“handyman”) and/or some other so far unknown ancestor (including candidates from the genus *Australopithecus*) and *Homo sapiens* – according to many of the best modern paleoanthropologists *Homo erectus* is *Homo sapiens*. “There is strong evidence that the bones commonly referred to as *Homo erectus* are fully human individuals who suffered from various pathologies associated with such things as inbreeding, mutation, teratogens (developmental abnormalities), etc. Claims that Erectus was a sub-human species are clearly contested among leading evolutionary paleo-experts. While some insist Erectus was morphologically distinct from modern man, others point out that Erectus morphology overlaps extensively with modern humans – and so Erectus should be reclassified as *Homo sapiens*. While some claim they were our progenitors, others acknowledge that they coexisted and interbred with anatomically modern *Homo sapiens*.”⁵⁰

What about all the other forms – a few of which I have mentioned above – to guarantee the alleged fact of the origin of man by random mutations and natural selection from extinct apes like Lucy (*Australopithecus afarensis*) shown in reconstructions at any larger natural history museum around the world? Fortunately, the detailed examination of a critical analysis of the most important “links” has already been presented by Luskin (2017)⁵¹ and also through an in-depth-analysis by the authors just quoted above, Rupe and Sanford, in their book *Contested Bones*, second enlarged printing 2019: 370 pp. (one need not follow

Some (contradictory) illustrations of *Australopithecus afarensis* and (now correct) *Homo sapiens neanderthalensis*



Lucy often positioned to minimize sloping face.



First row (from left to right): Reconstruction of *Australopithecus afarensis* (standing upright, walking like *Homo*) displayed in Neanderthal Museum in Mettmann¹, Germany. In contrast now the second photo upper row: Lucy reconstruction and display of *A. afarensis* at Creation Museum² in Kentucky (apelike, displayed correctly with prehensile feet and as a knuckle walker; the much ridiculed creationists (due to their usually dogmatic theology including their brief time scale for the entire universe of some 6,000 to 10,000 years) in this case appear to be much nearer to the truth (being in agreement with several evolutionary paleoanthropologists; see below) than most science museums. Third of the upper row: A note by creationist “Real Science Radio”³ with some revealing points on the “List of problems with “Lucy” as an upright walker”. Upper row, last photo on the righthand side: Another view of the reconstruction of Lucy as an apelike species at the Creation Museum.

Middle row: Picture behind the couch: Neanderthal Museum, Mettmann, with invitation “Werde Teil der Menschenfamilie” (“Become Part of the Human Family”) by sitting on couch in front of the picture, which I did – photo of the entire scene with me 31 July 2019.

Now on the right of W.-E.L.– just behind the couch – **there is Lucy (*A. afarensis*) as the putative progenitor/ancestor of the entire human family**, of which *Homo sapiens neanderthalensis* (1 and 4 from left) and a sinewy *Homo sapiens erectus* (4 from the right) are shown. But as to Lucy et al., the general statement of the distinguished evolutionary biologists Nelson and Platnick is to be applied: “The notion that phylogeny can be read directly from the rocks **is superstition and nothing more.**”

Lower row (again from left to right): *Homo sapiens neanderthalensis* (skull, reconstruction of possible habitus, face, another reconstruction, teaching child, and Neanderthal man in modern suit. I would like to encourage the reader to carefully observe/take note of the head shapes of people around in your area or elsewhere. You may perhaps be astonished how many Neanderthals and examples of *Homo sapiens erectus* you can discover. (All photos made at Neanderthal Museum by W.-E. L. 31 July 2019).

Even if one strongly doubts the overall materialist message of the Museum (from ape to man by mutation and selection), the entire exhibition has been extraordinarily well **intelligently designed** (entertainingly and captivatingly so to convince the public) **that absolutely no intelligent design was necessary for the origin of humans.**

¹ <https://www.neanderthal.de/de/> (Photo: W.-E.L. 31 July 2019).

² <https://answersingenesis.org/fossils/fascinating-fossils-glimpse-creation-museum-collection/>
https://en.wikipedia.org/wiki/Creation_Museum

³ <https://kgov.com/list-of-problems-with-lucy-as-an-upright-walker>

their *re-ligio* – see definition of the term below – to perceive that the authors have produced an excellent up-to-date scientific criticism of the topic), to which I would like to refer the reader interested in the historical and anatomical (and much more) wealth of astoundingly contradictory data of paleoanthropology. (My comment on their *re-ligio* may be extended also to all the other authors cited in the present paper who also have composed thoroughly researched scientific papers and treatises in spite of, or motivated by, their different worldviews.)

As for Johanson’s Lucy, the most often asserted ancestor of humans during the last some fifty years, I would like to quote only the following key points (for a full examination consult please chapter 7 pp. 113-156 of *Contested Bones*):

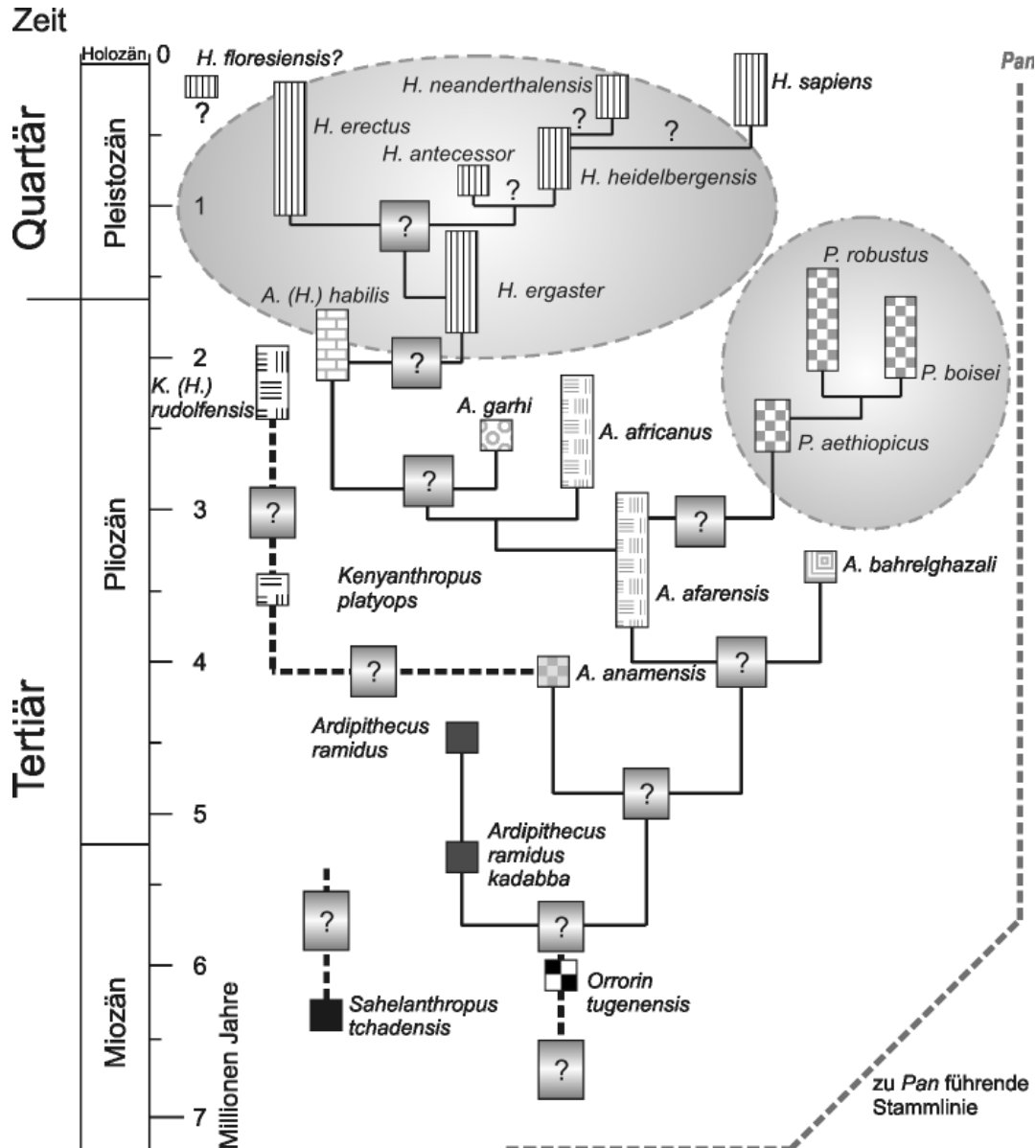
Australopithecus afarensis: “This Latin name means *southern ape from Afar* – because Lucy was found in the Afar region of Ethiopia” near the village of Hadar on the southern edge of the Afar Triangle of Ethiopia). Key point: “Initially, Johanson and the Leakeys had agreed with one another about the taxonomic assignment of their fossils. It was clear to them that their combined fossil assemblage represented multiple species from at least two separate genera – *Australopithecus* and *Homo*. But later, there would be sharp disagreements over Johanson’s unilateral decision to reclassify all of his Hadar findings (as well as Mary’s findings in Laetoli) as representing his new species, *Australopithecus afarensis*. Their conflicting interpretations of the fossils that they found in Hadar and Laetoli created a divide between them and within the paleo-community, which has lasted to this day. Johanson claimed that Afarensis represented the oldest hominin fossils found, which was the ancestor to all later hominins, including *Homo sapiens*. Johanson’s reassessment made him a “paleoanthropological superstar” and his Lucy became the most famous hominin fossil ever discovered” (2019, pp. 113, 114/115).

However, *Lucy may not even have been a female*: “Peter Schmid of Wits [Witwatersrand] University, Johannesburg and his colleague Martin Häusler from the Anthropological Institute in Zurich, published a revised reconstruction of Lucy’s pelvis in the *Journal of Human Evolution*. Schmid and Häusler concluded, based on the pelvic inlet (birth canal) and related pelvic features, that **Lucy was not a female** (they suggested **renaming Lucy’s skeleton “Lucifer”**). In their assessment, the males (Lucy’s skeleton) were not significantly larger than the females, contrary to what Johanson et al. have claimed. Both genders were of about the same size. Therefore, Afarensis cannot be accepted as a sexually dimorphic species. The larger, anatomically distinct bones apparently belonged to an entirely separate species, and likely a separate genus. This is actually what Johanson had originally reported in *Nature*” (Rupe and Sanford, p. 248).

Résumé of the authors (pp. 155/156): “The primary discoverers of those bones that are now called Afarensis, could *easily see that **the bones were a mixture of ape bones and human bones***. This view was overthrown by Johanson et al., who claimed all the bones were a single species – with the human-like bones being male and the ape-like bones being female. We agree with numerous paleo-experts who report in the scientific literature that Johanson’s sexual dimorphism theory is not credible. On this point many paleo-experts agree with us including Coppens, Falk, Hartwig-Scherer, Olsen, Senut, and Schmid. This also includes Deloison, Ferguson, Häusler, M. Leakey, R. Leakey, Tardieu, Walker, and Zihlman” (emphasis added). See also the review by Cremo and Thompson.⁵²

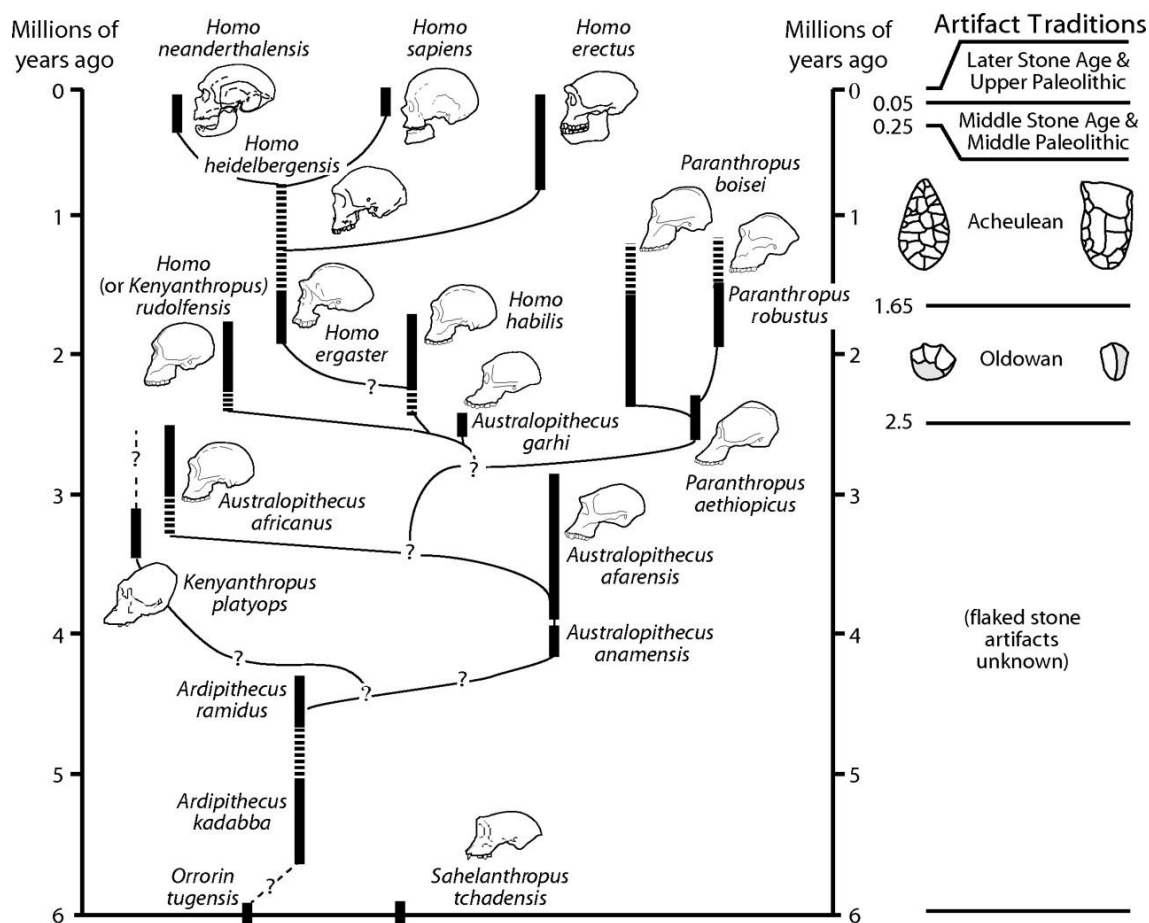
Now, such conflicting interpretations of the fossil record relevant for the origin of man are not the exceptions but the rule. This fact is presented *ad oculos* by the

diagrams on human evolution presented by leading paleoanthropologists, as for example, Winfried Henke from the *Institut für Anthropologie*, Johannes Gutenberg Universität Mainz. Check, please, the question marks for the relations to each other of the fossils found (I counted 16; 15 plus 1 extra for *H. floresiensis*).



Shown above is Winfried Henke’s “modified model of splitter phylogenetic tree” (2007)⁵³ with reference to several preceding authors (similar figure in Henke and Rothe 2015⁵⁴ – with one exception due to the absence of *Homo floresiensis* in the latter, displaying the same position of the question marks). The sixteen question marks are hinting at the corresponding controversies among paleoanthropologists on the relationships and systematics of the fossils so far found. Nevertheless, despite the growing number of unsolved problems, often aggravated by new fossil finds⁵⁵, Henke and Rothe like to express their naturalistic conviction in 2015 (Henke similarly in 2007) as follows: “Today, there is no longer any doubt that the African

apes are our closest phylogenetic relatives, the evidence is clear”, followed by the false claim (see below) that the genotype of chimpanzee and human being is 98.8%.⁵⁶ A somewhat similar presentation (also with a series of question marks) was given by Richard G. Klein in *PNAS* shortly afterwards.⁵⁷



R. G. Klein: “A working phylogeny of the australopithecines and *Homo* (after ref. 19). Flaked stone artifacts appeared at about the same time as the earliest species of *Homo*. The initial expansion of humans from Africa coincided roughly with the shift from the Oldowan to the Acheulean (handaxe) traditions. The subsequent expansion about 50,000 years ago coincided with the shift from the Middle Stone Age/Middle Paleolithic to the Later Stone Age/Upper Paleolithic traditions.”

Carefully comparing the figure presented by Henke (see preceding page) with that of Klein above, you will find that the question marks are often situated at different places in the two figures. *Homo heidelbergensis* has been given question marks for being the ancestor of *H. neanderthalensis* and *H. sapiens* by Henke. However, in the figure of Klein *Homo heidelbergensis* is the direct ancestor of the two (without a question mark). In Klein’s figure *H. erectus* is derived from nowhere between *Homo ergaster* and *H. heidelbergensis* (dashed line) and *H. ergaster* himself is derived with a question mark from the beginnings of *H. habilis* (which unfortunately never existed) and which, in turn, seems to be derived from *Australopithecus garhi*, yet note the dashed line in between the two “species”.

Homo habilis is called correctly *Australopithecus (H.) habilis* by Henke, giving rise in both figures (with appropriate question marks) to *H. ergaster*, which in turn seems to have generated *H. erectus*, *H. antecessor*, and *H. heidelbergensis* in Henke's figure (with 3 suitable question marks), but in Klein's figure (apart from the fact that the "all-embracing "wastebasket" species [*H. habilis*] into which a whole heterogeneous variety of fossils could be conveniently be swept"⁵⁸ never existed at all) produced only *H. erectus* as an early side branch – although rising from a dashed line – and later *H. heidelbergensis*, subsequently splitting into *H. neanderthalensis* and without any contact with Neanderthals (in the interim disproved by molecular genetics for both the figures) into *H. sapiens* – as noted already above.

As to *A. garhi*: in contrast to Klein, Henke has placed it on a sideline with no descendants at all, whereas, according to Klein, it could be an ancestor of *Homo (Kenyanthropus) rudolfensis* and being (again with the appropriate question mark) at least near the assumed line leading to *Paranthropus aethiopicus*.

However, for the latter, Henke appears to favor *A. afarensis* as a possible ancestor instead of *A. garhi*. And where does *A. afarensis* come from? – Well, only three lone question marks without any contents leading to, perhaps, *Orrorin tugenensis* (dashed line in Henke), which then leads to the final question mark of the latter's ancestor there. In Klein *A. afarensis* and/or *A. anamensis* are the possible ancestors of *A. garhi* and perhaps somewhat earlier also of *A. africanus* as a side branch. And where does *A. anamensis* come from? Klein seems to favor *Ardipithecus ramidus* (although with two question marks), which in turn is hypothesized to have come from *Ardipithecus kadabba* (interrupted by dashed lines) leading to – with just one question mark – *Orrorin tugenensis*. Let's emphasize that *Ardipithecus ramidus* is an extinct species without any descendants in Henke's evolutionary scheme whereas it could have led – over a series of further links – to *Homo sapiens* in Klein's device.

Homo (Kenyanthropus) rudolfensis is derived from *Kenyanthropus platyops* in Henke's scheme which in turn is generated there via three question marks from *Orrorin tugenensis*. However, in Klein's figure *Kenyanthropus platyops* (leading to 'Erewon') is generated somewhere near *Ardipithecus ramidus*.

So, what do we really know? "Evolution is a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt evolution is a fact. The evidence for evolution is at least as strong as the evidence for the Holocaust, even allowing for eye witnesses of the Holocaust"? How "ignorant, stupid or insane", "tormented, bullied, or brainwashed" must a reader be to doubt the entire evolutionary scheme for the origin of man from extinct apes

contrast to Henke and Klein – according to Bernard Wood not only *Sahelanthropus tchadensis* but also *Orrorin tugenensis* is now placed on side branches and *Ardipithecus kadabbe* is here not derived from *O. tugenensis* anymore. Has this replacement been due to new and better fossil evidence? As far as I could find out, definitely not. It appears to be just different (although well educated) guesswork without any solid, testable scientific evidence.

Apart from the fact that almost all the side branches – normally sprouting directly from the main stem of a natural tree (even in *Pinus longaeva*, the model for the illustration above) – are now hanging in the air (thus systematically substituting all the question marks of many other figures presented by several different authors, as in the examples shown above), this overriding additional point may also to be noted: Although the main stem itself appears to be stronger at the lower part of the figure – evaluated on the basis of scientific evidence of the fossils found so far, it should be definitely *thinner* than the upper part (“[t]he first third of our evolutionary history is poorly known” – John Hawks; 2019⁶⁰; “[e]arly Pliocene hominin evolution is shrouded in darkness largely because of the lack of fossils” – Yohannes Haile-Selassie, Stephanie M. Melillo, and Denise F. Su; 2016⁶¹), i.e. in reality the tree stands totally upside down (not the very best position for a real tree to be deeply rooted in fertile soil bearing large amounts of fruit).

Interestingly, in Bernard Wood’s tree – without any exceptions – all the Australopithecines are now placed on side branches (right hand side), definitely implying that none of them belong to the alleged direct ancestors of man (most of them are even far away from them in that largely fragmented and almost shredded tree). ***Wood is in agreement with*** a minority but famous paleoanthropological authors like ***Louis and Richard Leaky, Charles E. Oxnard, and Sir Solly Zuckerman***. Yet, the contrast to majority view, presented in most other evolutionary trees following Donald Johanson, including those displayed in museums and textbooks around the world, can hardly be greater! (Even *Australopithecus sediba*, although placed near *Homo ergaster* = African *Homo erectus*, is not presented as an ancestor of the latter). And what about *Homo habilis*, the ancestor of *H. erectus* and *H. sapiens* in almost all museum displays? “The ongoing debate about the origins of our genus is part of *H. habilis*’s legacy. In my view, the species is too unlike *H. erectus* to be its immediate ancestor, so a simple, linear model explaining this stage of human evolution is looking less and less likely. Our ancestors probably evolved in Africa, but the birthplace of our genus could be far from the Great Rift Valley, where most of the fossil evidence has been found. The Leakeys’ iconic discoveries at Olduvai Gorge should remind us of how much we don’t know, rather than how much we do” (Bernard Wood 2014).⁶²

Rupe and Sandford sum up the present state of *A. sediba*: “Team leader John Hawks and even discoverer Lee Berger himself, appear to have given up on Sediba. As Hawks reflects, “It’s not everything the rumor mill said it was going to be. It’s not a missing link.” From the beginning, the paleo-community was suspicious of Berger’s sensationalized claims, and has since dismissed Sediba as a credible transitional “bridge species” to early *Homo*. An article in National Geographic by science writer James Shreeve captures the current sentiment of the paleo-community regarding the claims made about Sediba: “Though the doyens of paleoanthropology credited him with a “jaw-dropping” find, most dismissed his interpretation of it. *A. sediba* was too young, too weird, and not in the right place to be ancestral to *Homo*: It wasn’t one of us. In a sense neither was Berger. Since then, prominent researchers have published papers on early *Homo* that didn’t even mention him or his find.””⁶³

In Wood’s evolutionary family tree *Ardipithecus ramidus* is ruptured from *Ardipithecus kadabba* – the latter being placed on and directly derived from the main evolutionary stem again in contrast to Henke and Klein (as shown above).

Kenyanthropus platyops in turn is placed near, yet dismembered from, *Ardipithecus ramidus*, which is put adjacent to the latter by Klein (yet with question marks), but is derived from *Australopithecus anamensis* by Henke (once more with question marks).

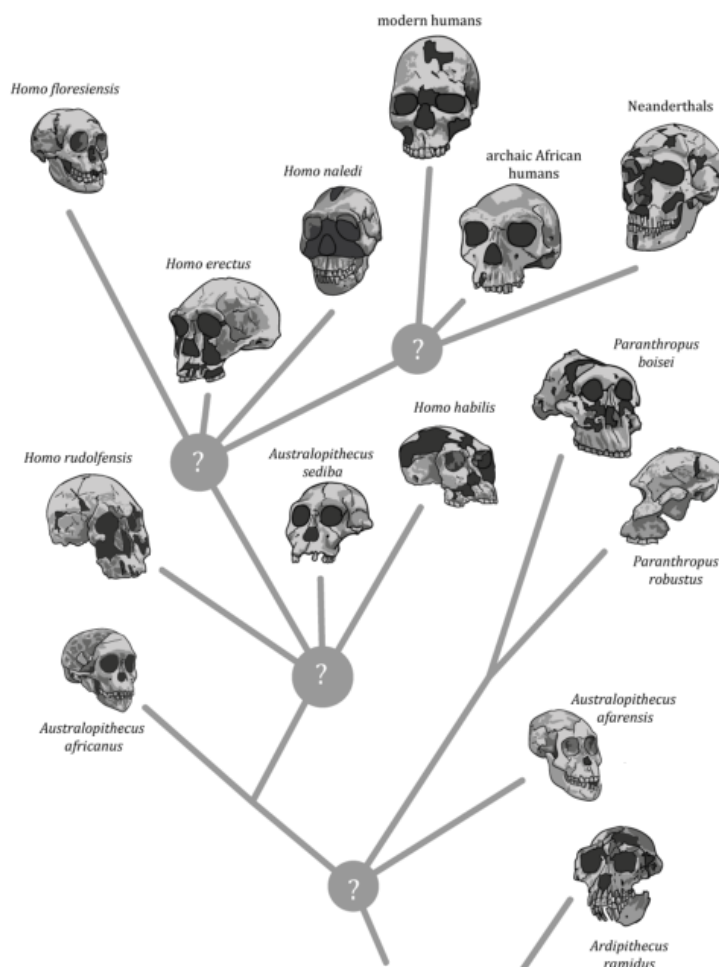
Strangely enough, *Homo habilis* has also been ‘resurrected’ by Wood (although it most probably had never existed at all in the form usually presented in textbooks and museums during the entire history of the earth, or in Wood’s own words: “The diverse group of fossils from 1 million years or so ago, known as *Homo habilis*, may be more properly recognized as australopithecines”⁶⁴; see also the meticulous review by Michael Brandt 2017⁶⁵), but despite the points just given in brackets it is now standing ‘alive’ – although rather isolated – in the vicinity of *Homo rudolfensis* (appearing simultaneously with *H. habilis* in the figure). However, Wood placed *H. habilis* near a fractured branch leading almost horizontally to *H. heidelbergensis*, which in turn allegedly leads to *H. neanderthalensis* on the right and *H. sapiens* on the left (as already mentioned above). *H. rudolfensis* is now placed near a stronger branch of the main tree but a bit farther away from the latter three humans, somewhat in contrast to Klein and Henke who both had put *H. rudolfensis* on a totally dead end.

Last not least, *Homo erectus* is not portrayed as a possible link to *Homo sapiens* by Wood (note please, the broken twig/side branch), in opposition to Henke and Klein who placed *Homo ergaster* (African *Homo erectus*) as a conceivable link – although with question marks or dashed lines respectively.

Well, my résumé: The authors cited above have to ***be recommended for their honesty*** by not displaying illusory final results on the evolution of man, yet I would like to bring into consideration, to put it ironically, that whoever should

cherish the idea of climbing Bernard Wood's 'disintegrated/fractured/shredded tree' – or any one of the 'question-marks-trees' of the other authors – should perhaps first calculate the probability to fall off somewhere in the midst and hence never reach the top.⁶⁶

In John Hawks' latest evolutionary tree of 2019⁶⁷ (which in my view corroborates the résumé just given), a range of *Homo* forms (from left to right: *Homo floresiensis*, *Homo naledi*, and, with a second question mark, modern humans, archaic African humans and Neanderthals, are all placed rather far away from each other, as if interbreeding could never have occurred) – is all derived from *Homo erectus* (of course, with a question mark) in clear contrast to B. Wood. *Homo habilis* has again been 'resurrected', being derived together with *Australopithecus sediba* and *Homo rudolfensis* from another question mark, as it were. *Australopithecus africanus* and *A. afarensis* are placed far away from each other (as also has been done by Klein) without being a candidate for a direct ancestor in the alleged line leading to *Homo sapiens*, but in Henke *A. afarensis* is definitely nearer or perhaps even on that line, though – as usual – with question marks.



Note, please, among other things addressed below, the five question marks in John Hawks' phylogenetic tree of 2019⁶⁸, just presenting the upper half of the entire evolutionary scheme for the origin of man often starting with something like *Orrorin tugenensis*.

Note added in proof (7 Aug and 27 Dec 2019): On 2 August 2019 I received the book edited by Jeffrey H. Schwartz (2018): *Rethinking Human Evolution* (Cambridge: M.I.T. Press), in which the acclaimed paleoanthropologist Ian Tattersall wrote Chapter 15: “Brain Size and the Emergence of Modern Human Cognition” (pp. 319-334). On p. 320 he updated his “provisional genealogical tree of the hominid family, showing both high diversity and that typically several hominid species (up to 7) have coexisted at any one time. Drawn by Patricia Wynne” (2016). See p. 257 of <https://www.amphilsoc.org/sites/default/files/2017-07/attachments/Tattersall.pdf>. Again – and correctly so – all branches of the tree are ‘hanging in the air’ **without a connection to a main trunk** (although Tattersall decidedly emphasizes his naturalistic faith “that we living *Homo sapiens* are fully integrated into the Great [evolutionary] Tree of Life”, displaying a “very bushy form” in man – 2016, pp. 254, 258). Dots show suspected relations, solid lines the real fossil evidence. And if you compare this genealogical tree with the others shown above, you will find an additional series of differences to each of them. To discuss that tree in detail would necessitate the insertion of a longer text, yet the principle of the message on *The Evolution of Man: What do We Really Know?* should already have become clear by the discussion presented so far in the present article.

Now, if somebody ever objects that the leading paleoanthropological authors so far quoted (Henke, Klein, Wood, Hawks, Tattersall) did not publish their ideas (including their evolutionary trees) simultaneously but over >a decade (from 2007 to 2019) and that the differences and contradictions may be due to progress in research – well, I would point out that this objection would not even be close to the truth.

Although some new fossil discoveries have been made during the last 12 years (*A. sediba*, *H. naledi*, *H. luzonensis*) none of them can convincingly explain the disagreements, discrepancies and contradictions between the different assessments of the alleged human evolutionary tree as shown by the authors and as discussed above. On the contrary, the new finds have aggravated the dilemma to achieve a scientifically convincing phylogenetic tree. But the problem runs even deeper. In the words of Henke “[T]he methods of phylogenetic reconstruction provide a significant broadside for critical objections. These are by no means only semantic problems, as some think, but massive difficulties in reconstructing the order of living beings through morphological and even molecular-biological trait patterns (eg. mtDNA)”.⁶⁹

Yet, this still does not address fully the deeper foundational problematics of the different evolutionary scenarios. After all, one could argue that despite all the differences, conflicts and contradictions between the various authors, there are, in fact, several different forms of Hominoidea, which can be so arranged in time that the idea of evolution (unceasingly translating morphological similarities into phylogenetic trees) of *Homo sapiens* from extinct apes becomes inescapable – either by continuous or saltational evolution.

I’m going to come back to and address this seemingly strong objection below (not to remind the reader of the mixed ape/human bones of *A. afarensis* already mentioned above). To settle one thing right away: The argument could have some force **only if** the following statement of Hooton made for fossil findings of *Homo sapiens* earlier than Neanderthals (see below and corresponding endnote) could definitely not be applied to the time schedules of also most of the earlier Homininae and Hominoidea: “Heretical and nonconforming fossil men were banished to the limbo of dark museum cupboards, forgotten or even destroyed.”

Right now, to assess the question more thoroughly concerning the evolutionary methods to prove the ape-to-man story, let’s first have a look at Blackwelder’s comments on the effects of the Darwinian theory on morphology:

“Accordingly, the morphologists experienced a revolution. Their work was given direction and a definite goal, and they spent nearly half a century to unravel evolution by means of structure. It has often been forgotten that this effort ended in failure. Anatomy and embryology were not able to explain or prove evolution, even after the fields became largely experimental, because they were trying to infer from static phenomena (the intimate structure of the body) the dynamic relations in a course of events (organic evolution). This was a hopeless task, as was pointed out by Raymond Pearl, in spite of the fact, that it was bolstered by certain plausible ideas that were mistaken for natural laws. Among these was the idea of ontogenetic recapitulation of phylogeny and the belief in an objective basis for homology. It would be doubtless more accurate to say that the search for morphological proof of evolutionary theory was the result of belief in these things.”⁷⁰

In other words: The entire method is useless to construct reliable phylogenetic trees. Also, “They [taxa and evolutionary units] are different things, and complete equivalence is therefore inappropriate and responsible for many semantic problems and discussions (Woodger, 1952; Blackwelder, 1962).⁷¹

The inappropriateness of the method resulting in an almost infinite series of conflicting results produced for the origin and evolution of man (among others) has vividly been documented in a series of recent comments by paleontologist Günter Bechly in *Evolution News and Science Today* 2017-2019.⁷² See also Casey Luskin (2017): *Missing Transitions: Human Origins and the Fossil Record*.⁷³ For further documentation on the method’s incongruity for phylogenetic reconstructions, see Nelson, Williams and Ebach, Nelson and Platnick, Stanley, Patterson, as documented in <http://www.weloennig.de/ElephantEvolution.pdf>, pp. 22-24 (there also the literature references and further extensive documentation). Because of the importance of these insights, I have now repeated the main points in the present article in the following paragraphs:

After about a century of careful analyses of the *pros* and *cons* for proofs of ancestor-relationships of fossil forms, the following conclusion of the matter has been generally accepted by virtually all well-informed paleontologists and neontologists alike, and this has already been so for *for many decades*, so that even evolutionary hardliners like Prothero and others seem to have accepted it – at least paying lip service to it (see below).

As evolutionary biologist Gareth J. Nelson has formulated in his renowned paper of 1969 (and further elaborated 2005 and 2014) – with a strong impact and aftereffects to this very day (see, for example, Prothero 2017 as quoted below):

(1969, p. 22) “*It is a mistake to believe even that one fossil species or fossil “group” can be demonstrated to have been ancestral to another.* The ancestor-descendant relationship may only be assumed to have existed in the absence of evidence indicating otherwise.” (P. 23) “The history of comparative biology teaches us that the search for ancestors is doomed to ultimate failure; thus, with respect to its principal objective, this search is an exercise in futility. Increased knowledge of suggested “ancestors” usually shows them to be too specialized to have been direct ancestors of anything else.”

And on Nelson’s *Presentation to the American Museum of Natural History*, also in same year, David Williams and Malte Ebach commented in 2010, p. 613:

“*Nelson’s talk caused an outrage.* Previously, fossil taxa that were similar to younger species were **labeled as ancestors** and a lineage was proposed based on the rates of similarity and the arrow of time dictated by the rock record. Biologists or “neontologists” were dismissed as possessing neither the faculty nor the data to find evolutionary

relationships. Paleontology was thought to be superior, and, as a consequence, **many fossils were thought to be real ancestors**.

– Which thoughts could not be proved. Now, in our context I'm going to reproduce just the key quotation of Nelson's presentation of 1969 (the text was reproduced by Williams and Ebach (2004, pp. 702-712, quote p. 707):

"[T]he idea that one can go to the fossil record and expect to empirically recover an ancestor-descendant sequence, **be it of species, genera, families or whatever**, has been, and continues to be, a **pernicious illusion**, responsible, in my opinion, for much of the current confusion within the field of comparative biology."

For a detailed justification of this conclusion, see please the original papers.

Gareth Nelson and Norman Platnick have emphasized in their book on *Systematics and Biogeography* (1981, p. 333; see comments on the importance, influence and relevance of this book by Ebach and Williams 2010):

"The notion that phylogeny can be read directly from the rocks **is superstition and nothing more**."

Perhaps one important reason for this fact has been given by Steven M. Stanley already in 1981 stating (p. 95) in the context of the superb fossil data from the Bighorn Basin of Wyoming) that "*in fact, the fossil record does not convincingly document a single transition from one species to another*." Can we extrapolate his inference on the basis of these findings to the elephants and other organisms? Now, if this is true for such "superb fossil data", and their "remarkable degree of completeness" even "unmatched by contemporary [Eocene] deposits" (at that time at least) – what can we conclude (1) for equally outstanding/magnificent/exquisite data? And (2) what for less perfect fossil data?

Hence, because of these facts, and for many additional reasons, British vertebrate paleontologist Colin Patterson – who told Tom Bethell that "he was an atheist, and once referred to the belief-system underlying the Church of England as "a pack of lies"" and who believed in evolution – stated in both editions of his book on *Evolution* (1978 und 1999): that:

"Fossils may tell us many things, but one thing they can never disclose is whether they were ancestors of anything else" (1978, p. 133 and 1999, p. 109).

And Nelson again (in the first paper by him quoted above, now p. 27):

"That a known fossil or recent species, or higher taxonomic group, however primitive it might appear, is an actual ancestor of some other species or group, **is an assumption scientifically unjustifiable**, for science never can simply assume that which it has the responsibility to demonstrate."

"It is the burden of each of us to demonstrate the reasonableness of any hypothesis we might care to erect about ancestral conditions, keeping in mind that we have no ancestors alive today, that in all probability such ancestors have been dead for many tens of millions of years, and that even in the fossil record they are not accessible to us."

So far this insertion.

In his book *Kladismus oder die Legende vom Stammbaum (Cladistics or the Legend of the Phylogenetic Tree)*, Olivier Rieppel of the Field Museum of Natural History (Rowe Family Curator of Evolutionary Biology), Chicago, Illinois, a critic of intelligent design theory, (nevertheless) had perceived with utmost clarity the epistemological and other problems involved in the topic of taxonomy and evolution, repeatedly (pp. 16, 17, 167) identifying the theory of evolution together with further authors as a plausible but "metaphysical research program" ("metaphysisches Forschungsprogramm") writing (1983, p. 18) for example:

"Organismic diversity and its graded similarity motivate us to raise the question of their origin. Why is it that millions of species populate and have populated our earth? How does the *apparent* change of species occur in successive layers of rock? These are phenomena that we can observe and that require explanation. **The theory of evolution** is one such explanation. **It does not provide knowledge, it is not proven nor provable, it is our thought construction**. Is there a better one? The discussion is opened!" (Emphasis added). Or p. 25: "The ascertainment of order is independent of evolutionary thought."⁷⁴

As far as I could find out, Rieppel was (at least at that time) in full agreement with the scientifically clear and convincing arguments of *Pattern Cladistics* concerning evolution, especially with the authors just mentioned above, but in the interim seems to have modified his views somewhat (as yet, I could not fully check his book of 2011 critiquing creationism and intelligent design).

Addition 5 August 2019: In the interim I could. No word on cladistics anymore, **Willi Hennig** – the father of cladistics and **strong critic of the possibility to identify real ancestors in the fossil record** – not even mentioned (obviously doesn't fit in this context). Instead a hymn of praise on Darwin as "one of the most important biologists of all times" at the end of the book (full of long obsolete arguments against design, none of the presently leading design proponents cited, the modern intelligent design theory definitely not understood).

However, Wheeler, Assis and Rieppel later (2013, p. 295) made in *Nature* some hints on Hennig's "take on fossils" that "surprised many contemporary paleontologists and evolutionary biologists. In the early twentieth century, and to a lesser extent, even while Hennig was writing his book, **the fossil record was treated as if it revealed the truth of evolutionary history**" (emphasis added). For further points on Hennig, see please the endnote.⁷⁵

Now, the second category of deeper foundational problematics of the entire evolutionary scheme consist of the historical fact that the ape-to-man-paradigm was accepted and had become materialist dogma at a time when hardly any fossils were known, fossils, which perhaps (not considering the points just mentioned above) could have corroborated the derivation of man from the animal kingdom. Sherwood Washburn, Professor for Anthropology at UC Berkeley (a convinced evolutionist) appropriately commented:

“The early theories of human evolution are really very odd, if one stops to look at them. David Pilbeam has described the early theories as ‘fossil-free.’ That is, here were theories about human evolution that one would think would require some fossil evidence, but in fact there were either so few fossils that they exerted no influence on the theory, or there were no fossils at all. So, between man’s supposed closest relatives and the early human fossils, there was only the imagination of nineteenth century scientists.” The key reason [applying Washburn’s critical assessment of Gregory’s book *Man’s Place among the Anthropoids* to that time]: “People wanted to believe in evolution, human evolution, and this affected the results of their work.”⁷⁶

So, the entire phylogenetic scheme was not developed on the basis of new empirical data and perhaps unexpected but strikingly convincing unique new discoveries of human fossils but appears to be largely due to the victory of the materialistic worldview at that time, in which “The Darwinian doctrine has thus been used, not [even] as a working hypothesis, in the strict sense of the word, but rather as an explanatory principle, which it is sufficient to illustrate by examples, rather than to verify. The role of the Darwinian theory in biology is therefore essentially that of a philosophical doctrine” (W. R. Thompson).⁷⁷

In the interim the philosophical dogma itself has become so petrified, frozen and fossilized that any facts, which could call into question the entire paradigm (if modern man appears too early, for instance) can be systematically either re-dated, – *cf.* the detailed documentations of several authors from their different religious standpoints (see *re-ligio* below): First, perhaps, by Roger Lewin (consenting, 1987, pp. 189-252), then by Michael A. Cremo and Richard L. Thompson (critically 1993, pp. 693-699), Marvin A. Lubenow (fully dissenting 1995, pp. 36-38⁷⁸) and by Christopher Rupe and John Sanford (also fully dissenting, 2019, pp. 256-259, 289-300) on the key example of the Anna Kay Behrensmeyer/KBS Tuff controversy until they fit the dominant preconceived theory – or are altogether ignored – as pointed out by Hooton for the Neanderthals.

“At a symposium held in 1973 at Nairobi, paleo-experts compared all the hominin fossils from the Turkana basin region. Meave Leakey et al. later described how leading paleo-experts at the symposium felt about Richard’s findings: “...the 2.6 Ma date attributed to the KBS Tuff was controversial. If the

date was accurate, stone artifacts from the KBS Tuff were the oldest known to science and the hominid fossils from below that tuff included the oldest representatives of the genus *Homo*". These findings blatantly conflicted with the "group think" of the paleo-community, and so the KBS Tuff was re-dated many, many times until (with the help of pig's teeth) a more "comfortable" age of 1.8 million years was finally accepted"⁷⁹, eventually catapulting Lucy onto the throne of human origins in most evolutionary trees and museum displays.

Interestingly, the first date of 2.6 Ma was based on several 'absolute' (or most probably sure), age determinations, respectively: (1) Argon-argon, (2) potassium-argon, (3) faunal correlations (elephant fossils), (4) paleomagnetism and (5) fission track dating. About two additional samples (one of pumice and one of felspar crystals) sent by R. Leakey for the dating process to Fitch and Miller in London, Fitch declared in a response to Leakey: "Where to proceed from there depended on the choices offered to Leakey, one of which was twice as expensive as the other but, said Fitch, "would result in this tuff *being incontrovertibly dated and with age greater accuracy than any other site in Africa or elsewhere*" (emphasis added). Result: 2.61 ± 0.26 Ma.⁸⁰

I must admit that I am impressed: If it is possible to re-date 5 independently obtained 'accurate' ages from 2.6 Ma down to 1.8 Ma (applying the same dating methods) to accommodate the ages to a preconceived evolutionary hypothesis on the origin of humans – to emphasize: a difference of 0.8 Ma = 800,000 years (!) – how sure can we be that such old and new age determinations of all the Ma are really correct? See also the enormous age differences given for *Homo floresiensis* highest numbers: 4,000 years, 92,000 yrs, 190,000 yrs and 700,000 yrs.⁸¹

A current example: We shall see what will happen to the recent discovery described in Gerhard Gierlinski's (and coauthors') paper (2017) on *the Possible hominin footprints from the late Miocene (c. 5.7 Ma) of Crete?* – which "Challenge Theories of Human Evolution"⁸². "These footprints are indubitably from a large bipedal primate with human-like feet, and it is precisely the shape of our foot "that is one of the defining characteristics of being part of the human clade" (Ahlberg & Bennett 2017). [...] The Crete footprints rather resemble the famous Laetoli footprints from Tanzania that have been dated to an age of 3.66 million years and attributed to *Australopithecus afarensis* as the oldest known human footprints until now, but look rather similar to modern human footprints" (Günter Bechly)⁸³.

A vivid and downright exciting paper on what *has* already happened rather recently to prevent publishing the new discoveries from Crete – the prejudices and resistances (even invective and slander), by an astonishing high number of peer reviewers of several leading science journals of the world, has been presented by Emily Chung (2018) *One hell of an impression*⁸⁴ (details in the link below).

The following insert – a word by Pierre Teilhard de Chardin – may further help explain the present situation in biology and related disciplines: “Is evolution a theory, a system or a hypothesis? It is much more: **it is a general condition to which all theories, all hypotheses, all systems must bow** and which they must satisfy henceforward if they are to be thinkable and true. Evolution is a light illuminating all facts, a curve that all lines must follow” (emphasis added).⁸⁵

Critically considering such comments (and there are, in fact, many more of them by world-famous Darwinians, see, please, p. 31 in <http://www.weloennig.de/ExplosiveOrigins.pdf>), – could it perhaps be that instead of being “a light illuminating all facts”, the theory is a gross gloom obscuring/obfuscating/darkening most facts and that (macro-)evolution has become more something like a totalitarian non-falsifiable *religion* than a scientific theory – perhaps even be “a totalitarian, **absolutely dogmatic and complete materialistic state of mind**”?⁸⁶

Now, we are coming back to the question raised above, whether several different forms of Hominoidea can be so arranged in time that the idea of evolution of *Homo sapiens* from extinct apes becomes inescapable and whether Hooton’s statement made for fossil findings of *Homo sapiens* appearing earlier than Neanderthals (see again below and endnote) can definitely not be applied to the time schedules of also most of the earlier Homininae and Hominoidea: “Heretical and nonconforming fossil men were banished to the limbo of dark museum cupboards, forgotten or even destroyed.”

In the ensuing paragraphs I start with an older but nevertheless evolutionarily never satisfactorily explained and solved example, but perfectly in line with the question just raised:

I first heard about the discoveries of Hans Reck, professor at the Geologisch-Paläontologische Institut der Friedrich-Wilhelms-Universität zu Berlin, in the late 1960s in the well-researched pro-Darwinian book *Ich suchte Adam* by Herbert Wendt (1966).⁸⁷ Reck had discovered a skeleton of an undoubtedly modern *Homo sapiens* (all authorities unanimously agreed on this point) (Oldoway hominid 1) in Bed II of Oldoway George, dated at present to be 1.15 million to 1.7 million years old and I was astonished that I did not find a clear analysis and perhaps also refutation of the find and its age in my textbooks available. “In December 1913 one of the workmen found a bone protruding from one of the oldest layers, Bed II, at a level where extinct animals from the Pleistocene had been found. He started to excavate, then told Reck of his find. Reck directed the excavation. The workers used hammers and chisels to excavate a human skeleton with modern anatomy that was embedded in a block of sedimentary rock. Reck examined the surrounding rocks carefully, but found no sign of disturbance that could indicate a burial at some later date.”⁸⁸

Rupe and Sanford: “German paleontologist Hans Reck was the first scientist to study the geology at Olduvai. He embarked on his first expedition in 1913 where he conducted extensive research, cataloguing numerous fossils and meticulously detailing the geology. Reck identified the five main depositional sequences that make up Olduvai Gorge (Beds I-V), a system that is still used by geologists today. He is also credited with finding the first fossil hominin, designated Olduvai Hominin 1 (OH 1), a nearly complete modern human skeleton (Figure 3). The provocative finding stirred up immense controversy among the paleoanthropology community of his time. Today, Reck’s finding has been swept aside and ignored, but not for any sound scientific reason (apart from the

commitment to the ape-to-man paradigm). Yet Reck and this skeleton very literally represent the beginning of modern paleoanthropology!”

“(OH 1), nicknamed “Oldoway Man.” The skeleton was nearly complete and unquestionably modern in its anatomy. It was excavated from Bed II making it the oldest discovery of a modern *Homo sapiens*. Reck reported his find, and invited Louis Leakey to visit the Olduvai site. At first, Leakey was skeptical about Reck’s find, until 1931 when he collaborated with him in Tanzania and examined the finding firsthand. Leakey was then convinced that Oldoway Man was authentic. But this was an unwelcome find for most paleoanthropologists who did not accept the possibility of such an early date for the origin of man (1.15–1.7 million years old, according to current potassium-argon dates for Bed II). This is significantly older than the oldest currently accepted *Homo sapiens* fossil; a jawbone that dates 315,000 years old was recently found in Jebel Irhoud, Morocco of northern Africa.⁴⁴ Many who had never directly examined the excavation site, put heavy pressure on Leakey to recant his position. They argued that it must have been an intrusive grave dug into Bed II in recent history, rather than an in situ burial at the time of deposition. Leakey, Reck, and a number of other researchers adamantly disagreed and expertly defended the find.⁴⁵ Those who had actually seen and carefully analyzed the site first-hand made numerous observations demonstrating that Oldoway Man could not have been an intrusive burial. Reck, who understood the geology at Olduvai better than anyone noted, “The bed in which the human remains were found...showed no signs of disturbance. The spot appeared exactly like any other in the horizon. There was no evidence of any refilled hole or grave.” He further stated: The sediment...is so constituted that the artificial breaking of the bed with its visible layering by digging of a grave would necessarily be recognizable. The wall of the grave would show in profile a division from the undisturbed stone. The grave filling would show an abnormal structure and heterogeneous mixture of excavated material, including easily recognizable pieces of calcrete. Neither of these signs were to be found despite the most attentive inspection. Rather the stone directly around the skeleton was not distinguishable from the neighboring stone in terms of color, hardness, thickness of layers, structure, or order. Among the many scientists who accepted the legitimacy of their findings was American anthropologist George Grant MacCurdy of Yale University.

...Although there was no valid evidence against its authenticity, scientific politics won the day. Louis Leakey eventually yielded to the demands of the senior members of the paleo-community to dismiss the finding, as those hostile to his position were reviewing his latest submitted papers. Since then, Oldoway Man has been largely forgotten. If mentioned at all, Oldoway Man is listed as an “intrusive burial.” But the early debate about Oldoway Man is well documented in a series of Science papers.”⁸⁹

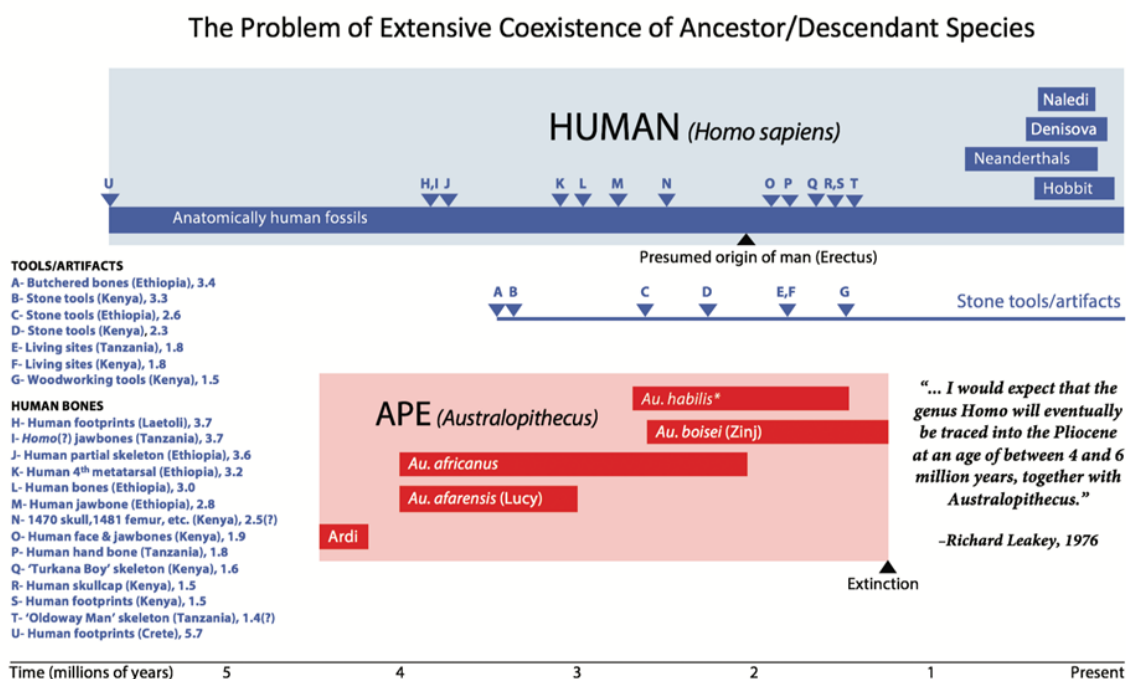
Nevertheless, even Reck himself seems to have surrendered to the pressure of the paleoanthropological community eventually (“It remains somewhat of a mystery why both Reck and Leakey changed their minds about a Bed date II for Reck’s skeleton”⁹⁰) – yet never for clear comprehensible scientific reasons. So, the question remains undecided to this very day. For a painstakingly thorough examination of the *pros and cons* of the entire drama of this curious/bizarre redating process, see also Michael A. Cremo and Richard L. Thompson, *Forbidden Archeology* pp. 628-649.⁹¹ In their introduction to chapter 11: *Always Something New Out of Africa* they point out – as far as I know independently of Rupe and Sanford (scientifically and ‘religiously’) – that, among other things (pp. 627/628):

“In this chapter, we survey the history of paleoanthropological discoveries in Africa. The finds from the early part of the twentieth century, such as Reck’s skeleton (Section 11.1) and the Kanjera skulls and Kanam jaw (Section 11.2), were controversial. According to their discoverers, these fossils represented evidence for anatomically modern humans in the Early Pleistocene. Anomalous finds continued to occur even in the latter part of the twentieth century. Among these we may number the Kanapoi humerus (Section 11.5.1), the ER 1481 femur from Lake Turkana (Section 11.6.3), and the Laetoli footprints (Section 11.10). Scientists have said all of them are morphologically within the modern human range. *But instead of taking these fossils as evidence for anatomically modern humans in unexpectedly ancient times, scientists have generally said they show that protohuman creatures such as Australopithecus and Homo habilis had skeletal features resembling those of modern humans.* Indeed, most scientists have consistently depicted *Australopithecus* and *Homo habilis* as

essentially human below their apelike heads. They also say that these creatures were exclusively terrestrial and bipedal in the human fashion. But there is much evidence that this view is mistaken, and that the australopithecines and habilines were very well adapted for life in the trees.”

The question of how many fossils of *Homo sapiens* were treated in the same or similar way as that of Reck and others could be the topic and captivating task for a PhD thesis investigating in depth the ensuing statement of Harvard professor Ernest A. Hooton for pre-Neanderthal *Homo sapiens*: “Heretical and nonconforming fossil men were banished to the limbo of dark museum cupboards, forgotten or even destroyed.”⁹² Incidentally, Hooton “established Harvard as a center for physical anthropology in the United States and at the time of his death most physical anthropologists in the United States were former students or instructed by one.”⁹³

Considering and including many of the “heretical and nonconforming fossil men”, Rupe and Sanford have drawn the following diagram, which, if true, falsifies the hypothetical trees of Henke, Klein, Wood and Hawks from the bottom up.



Rupe and Sanford (2019, p. 266): “The diagram [shown above] reveals the extensive coexistence of *Australopithecus* and *Homo*, assuming conventionally assigned dates. The enduring coexistence of these two genera confounds their presumed ancestor/descendant relationship. Anatomically modern bones indistinguishable from *H. sapiens*, modern human-looking footprints⁹⁴, sophisticated stone tools, and butchered bones have all been found dating to the time of Lucy’s kind, Afarensis (3–4 million years ago). Here cladogenesis cannot be invoked. Such findings falsify the ape-to-man story. The extensive coexistence of these two genera strongly supports our alternative model—humans have always lived alongside the *australopithecines* (they were apparently part of their hunter-gatherer diet) until the time of their extinction. *An *Australopithecus* designation of Habilis is consistent with an earlier assessment by Wood.”⁹⁵

This diagram could even be extended for *Homo sapiens* deeply into the past if the scientifically thoroughly and painstakingly researched treatise of Michael Brandt *Vergessene Archäologie: Steinwerkzeuge fast so alt wie Dinosaurier*⁹⁶

(Upper Paleocene: 53 to 56 Ma) will stand the test of further research – the same would be true for Michael A. Cremo's and Richard L. Thompson's book, *Forbidden Archeology*. In the latter authors's view the millions of years are thought to be real, in the judgement of Rupe, Sanford and Brandt the millions of years are virtual.

(6) Evolution – including man as genetic cousin of the chimpanzee – is a fact, “beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt”.

The “evolution is a fact” suggestion (“*Suggestion*” in the German sense of the word as especially applied in psychology) is echoed almost everywhere (articles, textbooks, radio- and TV-shows – I have been systematically observing such assertions). Jay Mathers Savage, emeritus professor at the University of Miami and adjunct professor at San Diego State University, once noted, for example, that “No serious biologist today doubts the fact of evolution,...” – a statement endlessly repeated already a hundred years before and perhaps even more often and emphatically during the almost sixty years after that assertion. Savage continued: “The fact of evolution is amply clear.” Also: “The fact of evolution is demonstrated on every side in all fields of biology.” And “We do not need a listing of evidences to demonstrate the fact of evolution any more than we need to demonstrate the existence of mountain ranges.”⁹⁷

Well, positing (macro-)evolution on the same level of reality/actuality with the existence of mountain ranges – other Darwinians have put it on par with the fact that the sun is hot, the earth is a sphere, with gravity and other testable phenomena – could lead to some perhaps humorously captivating reflections by just swapping, for example, the mountain ranges for evolution:

"No serious geologist today doubts the fact of mountain ranges, ... The fact of mountain ranges is amply clear. ... The fact of mountain ranges is demonstrated on every side in all fields of geology ... We do not need a listing of evidences to demonstrate the fact of mountain ranges any more than we need to demonstrate the existence of evolution." May one not raise the question, for instance, which rational researcher would ever say such curious things defending the existence of mountain ranges, as if there was anything to defend? Or "No serious astronomer today doubts the fact that the sun is hot, ... We do not need a listing of evidences to demonstrate the fact that the sun is hot any more than we need to demonstrate the existence of evolution." And so on.

So, what is the basic difference between mountain ranges, that the sun is hot, the earth is a sphere, gravity etc. and evolution, so that no rational mind would ever try to compose such statements to defend the existence of the former phenomena (if ever doubted at all during the last 150 years) by comparing them

to (macro-)evolution? Answer: All the various examples given to inculcate “the fact of evolution” into the mind of the reader/listener are – as already hinted at above – testable and demonstrable (scientifically and mostly also by personal experience, at least potentially) *whereas evolution is definitely not*: “These evolutionary happenings are unique, unrepeatable, and irreversible. It is as impossible to turn a land vertebrate into a fish as it is to effect the reverse transformation. The applicability of the experimental method to the study of such unique historical processes is severely restricted before all else by the time intervals involved, which far exceed the lifetime of any human experimenter” – Theodosius Dobzhansky.⁹⁸

Thus, evolution – including man as a descendant of extinct apes and hence a genetic cousin of the chimpanzee – cannot honestly be spoken of as a fact like mountain ranges, that the sun is hot, like gravity etc. It is definitely *not* “beyond reasonable doubt”, neither “beyond serious doubt”, nor “beyond sane, informed, intelligent doubt”. Incessantly asserting the opposite, speaking of “the fact of evolution”, appears to be a form of “religion” (in the original meaning of the word). As to the atheistic Giordano-Bruno-Stiftung founded in Germany on 30 March 2004, a commentator had this to say on the kind of “religion” practiced there:

“The fatal mistake is failing to realize that every human being has some kind of religion, i.e. he is – whether he is realizing this or is unaware of it – bound to a postulate (*re-ligio*), whether it is the "religion of reason" or the postulate of the futility of the world. These unconscious religions are so dangerous, not because they are religion, but because their “confessors” do not know that they are attached to a belief, and thus cannot understand their fellow human beings through self-critical skepticism.”⁹⁹

My experience in many discussions and debates is that the type of atheist represented by Dawkins, Kutschera, and numberless other authors is, in fact, unaware of it – namely that they are bound to a postulate (*re-ligio*), naively preaching their atheistic religion as the sole truth possible in the scientific age of enlightenment that we live in – even in the face of an array of contrary facts. So, do we really know that “*Nothing made everything for no reason and made life from non-life for no reason and made meat robots who think they have purposes but don't for no reason*”?¹⁰⁰

But how is it possible at all that so many otherwise obviously intelligent biologists can perpetually repeat the “evolution is a fact” assertion? What could be the more or less unconscious basis for it? “The most important source of knowledge in phylogenetic research is the comparison of similarities and dissimilarities of living organisms” (Nobel laureate Konrad Lorenz)¹⁰¹.

Paleontologist Oskar Kuhn from Munich University wrote concerning the relationship between the similarity of forms and evolution:

“The similarity of forms was explained by evolution, and evolution in turn was proven by the various grades of similarities. It was hardly noticed that here one has fallen victim to circular reasoning; the very point that one set out to prove, namely that similarity was based on evolution, was simply assumed, and then the different degrees in the gradation of the (typical) similarities, were used as evidence for the truth of the idea of evolution. Albert Fleischmann has repeatedly pointed out the lack of logic in the above thought process. The same idea, according to him, was used interchangeably as assertion and as evidence. However, similarity can also be the result of a plan, and ...morphologists such as Louis Agassiz, one of the greatest morphologists that ever lived, attributed the similarity of forms of organisms to a creation plan, not to evolution.”¹⁰²

The following observation of German botanist Wilhelm Troll – perhaps the greatest plant morphologist of the 20th century (yet not so well known in the English speaking world) – between the correspondence of morphological similarity and (macro-)evolution is also true for the typical similarities on all further biological levels like anatomy, physiology and genetics: “Morphological similarity became evolutionary relationship. The type became the original form and homologies were declared to be ... as Darwin says [paraphrasing], “modifications of one and the same (ur)parental organ.””¹⁰³

Nevertheless, Kuhn added that “evolution is ... only indirectly accessible more or less as an appendix to systematic morphology”, quoting approvingly the Swiss zoologist and paleontologist Adolf Naef who had “argued that the basic concepts of ancient pre-evolutionary morphology were later simply “translated” into the language of evolution.

Thus [the following “translations” were made]:

relationship of form was translated...into evolutionary relationship
 systematics.....into phylogeny/evolution
 metamorphosis.....into evolutionary transformation
 systematic grades of similarities.....into evolutionary grades of ancestries
 typeinto stem form/original form
 typical states.....into original evolutionary states
 atypicalinto evolutionary derived
 lower animals.....into primitive
 atypical similarities.....into convergence
 morphological derivation.....into evolutionary derivation”¹⁰⁴

It is the *similarities* on all biological levels (including anatomy, physiology and genetics etc.), which are the undeniable facts being often subconsciously translated into (and treated as equivalent with) macro-evolutionary relationships (as to the limits to extrapolate from microevolution to macroevolution, see, please, <http://www.weloennig.de/KutscheraPortner.pdf> pp. 12-14, 41, 52, 61). So, let's substitute "morphological similarity" for "evolution" in the citations given above, keeping in mind that the expression stands also for all the other similarities (which could likewise be inserted here):

So, would Dawkins have been right, if he had said: "...history deniers who doubt the fact of morphological similarity are ignorant of biology"? Yes, that's true. "Morphological similarity is a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt morphological similarity is a fact. The evidence for morphological similarity is at least as strong as the evidence for the Holocaust, even allowing for eye witnesses of the Holocaust." Correct. Or: "The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that morphological similarity is true."

Or Jay Mathers Savage: "No serious biologist today doubts the fact of morphological similarity." Also "The fact of morphological similarity is amply clear." And "The fact of morphological similarity is demonstrated on every side in all fields of biology." And "We do not need a listing of evidences to demonstrate the fact of morphological similarity any more than we need to demonstrate the existence of mountain ranges."

Okay. However, the problem with such statements would be, of course, that they are altogether unsurpassably simplistic truisms, which could be set on par with such stupendously information rich assertions like "no serious geologist today doubts the fact of mountain ranges."

My hypothesis for the (usually scientifically baseless) leap from morphological and further similarities to macro-evolution is this: Materialist metaphysics and its *re-ligio* (being bound to a postulate) translate these biological similarities directly into evolution thus generating a shortcut to the naturalistic world view in the absence of real/testable proofs by, among other points, the incessant repetition of the slogan that "evolution is a fact", "beyond reasonable doubt, beyond serious doubt" etc.

(7) Evolution has nothing to do with chance. “Where *did* this ridiculous idea come from that evolution has something to do with randomness?”

According to my biological studies, defending the Darwinian theory of mutations and selection by such a doubtful comment can hardly be surpassed by any other contrary to the facts assertion aiming to immunize the theory against scientific refutation. Let us check, please, the following facts:

No less a renowned molecular biologist than Nobel laureate Jacques Monod unambiguously made the following statement concerning *randomness and mutations* being the ultimate basis and source of any evolution (and most of today’s biologists concur):

“We call these events accidental; we say that they are random occurrences. And since they constitute the *only* possible source of modifications in the genetic text, itself the *sole* repository of the organism’s hereditary structures, it necessarily follows that chance *alone* is at the source of every innovation, of all creation in the biosphere. Pure chance, absolutely free but blind, at the very root of the stupendous edifice of evolution: this central concept of modern biology is no longer one among other possible or even conceivable hypotheses. It is today the sole conceivable hypothesis, the only one that squares with observed and tested fact” (emphasis by Monod, p. 112).

And on page 138 he admits: “When one ponders on the tremendous journey of evolution ... one may well find oneself beginning to doubt again whether all this could conceivably be the product of an enormous lottery presided over by natural selection, blindly picking the rare winners from among numbers drawn at utter random.” However, he continues to assert that “one’s conviction may be restored by a detailed review of the accumulated modern evidence that this conception alone is compatible with the facts...” – a claim without a scientifically valid answer for the origin of life, the Cambrian explosion and most other biological phenomena – of which just few important ones are referred to below. Interestingly Mono ends that paragraph with a quotation of literature Nobel laureate François Mauriac: “What this professor says is far more incredible than what we poor Christians believe.”

Now, it was Dawkins himself who admitted directly after his statement cited above that, “the theory of evolution by natural selection has a random element – mutation – but by far the most important part of the theory of evolution is non-random: natural selection. Mutation is random. Mutation is the process whereby parent genes are changed, at random. Random in the sense of not directed toward improvement. Improvement comes about through natural selection, through the survival of that minority of genes which are good at helping bodies survive and reproduce. It is the non-random natural selection we are talking about when we talk about the directing force which propels evolution in the direction of

increasing complexity, increasing elegance, and increasing apparent design.” (Similarly: Lorenzen, Mayr, Huxley, Ridley, Dobzhansky.¹⁰⁵)

Well, “the theory of evolution by natural selection has *a* random element – mutation”? (Emphasis added) Let’s first focus briefly on the formulation of “*a* random element” – sounds somewhat like “*just* a random element” and subsequently on the assertion that “the *most important part* of the theory of evolution is non-random: natural selection”.

According to Monod (again in accordance with most modern geneticists): “Pure chance, absolutely free but blind, [is] at the very root of the stupendous edifice of evolution”. So, conforming to the neo-Darwinian theory, on what is the survival of the fittest, natural selection, clearly based on?

Survival in natural selection is clearly build on the functionality of all the structures and organs of the organisms. As I put it similarly some time ago: A hare runs faster, a lion jumps farther, a zebra senses a carnivore better, an eagle spots prey at a greater distance, a chimp responds more effectively than his or her conspecifics.¹⁰⁶ Why? Because – according to the neo-Darwinian doctrine – the chance events of mutation have equipped them as needed, with all structures originating until then as well as the newly gained improvements. All this is assumed to occur in a continuous process of evolution by “innumerable slight variations”, “extremely slight variations” and “infinitesimally small inherited variations”. Thus, chance events determine everything in evolution: form and function of all structures dominating natural selection in the struggle for life and hence the entire phylogeny of plants and animals.

Provided that we have, in fact, virtually really nothing but mutation and selection for the origin of species including *Homo sapiens*, Jacques Monod was right: Pure chance is at the very root of the stupendous edifice evolution. Without form and function of already existing structures there is no selection. In the final analysis, natural selection itself is the result of the chance events resulting in special forms and skills, including even the every so often enormous overproduction of the offspring of plants and animals.

Now let’s focus on the contention that “the most important part of the theory of evolution is non-random: natural selection”.

As I have stated in my Encyclopedia article *Natural Selection* on the reproductive powers of living beings and the survival of the fittest, 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 the pioneering work of Dobzhansky *Genetics and the Origin of*

Species – generally viewed as the crystallization point for the origin and growth of the modern synthesis or neo-Darwinian theory of evolution:

“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 7×10^{11} spores; *Sisymbrium sophia* and *Nicotiana tabacum*, respectively, 730,000 and 360,000 seed [orchid *Cycnoches* 3,751,000 per ovary, i.e. in case of some 30 flowers per plant 112,530,000 seed], salmon, 28,000,000 eggs per season [cod 6,500,000, turbot 9,000,000]; 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 fairly 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...” [Species in square brackets added.]

For agreement on and further documentation see almost all neo-Darwinian publications on that topic of the present time.

However, especially from the 1950s onward, French biologists, such as Cuénot, Tétry, 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?”¹⁰⁷

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).

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. 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", 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 never-ending 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.¹⁰⁸

So, can there be the least doubt that also in natural selection there is a strong element of chance and randomness?

Dawkins continues: "The statement that "evolution refers to the unproven belief that random undirected forces [produced a world of living things]" is not only unproven itself, it is stupid."

Strong words. Yet, as we have shown above – and as every intelligent mind can check it for himself for instance each spring on a tour into some woody landscapes when billions of tree-seedlings appear, of which only an extremely low minority will ever become adult or full-grown trees depending much more on a suitable environment (space, light, humidity, soil constitution, other plants in the neighborhood: allelopathy¹⁰⁹ etc.) than say a 1% genetic advantage – that also in natural selection there is a strong element of randomness (to give some additional examples: one birch tree [*Betula alba*]¹¹⁰, for example, produces 30 million seeds on average per year (a perpetual rain of seeds all around the area each year were hundreds of thousands of people live in the neighborhood of birch trees, me and my family included), a black cottonwood [*Populus nigra*] 28 million seeds – by the way, who has ever seen the fluff of poplar trees covering entire ways, roads and other larger areas, will immediately understand the problem of chance due to such overproductions for natural selection – , buddleja [*Buddleja davidii*] 20 million seeds¹¹¹, and so on).

So, considering randomness in natural selection and fully including chance mutations "at the very root of the stupendous edifice of evolution", evolution refers, in fact, to the unproven belief that basically/essentially random undirected forces created the ingenious complexities of life, including – to quote just some key words – the abrupt appearances of a series of new life forms as in the Cambrian explosion, even entire new world faunas und floras, the origin of man including, among many other things, the origin of language, autapomorphies, specified and irreducible complexities, ingenious synorganizations, orphan genes,

DNA repair processes, the histone code, often large input of new complex information for the origin of new genera, families, orders, classes and phyla, being at least in the giga to terabyte range (perhaps even in the petabyte ($10^{15}/2^{50}$) to yottabyte ($20^{24}/2^{80}$) area), cybernetic systems in organisms being a thousand-fold more complex than the best human inventions, better not only what we may have dreamed of, but even better than we are able to imagine in our most phantastic mental pictures, “indeed, the entire cell can be viewed as a factory that contains an elaborate network of interlocking assembly lines, each of which is composed of a set of large protein machines”, and many more scientific phenomena and beyond, which, in my view, assuredly, definitely, undeniably speak for intelligent design.

In the face of the 700 billion spores of *Lycoperdon* etc. (see please above), and the additional biological facts already quoted (and there are many more), I would dare to ask the ensuing not so kind question on the “stupid verdict” of Dawkins: How it is possible that a bright, careful, intelligent, reasonable, thoughtful person, being the “world's top thinker”, could ever so polemically – against all facts – deny the intrinsic nature of “random undirected forces” as being pivotal in evolution?¹¹²

However, he himself seems to have given the answer when stating in his paper's following sentence that “no rational person could believe that random forces could produce a world of living things”.¹¹³ In the face of this dilemma – “Pure chance, absolutely free but blind at the very root of the stupendous edifice of evolution” and the strong element of chance in natural selection, the insight into the utmost impossibility of random forces producing “life's endless forms most beautiful” (Darwin) – Dawkins contentiously denies the overwhelming importance of random forces in the neo-Darwinian theory of evolution – otherwise he would have to abandon it and with it his so cherished materialistic world view (for “Darwin made it possible to be an intellectually fulfilled atheist”). Lord Acton was right: “The worst use of theory is to make men insensible to fact.”

And yet, in spite of all this, Dawkins is nevertheless absolutely right emphasizing that “no rational person could believe that random forces could produce a world of living things”. I leave it to the reader whether or not, and if so, to what extent this can be applied to the gist of the Darwinian world view and its atheistic ramifications dominating not only biology but exercising a strong influence on many other *Fachbereiche*, not to speak of the Western (and also other parts of the) world in general today – not least including the question of the origin of humans.

(8) There is 98.5 % identity of chimp and human DNA.

This is a widely proclaimed but definitely “false fact”. Richard Buggs, Professor of Evolutionary Genomics at Queen Mary University of London, recently commented: “What does the data say today in 2018, and how can it be described to the public in an adequate manner?” Key answer: “The total percentage of the human genome that I can know for sure has one-to-one orthology with the chimp genome is 84.4%” [“our minimum lower bound”], i.e. more than 450 million differences (15% of 3 billion bp = 450 million).¹¹⁴ Similar numbers have independently been obtained by Jeffrey Tomkins, former faculty member in the Department of Genetics and Biochemistry at Clemson directing the Clemson University Genomics Institute for 5 years.¹¹⁵

(9) Included in “the top ten daily consequences of having evolved” are such widespread phenomena like problematic wisdom teeth, backaches and obesity – also structures like the coccyx

“For decades, evolutionists have claimed that our bodies and genomes are full of useless parts and genetic material – “vestigial” organs – showing life is the result of eons of unguided evolution. During the Scopes trial in 1925, evolutionary biologist Horatio Hackett Newman contended that there are over 180 vestigial organs and structures in the human body, “sufficient to make of a man a veritable walking museum of antiquities.” Over time, however, these predictions of vestigial body parts and useless DNA have not held true. As scientists have learned more and more about the workings of biology, important functions and purpose have been discovered for these so-called vestigial structures. Indeed, in 2008 the journal *New Scientist* reported that, since the days of Professor Newman, the list of vestigial organs “grew, then shrank again” to the point that today “biologists are extremely wary of talking about vestigial organs at all.”¹¹⁶

Wisdom teeth: I personally know several people with a fullgrown set of wisdom teeth without problems. “The lack of space in the mouths of certain people – and by no means all people – is a consequence of the degeneration of the human race in regard to both genetics and lifestyles. This is quite contrary to the concept of evolution, which implies that we are improving and adding features.”¹¹⁷

Backaches: “A familiar argument against intelligent design is the one that is based on observations of supposed bad design in nature – inept, unintelligent or in other words nonexistent design. Jerry Coyne recommends this list of illustrations. Take back pain, for instance, which is so prevalent among middle aged human beings. However, in today’s *New York Times*, an interesting interview with Harvard evolutionary biologist Daniel Lieberman casts this claim

in a different light. Interviewer Claudia Dreifus asks, “People with bad backs often blame evolution for their pain. They say, “My back aches because man was not meant to walk on two feet.” Are they right? Answers Lieberman: “If that were true, natural selection would have its toll and we’d be extinct. What is more likely is that many people sit in chairs all day, get no exercise, and thus have weak backs. We did not evolve to sit in chairs all day.” ...

Thus, on evolutionary grounds, Dr. Lieberman recommends barefoot running. He tells a story about how ancient humans found it adaptive to be able to run long distances on the savanna, of course without benefit of running shoes, and thereby tire out prey. Again, if we’re fitted to run barefoot, it’s just as plausible to suppose that we’re designed to do so. This I have not yet gotten up the nerve to test out myself, but would like to.”¹¹⁸

Obesity: This is perhaps the most curious suggestion for a vestigial phenomenon.

“In recent decades, obesity has reached epidemic proportions worldwide and became a major concern in public health. Despite heritability estimates of 40 to 70% and the long-recognized genetic basis of obesity in a number of rare cases, the list of common obesity susceptibility variants by the currently published genome-wide association studies (GWASs) only explain a small proportion of the individual variation in risk of obesity. It was not until very recently that GWASs of copy number variants (CNVs) in individuals with extreme phenotypes reported a number of large and rare CNVs conferring high risk to obesity, and specifically *deletions on chromosome 16p11.2*. In this paper, we comment on the recent advances in the field of genetics of obesity with an emphasis on the genes and genomic regions implicated in highly penetrant forms of obesity *associated with developmental disorders*. Array genomic hybridization in this patient population has afforded discovery opportunities for CNVs that have not previously been detectable” (emphasis added).¹¹⁹

Seems to be more like an illness than a vestigial phenomenon. Or does anyone really speculate that their presumed forefathers in the trees displayed these deletions on chromosome 16p11.2, hence ate too much thus falling from their lofty places, the survivors subsequently trying to walk upright to perceive and avoid any enemies and running away as fast as they could in that position? But perhaps this scenario will give rise to a new evolutionary hypothesis.

The coccyx (tailbone): “Many evolutionists still claim this is a hold-over from the tails of our supposed primate ancestors, but it’s actually a vital part of our skeleton, used for attaching muscles, tendons, and ligaments that support the bones in our pelvis.”¹²⁰ “Several muscles converge from the ring-like arrangement of the pelvic (hip) bones to anchor on the coccyx, forming a bowl-shaped muscular floor of the pelvis called the pelvic diaphragm. The incurved coccyx with its attached pelvic diaphragm keeps the many organs in our abdominal cavity from literally falling through between our legs. Some of the pelvic diaphragm muscles are also important in controlling the elimination of waste from our body through the rectum”¹²¹ Even Wikipedia: “The coccyx serves as an attachment site

for tendons, ligaments, and muscles. It also functions as an insertion point of some of the muscles of the pelvic floor.”¹²²

Moreover (and hardly expected on evolutionary preconceptions), none of our supposed primate ancestors (or at least closed cousins) like *Australopithecus afarensis*, *Ardipithecus ramidus*, *Sahelanthropus tchadensis* and not even *Proconsul africanus*, dated to 23 to 25 million years ago¹²³, are ever reconstructed and shown with tails – and correctly so, for there is no evidence of such an anatomical structure in any of them.

(10) The evolutionary show must go on (even with false facts?)

Coccyx: “This tail is most prominent in human embryos 31–35 days old. The tailbone, located at the end of the spine, has lost its original function in assisting balance and mobility, though it *still* serves some *secondary* functions, such as being an attachment point for muscles, which explains why it has not degraded further” (emphasis added). However, this is neither *still* nor *secondary*, but the coccyx serves *primary* functions in man – as we have just seen above. (And when in 2006 someone in the audience in the auditorium of the Landesmuseum Kassel after my talk on the topic *Kann die Intelligent-Design-Hypothese (ID) eine realistische Antwort auf die Ursprungs-Frage in der Biologie geben?* in a question implied that the coccyx was a rudimentary organ, I replied: “The coccyx is not a vestigial organ, otherwise you would not be sitting there now.”¹²⁴)

For further refutations of examples of vestigial organs, see please the links below.

To make a long story short, almost all Darwinians seem to totally overlook the most basic problem involved in their vestigial organs hypothesis, namely this:

According to Nobel laureate Francois Jacob: "The genetic message, the programme of the present-day organism ... resembles a text without an author, that a proof-reader has been correcting for more than two billion years, *continually improving, refining and completing it, gradually eliminating all imperfections.*"

This verdict does not represent an isolated case but describes, in principle, an important and constitutive part of the general state of mind of neo-Darwinian biologists, which can be traced back to Darwin himself. The latter states – just to quote a few examples:

"As natural selection acts solely by the preservation of profitable modifications, each new form will tend in a fully-stocked country to take the place of, and finally to *exterminate, its own less improved parent-form and other less-favoured forms with which it comes into competition.* Thus extinction and natural selection go hand in hand."

Or: "...old forms will be supplanted by new and improved forms." And on the evolution of the eye that natural selection is: "intently watching each slight alteration" ... "carefully preserving each which...in any way or in any degree tends to produce a distincter image." And "We must suppose each new state of the instrument to be multiplied by the million; each to be preserved until a better one is produced, and then the old ones to be all destroyed." Also: "In living bodies, variation will cause the slight alterations, generation will multiply them almost infinitely, and *natural selection will pick out with unerring skill each improvement.*"

In the context of eye-evolution (including necessarily the entire innervation and corresponding parts of the brain in complex animals), Salvini-Plawen and Mayr regularly speak of "evolutive improvement", "eye perfection", "gradually improved types of eyes", "grades in eye perfection", "the principle of gradual perfecting from very simple beginnings", "regular series of ever more perfect eyes."

Applying this kind of reasoning to vestigial organs in humans leads us directly into one of the most basic contradictions within the neo-Darwinian world view, to wit, that the “unerring skill” of natural selection – that exterminates every “less improved parent-form and other less-favored forms”, which picks out and preserves “each improvement...”, which is believed to have produced lots of ‘regular series of ever more perfect nerves’ and all other organs and their functions and which is, above all, “gradually eliminating all imperfections” – now as an overall result in man a body full of rudimentary (malfunctioning or even nonfunctioning) organs. However, Darwinians cannot have both, omnipotent natural selection and an entire world of living beings (including man) being brimful with imperfect vestigial organs – i.e. humans and other species being walking museums displaying all kinds of useless, superfluous organs and disfunctions from their assumed 544 million years of past evolutionary history.

Concerning concrete answers to the many doubtful examples produced by evolutionary biologists *cf.* for instance the following links:

<https://evolutionnews.org/2018/02/bioengineer-asks-what-do-darwinists-hide/>

<https://evolutionnews.org/2017/12/intelligent-design-and-the-advancement-of-science/>

“Design features once assumed to be poorly engineered were later shown to play essential roles. Examples include the backwards wiring of the vertebrate eye, the panda’s thumb, and so-called vestigial organs such as the human appendix.”

<https://evolutionnews.org/2017/09/darwins-point-no-evidence-for-common-ancestry-of-humans-with-monkeys/>

<https://evolutionnews.org/2017/09/theology-in-biology-class-vestigial-structures-as-evidence-for-evolution/>

https://evolutionnews.org/2016/12/lsu_ophthalmolo/

https://evolutionnews.org/2016/06/common_descent/

https://evolutionnews.org/2015/07/people_who_unde/

https://evolutionnews.org/2014/12/5_of_our_top_te/

https://evolutionnews.org/2015/02/problem_10_neo/

See also Reinhard Junker und Siegfried Scherer (eds.) expertly addressing the vestigial-organs-question in their book *Evolution – Ein kritisches Lehrbuch* pp. 200-226¹²⁵ and extensively Reinhard Junker in *Ähnlichkeiten, Rudimente, Atavismen* (204 pp.)¹²⁶.

As for a refutation of the overall evolutionary message on *the origin of man and all life forms* as quoted according to Ayala and Cela-Conde (2018) above, I would like to draw the reader’s attention (again, as in the endnotes) to <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>, especially pp. 353-370.

Additional Note: Richard G. Delisle (2018) on: “What Makes Paleoanthropologists Tick?”

Evolutionary researcher Richard G. Delisle (Ph.D. in paleoanthropology from the University of Witwatersrand in South Africa and Ph.D. in the philosophy of science from the Université de Montréal, now Professor at the University of Lethbridge, Canada) has written an article on the topic of “*The Deceiving Search for ‘Missing Links’ in Human Evolution, 1860-2010: Do Paleoanthropologists Always Work in the Best Interests of Their Discipline?*”, in J. H. Schwartz (ed.), *Rethinking Human Evolution* (Cambridge: M.I.T. Press), pp. 1-30 (2018).

On pp. 5-7 Delisle has formulated the following thought-provoking observations on the subtopic “*What Makes Paleoanthropologists Tick?*” After enumerating the *Missing Links: A Historical Overview Beginning in the Late Nineteenth Century*, starting from *Pithecanthropus erectus* (1891-1892) up to *Australopithecus sediba* (2008), he continues:

“While the above list of discoveries is not exhaustive, it is sufficient to permit identification of a common paleoanthropological practice: namely, the twofold strategy of claiming that one’s discovery is likely a direct evolutionary link to living humans, and of displacing other specimens from this position (if necessary). There appear to be several closely related motivations for this practice.

Scientific fame (prestige)

Without doubt, the discovery of a claimed “missing link” attracts more attention than discovering a specimen that is deemed an “evolutionary dead end.” Indeed, the pursuit of recognition within and beyond the boundaries of one’s discipline is a common feature of scientific endeavors, paleoanthropology being one. As Jacek Tomczyk (2004, 234) summarized the situation: “Paleoanthropologists are in no way different from other people: they want to be popular, they are desirous of fame and they compete against each other. The interpretation of fossil material provides ample opportunities for such contests.”

Media attention

The media – for example, radio, television, documentaries, popular science magazines, semipopular books, and even high-impact scholarly magazines and journals – are likely to cover an event announcing the discovery of a new “missing link,” especially if it impacts views of human evolution (Larsen 2000, 2; Lewin 1987, 13–18). This is so even at the risk of distorting the scientific message in order to attract public attention (White 2000, 288–289; 2009, 127–128). The advent of the Internet, and its uncontrolled exploitation by individuals wanting to promote their perspective at the expense of other and often more informed presentations has only exacerbated the problem of fame first, science second (Cartmill 2000).

Funding imperatives

Funding agencies are usually more generous when significant discoveries, such as those dealing with missing links, are involved. Of course, the notion that finding “missing links” is more significant than finding fossils deemed “dead ends” is misguided. After all, if the goal of science is to reveal the complete story, the discovery of “evolutionary dead ends” is as crucial to understanding this picture as discovering presumed “missing links.” Unfortunately, given increasingly limited financial resources, funding agencies are forced to weigh the potential impact of the research projects they subsidize. Consequently, the search for potential missing links is intrinsically more appealing than adding another specimen to a known fossil record, especially if this merely corroborates the identity of evolutionary dead ends.

Just being lucky

Whether consciously or unconsciously, those who discover fossils find themselves in the position of taking liberties with scientific practice that result in stretching interpretation to include “missing links.”

.....

For all the reasons listed above, paleoanthropologists have a strong incentive to find missing links. Unless the paleoanthropological community eventually agrees on rules of engagement that bind all scholars with respect to fossil discoveries, there seems little hope that things will change. To sum up: (1) scientists in human evolution are often driven by extra-scientific considerations, including fame, media attention, funding, and being lucky (along with a few other reasons); and (2), much of this is due more to the sociology of the sciences than to scientific or epistemic rigor. One need not be alarmed that science has a sociological dimension, but one should be worried when this dimension predominates. That discoverers repeatedly claim to find missing links, even though most of them will be wrong – *as they themselves probably suspect* – is troubling, and it reveals paleoanthropology’s lack of rigor and scientific maturity (a responsibility also shared with nondiscoverers, as will be shown). Apparently, there is still room for improving paleoanthropology’s procedures” (italics by Delisle).

See further points by Richard G. Delisle in <https://azpdf.tips/rethinking-human-evolution-pdf-free.html>

Concluding Remarks: The Case For Intelligent Design

Now, concerning *The Evolution of Man: What do we really know? Testing the Theories of Gradualism, Saltationism and Intelligent Design*: The answer depends to a large extent on the *re-ligio* of the interlocutor.

The strict neo-Darwinian adamantly *believes* that he “knows” that humans are the result of natural selection of “innumerable slight variations”, of “a purposeless and material process that did not have him in mind” etc. For a refutation, the internal contradictions and incongruence with the facts of nature of the entire neo-Darwinian scheme, see, please, the arguments and facts presented above.

The problems for saltationism are no less serious: As also pointed out above, “a rather minor structural innovation at the DNA level”, for example, appears to be, for all that can be known at present, a rather unsatisfactory proposal for the origin of man (including perhaps the genesis of a thousand new genes, origin of Broca’s area and language, the opposability of the thumb with corresponding muscles – “What makes the modern human thumb myology special within the primate clade is ... [the appearance of] two extrinsic muscles, extensor pollicis brevis and flexor pollicis longus...”¹²⁷ etc.).

Intelligent design: Considering the statement (as quoted) that “even if all the data point to an intelligent designer, such a hypothesis is excluded from science because it is not naturalistic”, I have noted that it virtually is a *Denkverbot* (a ban on thinking/pondering), which could also be formulated as follows: Never ask the question for a designer even in cases of the most complex and ingenious constructions ever found in nature.

Answering this dogmatic imperative, I would like to reformulate the famous aphorism ascribed to Einstein “everything should be made as simple as possible, but not simpler”¹²⁸ as follows: “Everything should be explained as naturalistically as possible, but if all the data point to an intelligent designer, we should accept it.”

Could this, perhaps, be also applied to the origin of DNA? “Human DNA is like a computer program but far, far more advanced than any software ever created” – This quite rightly often cited insight of Bill Gates¹²⁹ on the complexities of DNA and its functions may shed some additional light on the origin of man (incidentally he had studied James D. Watson’s “Molecular Biology of the Gene” in his twenties and was enthralled with chemistry at high school). One may consider also Gates’ following comment: “[T]he mystery and the beauty of the world is overwhelmingly amazing, and there’s no scientific explanation of how it

came about. To say that it was generated by random numbers, that does seem, you know, sort of an uncharitable view.”¹³⁰

Now, if one is prepared to break away from the prohibition of materialistic philosophy, one could, for example, accept the following reasoning – in part according to Austrian cell physiologist Siegfried Strugger (professor of botany at the University of Münster): “The cell is the most perfect cybernetic system on earth [usually consisting of thousands of spatiotemporally precisely matched gene functions, gene interactions, cascades and pathways in a steady-state network of ingeniously complex physiological processes characterized by specified as well as (often) irreducible complexity including an abundance of information at least to the gigabyte to terabyte range]. In comparison to the cell, all automation of human technology is only a primitive beginning of man in principle to arrive at a biotechnology.”¹³¹

Well, if the first steps on the way/the path to the ingenious level of cybernetic complexities of the cell, i.e. the “primitive beginning” in Strugger’s formulation, demands conscious action, imagination, perception, intelligence, wisdom, mental concepts, spirit and mind – all being already absolutely necessary for the basic start, – so how much more so does this have to apply to the origin of the thousand times more complex cybernetic systems of the life forms themselves – including all the specified and irreducibly complex structures inescapably necessary for the origin of man.

P. S. As to a detailed scientific argumentation for the intelligent origin of life in its basic forms (as well as the theory of intelligent design in general), check please rigorously the books and papers by Axe, Behe, Bethell, Dembski, Denton, Eberlin, Johnson, Leisola, Lönnig, Meyer, Moreland et al. (eds.), ReMine, Sanford, Scherer, Sewell, Swift, Tour, Wells, and many others.

References

Note in advance: Included in the following references are several papers, books and internet sites, which some people – due to their differences concerning re-ligio (see, please, definition in the text) – would most probably either not cite or refer to only in the negative. However, I have no problem with such sites as long as the information is valid and also thought provoking. So, my quotations usually do not imply my identification with the re-ligio of the respective authors– which anyway is not possible for the often strongly contradictory positions.

All internet papers and commentaries referred and linked to in the present paper were retrieved between 13 May 2019 and 24 July 2019.

The present paper was originally planned for a journal using the method given in the following references. However, the paper grew too long for that journal, so that an abbreviated version, if possible, will be necessary.

¹ Michael J. Behe, *Darwin Devolves* (New York: HarperOne, 2019), 192. After that quote he discussed some losses of gene function on man. The formulation of “what we really care about” does, of course, not mean that there are not also many other topics that we really care about – in my case, for example, to topics mentioned subsequently.

² Wolf-Ekkehard Lönnig, “*Internet Library*”: www.weloennig.de/internetlibrary.html (2019). By the way, it is only rarely necessary today to remind a reader that the basic genetic laws, which are also relevant for man, were first discovered in plants. And this is also true for important later discoveries like transposons and for epigenetics plants have been also important (first as paramutations: “In epigenetics, a paramutation is an interaction between two alleles at a single locus, whereby one allele induces a heritable change in the other allele.”... “The first description of what would come to be called paramutation was given by William Bateson and Caroline Pellew in 1915, when they described “rogue” peas that always passed their “rogue” phenotype onto their progeny. However, the first formal description of paramutation was given by R.A. Brink at the University of Wisconsin–Madison in the 1950s, who did his work in maize (*Zea mays*.” <https://en.wikipedia.org/wiki/Paramutation> retrieved 18 June 2019).

³ Charles Darwin, “*The Origin of Species*” (London: Wordsworth Classics of World Literature, 1998), 368 (originally London: John Murray, 1859). See also: <http://darwin-online.org.uk/contents.html#origin>
The full title of the book *On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life* is rarely cited – probably because of its length and especially its possible racist connotations. The *Neanderthal Museum* in Mettmann, Germany, has (among further points) this to say on one of its texts for the public on the topic of humans as “One Species, no Races”: “Regardless of the spectrum of skin tones existing today, we all belong to a single species and we all share a common ancestry. The use of the term “race” in regard to humans stems from outdated ideologies. Animal races exist as a result of selective breeding, but human races do not exist.”

⁴ Robert Dunn, “The Top Ten Daily Consequences of Having evolved. From hiccups to wisdom teeth, the evolution of man has left behind some glaring, yet innately human, imperfections”: <https://www.smithsonianmag.com/science-nature/the-top-ten-daily-consequences-of-having-evolved-72743121/>

⁵ Bernard Wood, “Who are we?” *New Scientist* 176 (2366): 44-47. 26 October 2002: <https://www.newscientist.com/article/mg17623665-300-who-are-we/>

⁶ F. Clark Howell, “Early man,” *Time Life Nature Library Series* 1965, 41-45. Quoted according to Martin Lubenow *Bones of Contention* 2004, p. 167. “The once-popular fresco showing a single file of marching hominids becoming ever more vertical, tall, and hairless now appears to be a fiction.” J. J. Hublin, Max Planck Institute for Evolutionary Anthropology. Leipzig. *Nature* 203: 363.

⁷ Wolf-Ekkehard Lönnig, “Evolution by Natural Selection – Unlimited and Omnipotent?” See <http://www.weloennig.de/OmnipotentImpotentNaturalSelection.pdf> (2018): and Wolf-Ekkehard Lönnig (2016): “On the Limits of Natural Selection.” Cf. <http://www.weloennig.de/jfterrorchipmunks.pdf>

⁸ Ernst Mayr, “*Populations, Species and Evolution*” (Cambridge, MA: The Belknap Press of Harvard University Press, 1970), 169 (Similarly on mutations: Heberer 1959, Stebbins 1974, Dobzhansky et al. 1977, Rensch 1972, 1977, Bock 1984, Futuyma 2017 and many others, see below.)

⁹ For all the references, see, please <http://darwin-online.org.uk/>

¹⁰ Textbook author and leading evolutionary biologist Douglas J. Futuyma comments on the present state of evolutionary theories in his paper: “Evolutionary biology today and the call for an extended synthesis.” *Interface Focus* 7 (18 August 2017) 1-13 <https://royalsocietypublishing.org/doi/10.1098/rsfs.2016.0145>
<https://doi.org/10.1098/rsfs.2016.0145>

“Newly discovered molecular phenomena have been easily accommodated in the past by elaborating orthodox evolutionary theory, and it appears that the same holds today for phenomena such as epigenetic inheritance. In several of these areas, empirical evidence is needed to evaluate enthusiastic speculation. Evolutionary theory will continue to be extended, but there is no sign that it requires emendation.” (Quotation p. 1)

Carl Zimmer reported in his paper “Scientists Seek to Update Evolution” *Quanta Magazine* (22 November 2016) <https://www.quantamagazine.org/scientists-seek-to-update-evolution-20161122/> that Futuyma emphasized at the Royal Society Meeting on “New trends in evolutionary biology: biological, philosophical and social science perspectives concerning the strength and Modern Synthesis”:

““We must recognize that the core principles of the Modern Synthesis are strong and well-supported,” Futuyma declared. Not only that, he added, but the kinds of biology being discussed at the Royal Society weren’t actually all that new. The architects of the Modern Synthesis were already talking about them over 50 years ago. And there’s been a lot of research guided by the Modern Synthesis to make sense of them.”

“We illustrate how careful genetic studies have repeatedly shown that apparently puzzling results in a wide diversity of organisms involve processes that are consistent with neo-Darwinism. They do not support important roles in adaptation for processes such as directed mutation or the inheritance of acquired characters, and therefore no radical revision of our understanding of the mechanism of adaptive evolution is needed.”

See also the following concise characterization of today’s main evolutionary theory – the Modern Synthesis or neo-Darwinian theory of evolution with its focus on gradualism – by Gerd B. Müller “Why an extended evolutionary synthesis necessary” *Interface Focus* 7: 20170015.<http://dx.doi.org/10.1098/rsfs.2017.0015>
http://extendedevolutionarysynthesis.com/wp/wp-content/uploads/2017/09/Muller-GB_Interface-Focus_2017_corrected.pdf

“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.”

¹¹ George Gaylord Simpson, *The Meaning of Evolution* (New Haven: Yale University Press, 1950). Quoted according to Richard Weikart *The Death of Humanity and The Case for Life*. Introduction. (Washington and New York: Regnary Faith, 2016). Simpson similarly in his revised edition of 1967, pp. 295, 345.

¹² Stephen Jay Gould, *Wonderful Life. The Bugess Shale and the Nature of History* (New York and London: W.W. Norton & Company, 1989). Paperback 1990.

¹³ Stephen Jay Gould, *Wonderful Life. The Bugess Shale and the Nature of History*, 1989, p. 283. Cf. also pp. 310/311: “Since human intelligence arose just a geological second ago, we face the stunning fact that the evolution of self-consciousness required about half of the earth’s potential time. Given the errors and uncertainties, the variations of rates and pathways in other runs of the tape, what possible confidence can we have in the eventual origin of our distinctive mental abilities? Run the tape again, and even if the same general pathways emerge, it might take twenty billion years to reach self-consciousness this time except that the earth would be incinerated billions of years before. Run the tape again, and the first step from prokaryotic to eukaryotic cell might take twelve billion instead of two billion years-and stromatolites, never awarded the time needed to move on, might be the highest mute witnesses to Armageddon.”

¹⁴ Ross Anderson (a senior editor of *The Atlantic*), “What happened before the big bang? The new philosophy of cosmology,” *The Atlantic*. 19 January 2012 <https://www.theatlantic.com/technology/archive/2012/01/what-happened-before-the-big-bang-the-new-philosophy-of-cosmology/251608/>

¹⁵ Michel Brunet et al., “A new hominid from the Upper Miocene of Chad, Central Africa” *Nature* 418, (2002) 145-151. P. 151: “Sahelanthropus is the oldest and most primitive known member of the hominid clade, close to the divergence of hominids and chimpanzees”.

Robin McKie and Paul Webster “Fossil find of the century may just be a gorilla after all,” *The Guardian* (Sunday 14 July 2014) <https://www.theguardian.com/world/2002/jul/14/highereducation.artsnews> ‘This is the skull of a female gorilla,’ said Brigitte Senut, of the Natural History Museum in Paris, while her colleague Michael Pickford described the creature’s distinctive canines as being typical ‘of a large female monkey’. Pascal Picq, of the College of France, put the issue more delicately, describing Toumai as merely looking ‘pre-human’.

¹⁶ I would like to remind the reader of Gould’s comment on plausible stories: “Paleontologists (and evolutionary biologists in general) are famous for their facility in devising plausible stories; but they often forget that *plausible stories need not be true*” (emphasis added).

¹⁷ Wolf-Ekkehard Lönnig “Ein paar Kommentare zu den Ausführungen von Ulrich Kutschera in Portners Presseshow – Evolution ohne Schöpfergott: Was erklärt intelligentes Design?“ <http://www.weloennig.de/KutscheraPortner.pdf> (2019, p. 21).

¹⁸ For the different definitions of “evolution“ see, please, Stephen C. Meyer and Michael Newton Keas “The Meanings of Evolution” in: “Darwinism, Design and Public Education” 2003:135-156. <http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=305> The following quotation pp. 136/137:

1. Change over time; history of nature; any sequence of events in nature
2. Changes in the frequencies of alleles in the gene pool of a population
3. Limited common descent: the idea that particular groups of organisms have descended from a common ancestor.
4. The mechanisms responsible for the change required to produce limited descent with modification; chiefly natural selection acting on random variations or mutations
5. Universal common descent: the idea that all organisms have descended from a single common ancestor.
6. Blind watchmaker thesis: the idea that all organisms have descended from common ancestors through unguided, unintelligent, purposeless, material processes such as natural selection acting on random variations or mutations; the idea that the Darwinian mechanism of natural selection acting on random variation, and other similarly naturalistic mechanisms, completely suffice to explain the origin of novel biological forms and the appearance of design in complex organisms.”

Dawkins and many other authors (including Kutschera) use the term “evolution” in the sense of the sixth definition just quoted above, also usually referred to as “macroevolution”.

¹⁹ Richard Dawkins, “Put Your Money on Evolution,” Review of “*Blueprints: Solving the Mystery of Evolution*” *The New York Times* (9 April 1989), section VII, p. 35.

In a conversation with Laurence M. Krauss, Dawkins presents the following (perhaps not only for me somewhat amusing) relativization of his “absolutely safe to say...” explaining: “I like your clarification of what you mean by reaching out. But let me warn you of how easy it is to be misunderstood. I once wrote in a New York Times book review, “It is absolutely safe to say that if you meet somebody who claims not to believe in evolution, that person is ignorant, stupid or insane (or wicked, but I’d rather not consider that).” That sentence has been quoted again and again in support of the view that I am a bigoted, intolerant, closed-minded, intemperate ranter. But just look at my sentence. It may not be crafted to seduce, but you, Lawrence, know in your heart that it is a simple and sober statement of fact. Ignorance is no crime. To call somebody ignorant is no insult. All of us are ignorant of most of what there is to know. I am completely ignorant of baseball, and I dare say that you are as completely ignorant of cricket. If I tell somebody who believes the world is 6,000 years old that he is ignorant, I am paying him the compliment of assuming that he is not stupid, insane or wicked.”

Lawrence M. Krauss and Richard Dawkins “Should Science Speak to Faith?” (Extended version). *Scientific American* June 19 (2007). <https://www.scientificamerican.com/article/should-science-speak-to-faith-extended/?redirect=1>

Also, in *Free Inquiry* Dawkins explained: “Of course it sounds arrogant, but undisguised clarity is easily mistaken for arrogance. Examine the statement carefully and it turns out to be moderate, almost self-evidently true.” *Free Inquiry* 21, No. 3: “Ignorance Is No Crime”.

²⁰ Richard Dawkins "Ignorance Is No Crime", *Free Inquiry* 21 (3) (Summer 2001), ISSN 0272-0701 <https://secularhumanism.org/2001/07/ignorance-is-no-crime/>

²¹ John Dugale, “Richard Dawkins named world’s top thinker in poll” *The Guardian* (25 April 2013) <https://www.theguardian.com/books/booksblog/2013/apr/25/richard-dawkins-named-top-thinker>

²² Richard Dawkins, *The Greatest Show on Earth* (New York: Free Press, 2009), 8.

²³ Richard Dawkins, “The Alabama Insert”. Excerpted from: *Charles Darwin: A Celebration of his Life and Legacy*. Editors: James T. Bradley and Jay Lamar: https://archive.org/stream/AlabamaInsert/TheRichardDawkins_201704/Alabama_Insert_The_-_Richard_Dawkins_djvu.txt

²⁴ Again Richard Dawkins, “The Alabama Insert”. Excerpted from: *Charles Darwin: A Celebration of his Life and Legacy* Editors: James T. Bradley and Jay Lamar: https://archive.org/stream/AlabamaInsert/TheRichardDawkins_201704/Alabama_Insert_The_-_Richard_Dawkins_djvu.txt

²⁵ Robert Dunn, “The Top Ten Daily Consequences of Having evolved. From hiccups to wisdom teeth, the evolution of man has left behind some glaring, yet innately human, imperfections”: <https://www.smithsonianmag.com/science-nature/the-top-ten-daily-consequences-of-having-evolved-72743121/> “Because our teeth are roughly the same size as they have long been, our shrinking jaws don’t leave enough room for them in our mouths. Our wisdom teeth need to be pulled because our brains are too big”.

²⁶ Robert Dunn, “The Top Ten Daily Consequences of Having evolved. From hiccups to wisdom teeth, the evolution of man has left behind some glaring, yet innately human, imperfections”: <https://www.smithsonianmag.com/science-nature/the-top-ten-daily-consequences-of-having-evolved-72743121/> “For reasons anthropologists debate long into the night, our hominid ancestors stood upright, which was the bodily equivalent of tipping a bridge on end. Standing on hind legs offered advantages—seeing long distances, for one, or freeing the hands to do other things—but it also turned our backs from an arched bridge to an S shape. The letter S, for all its beauty, is not meant to support weight and so our backs fail, consistently and painfully.”

²⁷ Again Robert Dunn, “The Top Ten Daily Consequences of Having evolved. From hiccups to wisdom teeth, the evolution of man has left behind some glaring, yet innately human, imperfections”: <https://www.smithsonianmag.com/science-nature/the-top-ten-daily-consequences-of-having-evolved-72743121/> “Hunger evolved as a trigger to drive us to search out food. Our taste buds evolved to encourage us to choose foods that benefited our bodies ...In much of the modern world, we have more food than we require, but our hunger and cravings continue. They are a bodily GPS unit that insists on taking us where we no longer need to go. Our taste buds ask for more sugar, salt and fat, and we obey.”

²⁸ Harald Czycholl “Rudimentäre Organe” *Die Welt* (7 December 2010) https://www.welt.de/print/die_welt/wissen/article11440169/Rudimentaere-Organe.html (2010)

²⁹ Not easy to count exactly because his definitions are often rather nebulous.

³⁰ https://en.wikipedia.org/wiki/Robert_Wiedersheim (retrieved 4 July 2019)

³¹ Robert Wiedersheim, *Der Bau des Menschen als Zeugnis für seine Vergangenheit* (Tübingen: H. Laupp, 3. Auflage, 1902), 223-229: <https://archive.org/details/derbaudesmensche00wied/page/228>

³² Francisco J. Ayala and Camilo J. Cela-Conde, *Processes in Human Evolution* (Oxford: Oxford University Press. Second Edition 2017, reprinted with corrections 2018), 1. For a refutation of the overall message, see, please <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>, especially pp. 353-370.

³³ Wolf-Ekkehard Lönnig, “Natural selection” in: W. Edward Craighead & Charles B. Nemeroff (eds.): *The Corsini Encyclopedia of Psychology & Behavioral Science* (Hoboken: John Wiley & Sons, Vol. 3, 3rd Edition), 1008-1016.

³⁴ John Sanford, Wesley Brewer, Franzine Smith, and John Baumgardner “The waiting time problem in a model hominin population”. *Theoretical Biology and Medical Modelling* (2015 Sep 17), 1-22. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4573302/pdf/12976_2015_Article_16.pdf DOI:10.1186/s12976-015-0016-z

³⁵ Adolf Portmann *Biologie und Geist* (Frankfurt: Suhrkamp 1956, 1963, 1968, 1973), 265. (Neuaufgabe: Göttingen: Burgdorf Verlag, 2000).

³⁶ Tattersall *Masters of the Planet: The Search for our Human Origins* (New York: Palgrave MacMillan, (2012), and New York (2013): St. Martin’s Griffin), 207.

³⁷ Jeffrey H. Schwartz, *Sudden Origins. Fossils, Genes, and the Emergence of Species* (New York: John Wiley and Sons, 1999), 378. See also: Jeffrey H. Schwartz (Ed.), *Rethinking Human Evolution* (Cambridge, Mass. Massachusetts Institute of Technology 2018. For a critical discussion of the hypotheses of Schwartz (1999), see Stephen C. Meyer (2013/2014): *Darwin’s Doubt*, pp. 317-321.

³⁸ Again: Tattersall *Masters of the Planet: The Search for our Human Origins* (New York: Palgrave MacMillan, (2012), and New York (2013): St. Martin’s Griffin), 207.

³⁹ Arthur Keith quoted according to D. Heinemann (1979): “Die Menschenaffen”. in *Grzimeks Tierleben. Zehnter Band. Säugetiere* 1 (München: Deutscher Taschenbuch Verlag), 485-499. Quotation p. 485.

See also Erich Thenius (1981, p. 235): „Die in der Tabelle aufgezählten Merkmale zeigen neben sog. pongiden (z. B. Armverlängerung, Handgelenk, Schwanzreduktion, Zahl der Thoracolumbalwirbel, Sternum, Thoraxform, Bau der Molaren, keine Backentaschen, Serologie) und eher cercopithecoiden Kennzeichen (z. B. Bau des Beckens, Sitzbeinknollen und Gesäßschwielen, Ohrknöchelchen, Karyotyp) eine Reihe von Eigenheiten (z. B. Hand- und Fußbau einschl. Dermatoglyphen, äußere Geschlechtsorgane, kein Sexualdimorphismus, Verhalten, Gehirn), wie sie in dieser Art und Weise nur von den Hylobatiden bekannt sind. Interessant ist in diesem Zusammenhang - auch wenn der Zahl der jeweils übereinstimmenden Merkmale allein kein besonderes Gewicht in systematisch-phylogenetischer Hinsicht zugemessen werden kann - die Tatsache, dass nach Arthur Keith der Mensch von 1065 anatomischen Merkmalen mit den Cercopithecoidea 113 und dem Gibbon (*Hylobates*) 117 gemeinsam hat, während es mit dem Orang 354, dem Schimpansen 369 und dem Gorilla 385 sind (s. Franzen 1972). Zeitschrift für Säugetierkunde Vo. 46 (1981, p. 235) Full text of *Zeitschrift für Säugetierkunde*. Im Auftrage der Deutschen Gesellschaft für Säugetierkunde e.V.

https://archive.org/stream/zeitschriftfrsu461981deut/zeitschriftfrsu461981deut_djvu.txt

⁴⁰ Jorge Ruiz-Orera, Jessica Hernandez-Rodriguez, Cristina Chiva, Eduard Sabidó, Ivanela Kondova, Ronald Bontrop, Tomàs Marqués-Bonet, M.Mar Albà “Origin of de novo genes in Human and Chimpanzee” *PLOS Genetics* (December 31, 2015 <https://doi.org/10.1371/journal.pgen.1005721>): “After performing exhaustive sequence similarity searches, we identified 2,714 genes which were specific of human, chimpanzee, or their hominoid ancestor. ... This pipeline identified 634 human-specific genes (1,029 transcripts), 780 chimpanzee-specific genes (1,307 transcripts), and 1,300 hominoid-specific genes (3,062 transcripts). Taken together, the total number of candidate de novo genes was 2,714 (5,398 transcripts) (Fig 2a). The rest of genes will be referred to as conserved genes.” In the interim, new discoveries of human-specific genes will probably have been made and for the future further discoveries can be expected.

<https://journals.plos.org/plosgenetics/article?id=10.1371/journal.pgen.1005721>

See also Ann Gauger “The Mismeasure of Man: Why Popular Ideas about Human-Chimp Comparisons Are Misleading or Wrong” (2014): https://evolutionnews.org/2014/03/the_mismeasure/

⁴¹ Cf. James Tour, “An open Letter to my Colleagues,” *Inference: International Review of Science* 3, no. 2 (2017) <https://inference-review.com/article/an-open-letter-to-my-colleagues>. There links to further papers.

The following insert and discussion partially transcend the possibilities and limits of contemporary science:

As for the Biblical view of the origin of man, not only the direct transformation of matter into a living soul has been severely criticized by virtually all materialists and that “he made out of one man every nation of men to dwell on the entire surface of the earth” (Acts 17: 26), but especially also the creation of Eve on the basis of a rib from Adam. “Das Wort „Adam“ (hebräisch אָדָם *ādām*), das ... als Eigenname gebraucht wird, bedeutet „Mensch“ (im Gegensatz zu anderen Lebewesen, insbesondere den Tieren). Auf das ähnlich klingende Wort Adamah (hebräisch אֲדָמָה *ādāmāh* „Erde, Erdboden“) wird durch den Schöpfungsakt Bezug genommen.“

Der Name „Eva“ (hebräisch חַוָּה, *ḥawwāh* oder *ḥawwah*; [ħa'va] oder [χa'va]) wird mit dem Verb חָיָה *chajah* (leben, am Leben bleiben) in Verbindung gebracht und bedeutet daher „die Belebte“. (https://de.wikipedia.org/wiki/Adam_und_Eva).

Some further informative quotations:

“Perhaps no part of the Genesis account has come under more attack than the part relating to the creation of the first man and woman in the Garden of Eden: "And God proceeded to create the man in his image, in God's image he created him; male and female he created them." Genesis 1:27; 2:8. ... But what objection to the Bible account could a reasonable person have? Is there basis for doubting that there ever was an original human pair? Is belief in an original pair “unscientific”? For answer, note this from a publication printed in Paris by the Educational, Scientific and Cultural Organization of the United Nations:

"All of us, if we went back far enough, hundreds of generations, would arrive at the same place – the base of the human family tree with the first *Homo sapiens*. ... Our common ancestor could as well be called Adam, which also means man in Hebrew, for the familiar Biblical story foreshadowed the evidence of science that present men derive from a common stock."

And another scientific publication, *The Races of Mankind*, says:

"The Bible story of Adam and Eve, father and mother of the whole human race, told centuries ago the same truth that science has shown today: that all the peoples of the earth are a single family and have a common origin." – 1951, pp. 3, 4.

What has brought the scientists to such conclusions? Anthropologist M. F. Ashley Montagu explains:

“All varieties of man belong to the same species and have the same remote ancestry. This is a conclusion to which all the relevant evidence of comparative anatomy, paleontology, serology, and genetics, points. *On genetic grounds alone it is virtually impossible to conceive of the varieties of man as having originated separately*” (emphasis added).

The like structure of humans of all races and the fact that they can all intermarry and produce children point to our having descended from an original human pair, male and female. Why, then, should we balk at calling these first ancestors Adam and Eve?” (*Is the Bible Really the Word of God?* New York: Watchtower Bible and Tract Society 1969, 29, 30)

Some points on Genesis 2:22 and 23, which reads: “Hence Jehovah God had a deep sleep fall upon the man and, while he was sleeping, he took one of his ribs and then closed up the flesh over its place. And Jehovah God proceeded to build the rib that he had taken from the man into a woman and to bring her to the man. Then the man said: “This is at last bone of my bones and flesh of my flesh This one will be called Woman, because from man this one was taken.” (Translation according to <https://www.jw.org/en/publications/bible/bi12/books/genesis/2/>)

Carl Wieland (medical doctor) reports (1999): A head-on impact with a fully laden fuel tanker at highway speeds is an experience I would hope for none to share During the 5½ months in hospital, and for years afterwards, I had a series of operations to reconstruct various parts of me, particularly the bones of my face.

These operations often required using my own bone for grafting. I noticed that the plastic surgeon would keep going back to the right side of my ribcage, through the same horizontal scar, actually, to get more bone for these procedures. One day, I asked him why he hadn't ‘run out of bone’. He looked at me blankly, and then explained that he and his team took the whole rib out, each time. ‘We leave the periosteum intact, so the rib usually just grows right back again’. <https://answersingenesis.org/human-body/the-amazing-regenerating-rib/>

And Francesco Callea and Michele Callea, “Adam’s rib and the origin of stem cells”, *American Journal of Hematology* 86 (11 February 2011), 529, in a peer-reviewed *scientific correspondence*:

“In the first book of the Bible, God fashions a woman from one of Adam's ribs: “while Adam was sleeping, ... [he] took one of the ribs... and the rib taken from man... made a woman” (Genesis 2:21–22). Were stem cells present at this ancient origin point, in Adam's rib?

The recent discovery of stem cells in bone marrow and their therapeutic application in stem cells regenerative medicine would support the hypothesis that the development of science represents a quite predictable phenomenon proceeding from the potency of Adam's rib. Likewise, the biomedical research appears to represent a continuous discovery of historical and prehistorical milestones.

Stem cells represent by far the most recurrent word in all kinds of writings, in either scientific papers or mass-media communications. PubMed data reveal that over the past 10 years, more than 130,000 papers have been published on this topic in English international journals, with about 19,000 appearing just in the last year. These data reflect the great impact of stem cells on the scientific community and on worldwide expectations for disease prevention and treatment.

... The rib, in particular, represents an anatomic type of long bone with a wide, spongy component rich in hematopoietic bone marrow, containing multipotent, pluripotent, and unipotent stem cells. Totipotent so far have not been identified in bone marrow. As with the making of new life from Adam's rib, new tissues and organs are now being made in both experimental and clinical work by using hematopoietic bone marrow from cell cultures.

Given this creation of new tissues and organs via hematopoietic bone marrow, the question arises about the implication of these observations for science. Carefully reading Genesis 2, one is impressed by the fact that man and woman originated via two different modalities: Man “from the dust of the ground, [God] breathed into his nostrils the breath of life; and man became a living soul” (Genesis 2:7); Woman “from the rib taken from [from] man [Adam]” while he was sleeping (Genesis 2:21–22).

The analogy between Adam's sleep and anaesthesia (as in surgical procedures, for bone marrow transplantation) is striking. Also striking, is that the two events—the origin of man and of woman—are not comparable. Adam's origin is not discussed at present, as nowadays, it seems to belong to the sphere of divinity and as such is inaccessible to scientific knowledge, whereas woman's origin is a suitable subject for science.

The recent discovery (or rediscovery) of stem cells in bone marrow and their application in regenerative medicine would seem to support the hypothesis that the development of science could be predicted from the story of Adam's rib. Surprisingly, the progress of science, in turn, may lead us to look again into the narrative of our evolutionary ancestry." <https://onlinelibrary.wiley.com/doi/full/10.1002/ajh.22005>

Perhaps also interesting in this context: "It is possible for [even] a fully differentiated cell to return to a state of totipotency. This conversion to totipotency is complex, not fully understood and the subject of recent research." https://en.wikipedia.org/wiki/Cell_potency (retrieved 15 July 2019)

And some reflections on Genesis 2: 22 and 23 by Georgia Purdom, PhD in molecular genetics from The Ohio State University. She comments (2009):

"Being a woman this is an especially important part of Scripture to me!

Some people have mistakenly thought that because God used a rib from Adam to make the woman that all men have one less rib than women. We know this is false because we can easily count the number of ribs in men and women and see they are the same. The number of ribs is determined by the code written in our DNA. God did not change Adam's DNA; He simply removed one of his ribs to use for the creation of the woman. Thus, all men descended from Adam (and Eve) would have 12 pairs of ribs, even if Adam had one less rib. The same could be said for a man who loses his leg due to an accident. Would all his children only have one leg? Of course not—the man's DNA that codes for two legs has not changed.

God chose from Adam the one bone that could regenerate itself. So, even though he likely had one less rib bone for some period of time (possibly to some an indication of imperfection before the Fall), we still observe perfection and completeness in Adam physically before the Fall due to the regenerative capability of the ribs.

As a woman I find it compelling that God chose to remove a bone from Adam's side versus from his head or his feet to create the woman. Matthew Henry states [as did similarly Jewish Rabbis], "That the woman was made of a rib out of the side of Adam; not made out of his head to rule over him, nor out of his feet to be trampled upon by him, but out of his side to be equal with him, under his arm to be protected, and near his heart to be beloved." <https://answeringgenesis.org/human-body/the-amazing-regenerating-rib/>

And a basic point: Could not *The God* who generated all physicochemical laws including the often cited 26 fundamental physical constants (not to speak of their fine-tuning as well as further constants as stated in https://physics.nist.gov/cuu/pdf/all_2002.pdf), who gave rise to 100 to 200 (and more) billion galaxies, each consisting of 100 to 1000 billion (and more) stars, bring the first man into being directly using the elements of the earth?

Just to present an overview of the often cited 26 fundamental physical constants (From Hans Krause, *Das Universum – Warum es da ist?* Hans-Krause-Verlag, Stuttgart 1992), 59, 60. Gemäß *Encyclopaedia Britannica* (siehe reference in the figure below).

PHYSIKALISCHER KONSTANTER WERT			
Quantität	Numerischer Wert	Unschärfe	SI
Lichtgeschwindigkeit im Vakuum	299792458(1,2)	0,004	m.s ⁻¹
Feinstrukturkonstante	7,2973506(60)	0,82	10 ⁸
Elementarladung	1,6021892(46)	2,9	10 ⁻¹⁹ C
Planck-Konstante	6,626176(36)	5,4	10 ⁻³⁴ J.s
Atomare Masseneinheit	1,660565(86)	5,1	10 ⁻²⁷ kg
Elektron-Ruhemasse	9,109534(47)	5,1	10 ⁻³¹ kg
	5,4858026(21)	0,38	10 ⁻⁴ u
Proton-Ruhemasse	1,6726485(86)	5,1	10 ⁻²⁷ kg
Verhältnis von Proton-Masse zu Elektron-Masse	1,007276470(11)		
	1836,15152(70)	0,38	
Neutron-Ruhemasse	1,6749543(86)	5,1	10 ⁻²⁷ kg
	1,008665012(37)	0,037	u
Verhältnis von Elektronladung zu Elektronmasse	1,7588047(49)	2,8	10 ¹¹ C.kg ⁻¹
Rydberg-Konstante	1,097373177(83)	0,075	10 ⁷ m ⁻¹
Klassischer Elektron-Radius	2,817938(70)	2,5	10 ⁻¹⁵ m
Freier Elektron-g-Faktor oder Elektron-Magnet-Moment	1,0011598567(36)	0,0035	
Elektron-Magnetmoment	9,284832(36)	3,9	10 ⁻²⁴ J.T ⁻¹
Magnetmoment des Protons in H ₂ O in Bohr-Magneton	1,52099322(10)	0,066	10 ⁻³
Proton Magnetmoment in Bohr-Magneton	1,521032209(16)	0,011	10 ⁻³

PHYSIKALISCHER KONSTANTER WERT			
Quantität	Numerischer Wert	Unschärfe	SI
Verhältnis von Elektron- und Proton-Magnetmoment	658,2106880(66)	0,010	
Proton-Magnetmoment	1,4106171(55)	3,9	10 ⁻²⁶ J.T ⁻¹
Verhältnis von Myon und Proton-Magnetmomenten	3,1833402(72)	2,3	
Myon-Magnetmoment	4,490474(18)	3,9	10 ⁻²⁶ J.T ⁻¹
Verhältnis von Myon-Masse zu Elektron-Masse	206,76865(47)	2,3	
Myon-Ruhemasse	1,883566(11)	5,6	10 ⁻²⁸ kg
	0,11342920(26)	2,3	8
Compton-Wellenlänge des Elektrons	2,4263089(40)	1,6	10 ⁻¹² m
	3,8615905(64)	1,6	10 ⁻¹³ m
Compton-Wellenlänge des Protons	1,3214099(22)	1,7	10 ⁻¹⁵ m
	2,1030892(36)	1,7	10 ⁻¹⁸ m
Compton-Wellenlänge des Neutrons	1,3195909(36)	1,7	10 ⁻¹⁵ m
	2,1001941(35)	1,7	10 ⁻¹⁶ m
Gravitationskonstante	6,6720(41)	615	10 ⁻¹¹ m ³ .s ⁻² .kg

Aus: *The New Encyclopaedia Britannica, Macropaedia* (1985) Bd. 25
S. 829, 830, Tabelle 7.

Perhaps a famous Aphorism of Johann Wolfgang von Goethe can be applied here: „Was wäre ein Gott, der nur von außen stieße, Im Kreis das All am Finger laufen ließe! Ihm ziemt's, die Welt im Innern zu bewegen, Natur in Sich, Sich in Natur zu hegen, So daß, was was in Ihm lebt und webt und ist, Nie Seine Kraft, nie Seinen Geist vermißt.“ (<https://www.aphorismen.de/zitat/78860>)

This approach implies that not only *Homo erectus* but also all humans including *Homo floresiensis*, *H. luzonensis*, *H. naledi* ultimately belong to the same species, *Homo sapiens*, which in several cases geographically far apart from and independently of each other degenerated by “founder effects, genetic isolation, high inbreeding coefficient” (to use some notions of Lee Berger) to its state/condition revealed by their fossils.

As for *Homo floresiensis*, Rupe and Sanford conclude after a careful discussion of the evidence (2019, p. 92): “... it seems very clear that Hobbit is human, especially in consideration of the shared features among the Palauan bones and the Rampasasa pygmies living on the island of Flores. Their impressive cultural inventory (an array of sophisticated stone tools), ability to sail the open ocean, endocast scans revealing a modern human brain, and an overall modern human anatomy further confirms their fully human status. To explain their unique features (i.e., asymmetry of the skull, flat-footedness, etc.), paleo-experts have offered a number of plausible explanations, including pathologies seen in modern humans. Their small body size and reduced brain size are quite clearly due to **island dwarfism**, subsequent inbreeding, and reductive selection. Most paleo-experts would classify Hobbit as either Erectus or *Homo sapiens*. Since *Homo erectus* is recognized by numerous paleo-experts as a variant of *Homo sapiens*, it is entirely reasonable to identify Hobbit as a variant of *Homo sapiens* – one of us!”

Homo luzonensis appears to be another case of island dwarfism.

Explaining the “Island Rule”, John de Vos and Jelle W. F. Reumer state (2018, pp. 55/56 of their paper “Human and Mammalian Evolution: Is There a Difference?” Pp. 53-59 In Jeffrey H. Schwartz (Ed.), *Rethinking Human Evolution*. Cambridge, Mass. Massachusetts Institute of Technology 2018): “... in general, small mammals (shrews, hedgehogs, rodents, leporids) become larger when isolated on islands, and large mammals become smaller. A notorious example is the dwarf elephant *Elephas falconeri* from Spinagallo Cave, Sicily, with a shoulder height of only 90 cm in adult females and 1.3 m in adult males (Van der Geer et al. 2010). Similar examples abound from islands around the globe. We now know, to list a few examples, of dwarf elephantids (genera *Elephas*, *Mammuthus*, *Stegodon*) from Sicily, Malta, Crete, Santa Rosa (and adjacent Channel Islands), Java, and Flores; of dwarf bovids from Mallorca, Menorca, and the Philippines; of dwarf cervids from Crete, Karpathos, the Ryu-Kyu Islands; and of dwarf hippopotamids from Crete, Malta, and Cyprus.”

After some arguments for an application of the Island Rule to *Homo floresiensis* (including the fact “that size reduction can occur quite rapidly”), the authors finally continue to mention also ***H. luzonensis***, saying among other points (p. 56): “Although until fairly recently one might have wondered if humans would be an exception to the Island Rule, the possibility emerged with the discovery of the remains of a Late Pleistocene hominid on the Indonesian island of Flores (Morwood et al. 2004; Morwood and Van Oosterzee 2007; see also Van den Bergh et al. 2016). Claims of microcephaly notwithstanding, the specimens are more reasonably seen as evidence of island dwarfing and of a separate species. More recently, **a possible second example of a small hominid was discovered in Callo Cave on the island of Luzon** (Philippines; Mijares et al. 2010).” Concerning the “separate species” see please my book on *Species Concepts* <http://www.weloennig.de/Artbegriff.html>.

Homo naledi: Rupe and Sanford’s conclusion after an excellent discussion of the fossils (2019, pp. 230/231):

“A careful analysis of the bones in question supports that Naledi was fully human. Naledi is not a new species, nor does it have features “retained from a more apelike ancestor.” Naledi’s distinctive features are better explained in terms of inbreeding and physiological changes. Physiological changes involve non-genetic, non-heritable modifications due to environment (i.e., curved finger bones can be caused by mechanical stress from either tool use or climbing).

The discovery of the Naledi bones made a huge media splash. A flood of popular press articles and news outlets, including the front page of the *New York Times*, showcased Naledi as conclusive proof of human evolution. The front cover of *National Geographic* offered a catchy headline: “Almost Human.” Was the media hype consistent with the science? The paleo-community was clearly more skeptical than the media. Just as they largely rejected Berger’s claims about Sediba, leading experts in the field did not take Berger’s Naledi claims seriously. A UC Berkeley article reports:

White is not alone in his uneasiness over *H. naledi*. Reviewers at top scientific journals also found evidence for the new hominin species to be suspect. Berger and his team originally submitted multiple papers on *H. naledi* to the prestigious journal *Nature*, which rejected them.

Preeminent scientific authorities, including leading evolutionary paleo-experts, have dismissed the claims made by Berger and colleagues regarding Naledi. The paleo-community as a whole now rejects Naledi as a possible “missing link.” So why is the public still being led to believe that the Naledi discovery is conclusive proof of human evolution?

The failure of paleo-experts to find a legitimate “ape-like” ancestor to man after over 150 years of fossil hunting is remarkable. This flies directly in the face of the claim that human evolution is an uncontested fact. It is clear that neither Habilis, nor Sediba, nor Naledi bridge the vast evolutionary gap between the ape-like australopiths and man. Naledi is the latest and greatest claim of a bridge species between australopith and man. The date now assigned to Naledi shows it is not a pre-human species but appears to be a degenerate human population that lived in isolation. The missing link is still missing.”

Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First edition, Second [revised and enlarged] Printing 2019).

As for *Degeneration im Organismenreich* in general (however, contemporary evolutionary biologists usually prefer to speak of “regressive evolution” instead of degeneration) see, please: <http://www.weloennig.de/AesV1.1.Dege.html>

⁴² Scott C. Todd, “A view from Kansas on that evolution debate” *Nature* 401(6752), 423 (30 Sept. 1999).

⁴³ Wolf-Ekkehard Lönning “Mutationen: Das Gesetz der rekurrenten Variation“: http://www.weloennig.de/Gesetz_Rekurrennte_Variation.html

“Mutation breeding, evolution, and the law of recurrent variation” (in: *Recent Research Developments in Genetics and Breeding 2*: 45-70 (2005) [detailed/itemized version]) <http://www.weloennig.de/Loennig-Long-Version-of-Law-of-Recurrent-Variation.pdf>

“Mutations: The law of recurrent variation” (Floriculture, Ornamental and Plant Biotechnology, Vol I: 601-607, edited by Jaime A. Teixeira da Silva, London: Global Science Books (peer reviewed condensed version). http://www.weloennig.de/ShortVersionofMutationsLawof_2006.pdf

Charles Mann “Lynn Margulis: Science’s Unruly Earth Mother,” *Science* 252 no. 5004 (19 April 1991), 378-381. (Quotation: 379) http://environmentalevolution.org/environmentalevolution.org/Fair_Use_files/Unruly%20Earth%20Mother.pdf

Science 252: 378-381. Today, it [neo-Darwinism] is the reigning paradigm of the discipline, but to Margulis it is little more than a “quaint, but potentially dangerous aberration” that needs to be tossed out in order for science to answer “basic questions” like why stasis is so prevalent in the fossil record, and how one species can evolve from another. “I have seen no evidence whatsoever that these changes can occur through the accumulation of gradual mutations,” she told an audience recently at the University of Massachusetts. “There’s no doubt, of course, that they exist, but the major source of evolutionary novelty is the acquisition of symbionts - the whole thing then edited by natural selection. It is never just the accumulation of mutations.” Exasperated by the silent skepticism of the real biologists in her Massachusetts audience, Margulis challenges them to name a single, unambiguous example of the creation of a new species by the building up of chance mutations. After a while, one man mentions a type of corn - only to be contradicted by another.

From a Gaian perspective, she wrote last December in *American Zoologist*, neo-Darwinism will ultimately be viewed as only “a minor 20th-century religious sect within the sprawling religious persuasion of Anglo- Saxon biology.” Which is why neo-Darwinians “must hate and resist an autopoietic, Gaian worldview.” “Gaia,” she says, “threatens everything they do.”

⁴⁵ Lynn Margulis, quoted in Darryl Madden, “UMass Scientist to Lead Debate on Evolutionary Theory,” *Brattleboro (Vt.) Reformer* (3 February 2006).

⁴⁶ Also: Lynn Margulis, *Discover*, April 2011, “The Discover Interview – Lynn Margulis”, page 68: “[N]eo-Darwinists say that new species emerge when mutations occur and modify an organism. I was taught over and over again that the accumulation of random mutations led to evolutionary change-led to new species. I believed it until I looked for evidence.”

See also Lynn Margulis and Dorion Sagan, *Acquiring Genomes: A Theory of the Origins of the Species* (New York: Basic Books, 2002), 29: “Mutations, in summary, tend to induce sickness, death, or deficiencies. No evidence in the vast literature of heredity changes shows unambiguous evidence that random mutation itself, even with geographical isolation of populations, leads to speciation.”

⁴⁷ John Sanford, Wesley Brewer, Franzine Smith, and John Baumgardner “The waiting time problem in a model hominin population”. *Theoretical Biology and Medical Modelling* (2016 Sep 17), 12: 1-22. <https://tbiomed.biomedcentral.com/articles/10.1186/s12976-015-0016-z>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4573302/>

⁴⁸ Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First edition, Second [revised and enlarged] Printing 2019), 74.

⁴⁹ Javier DeFelipe “The Evolution of the Brain, the Human Nature of Cortical Circuits, and Intellectual Creativity” *Frontiers in Neuroanatomy* 5 (16 May 2011), 1-17: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3098448/>

John R. Skoyles “Human evolution expanded brains to increase expertise capacity not IQ: A resolution of the normal IQ but small brain anomaly” *Psychology* 10 (1999) http://www.cpsimoes.net/artigos/art_smallbrain.html

⁵⁰ Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First Edition, Second [revised and enlarged] Printing 2019), 77.

⁵¹ Casey Luskin, “Missing Transitions: Human Origins and the Fossil Record”. In J. P. Moreland et al. (Eds.) *Theistic Evolution* (Wheaton, Illinois: Crossway), 437-473.

⁵² Michael A. Cremo and Richard L. Thompson, *Forbidden Archeology* (San Diego: Bhaktivedanta Institute, 1993), 914 pp.) 11.9.9: Opposition to the Single Species Hypothesis: 739-741.

⁵³ Winfried Henke “Paläoanthropologie – Standortbestimmung einer innovativen Disziplin“ *Heidelberger OJS-Journals* (2007). *Archäologische Informationen* 30/1, 2007, 1-23. *Bulletin de la Société Suisse d'Anthropologie* 13 (1), (2007) (Bulletin der Schweizerischen Gesellschaft für Anthropologie 13 (1), 200. <https://docplayer.org/46642175-Palaeoanthropologie-standortbestimmung-einer-innovativen-disziplin.html> Original German Text for the figure shown: “Abb. 4 Splitter-Stammbaummodell aus Henke und Rothe (2003), modifiziert (vgl. Hardt et al. 2006).”

⁵⁴ See arguments later after that quotation.

⁵⁵ Yohannes Haile-Selassie, Stephanie M. Melillo, and Denise F. Su: “The Pliocene hominin diversity conundrum: Do more fossils mean less clarity?” *Proceedings of the National Academy of Sciences of the United States of America* (113, 7 June 2016), 6364-6371: <https://www.pnas.org/content/113/23/6364> See also the comments on this question by Günter Bechly as referred to below.

⁵⁶ Winfried Henke and Hartmut Rothe *Menschwerdung* (Frankfurt: Fischer Kompakt, 2015) <https://epdf.pub/menschwerdung.html> (There also: Stammbaum des Menschen nach Vorstellung der >Splitter<)

⁵⁷ Richard G. Klein “Darwin and the recent African Origin if modern humans” *Proceedings of the National Academy of Sciences of the United States of America* (106, 22 September 2009), 16007-16009. Figure 16008. <https://www.pnas.org/content/pnas/106/38/16007.full.pdf> pp. 16007-16009.

⁵⁸ Ian Tattersall and Jeffrey Schwarz, *Extinct Humans* (New York: Westview Press (2001), 111. Cited according to Rupe and Sanford 2019, 159).

⁵⁹ Bernard Wood “Welcome to the Family. The Latest Fossil Finds Make the Puzzle of Human Evolution Harder Than Ever to Solve” *Scientific American* (September 2014), 43-47. Figure under the Title: “Were We Came From: 40-41”. <https://www.scientificamerican.com/article/the-latest-fossil-finds-make-the-puzzle-of-human-evolution-harder-than-ever-to-solve1/> and <https://www.scientificamerican.com/article/the-origin-of-humans-is-surprisingly-complicated/>

⁶⁰ John Hawks “Three big insights into our African origins” <https://medium.com/@johnhawks/three-big-insights-into-our-african-origins-3fa01eb5f03>

⁶¹ Yohannes Haile-Selassie, Stephanie M. Melillo, and Denise F. Su: “The Pliocene hominin diversity conundrum: Do more fossils mean less clarity?” *Proceedings of the National Academy of Sciences of the United States of America* (113, 7 June 2016), 6364-6371: <https://www.pnas.org/content/113/23/6364>

⁶² Bernard Wood “Fifty years after *Homo habilis*” *Nature* 508 (2014): 31-33 <https://people.stfx.ca/x2011/x2011asx/5th%20Year/Anthro%20111/Fifty%20years%20later.pdf>

⁶³ Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First Edition, Second [revised and enlarged] Printing 2019).

⁶⁴ Bernard Wood, "The age of australopithecines," *Nature* 372: 31-33. 3. (November 1994. Quoted according Martin L. Lubenow, *Bones of Contention*, Grand Rapids: BakerBooks, Michigan; 2004, p. 300.)

⁶⁵ Michael Brandt, *Frühe Hominiden* (Holzgerlingen: SCM im SCM-Verlag GmbH & Co. KG, 2017), 84-92.

⁶⁶ Bernard Wood, "Welcome to the Family. The Latest Fossil Finds Make the Puzzle of Human Evolution Harder Than Ever to Solve" *Scientific American* (September 2014), 43-47. Figure under the Title: "Were We Came From: 40-41".

⁶⁷ John Hawks, "Three big insights into our African origins," <https://medium.com/@johnhawks/three-big-insights-into-our-african-origins-3fa01eb5f03?sk=1d44a1e2a218a60314361ceec4af3e38>

⁶⁸ See again: <https://medium.com/@johnhawks/three-big-insights-into-our-african-origins-3fa01eb5f03?sk=1d44a1e2a218a60314361ceec4af3e38>

⁶⁹ Wilfried Henke, „Paläoanthropologie – Standortbestimmung einer innovativen Disziplin,“ *Paläoanthropologie. Heidelberger OJS-Journals* 2007. *Archäologische Informationen* 30/1, 2007, 1-23 (quotation from p. 8). *Bulletin de la Société Suisse d'Anthropologie* 13 (1), 2007

⁷⁰ Richard E. Blackwelder, "Animal taxonomy and the new systematics," *Survey of Biological Progress* (1962) 4, 31–35, 53–57.

⁷¹ Alessandro Rapini, "Classes or Individuals. The Paradox of Systematic Revisited," *Studies in the History and Philosophy of Biological and Biomedical Sciences* (2004), 35: 675-695. https://www.researchgate.net/publication/222411122_Classes_or_Individuals_The_Paradox_of_Systematics_Revisited

⁷² Günter Bechly, "New Fossil Human Species Thwarts Core Darwinian Predictions," <https://evolutionnews.org/2019/04/new-fossil-human-species-thwarts-core-darwinian-predictions/> (2019)

Günter Bechly, "Lessons from the Ongoing "Rewrite" of Human Origins Bechly," <https://evolutionnews.org/2019/03/beckly-lesson-from-the-ongoing-rewrite-of-human-origins/> (2019)

Günter Bechly, "#3 of Our Top Stories of 2018: For Paleoanthropology, Another Annus Horribilis" <https://evolutionnews.org/2018/12/3-of-our-top-stories-of-2018-for-paleoanthropology-another-annus-horribilis/> (2018)

Günter Bechly, "For Paleoanthropology, Dawn of Another Annus Horribilis" <https://evolutionnews.org/2018/01/for-paleoanthropology-dawn-of-another-annus-horribilis/> (2018)

Günter Bechly, "Rewriting Human Origins, Ongoing in East Asia" <https://evolutionnews.org/2018/11/rewriting-of-human-origins-ongoing-in-east-asia/> (2018)

Günter Bechly, "What, Another "Rewrite" of the Human Origins Story? How About a Rethink, Instead?" <https://evolutionnews.org/2017/11/what-another-rewrite-of-the-human-origins-story-how-about-a-rethink-instead/> (2017)

Günter Bechly, "Human Origins: Out of Africa, or Out of Germany?" <https://evolutionnews.org/2017/10/human-origins-out-of-africa-or-out-of-germany/> (2017)

⁷³ Casey Luskin, "Missing Transitions: Human Origins and the Fossil Record". In J. P. Moreland et al. (Eds.) *Theistic Evolution* (Wheaton, Illinois: Crossway), 437-473.

⁷⁴ Olivier Rieppel, *Kladismus oder die Legende vom Stammbaum* (Basel: Birkhäuser Verlag, 1983), 18.

German original text: „Die organismische Vielfalt und deren abgestufte Ähnlichkeit wecken in uns die Frage nach deren Ursprung. Wie kommt es, dass Millionen von Arten unsere Erde bevölkern und bevölkert haben? Wie kommt es zu dem anscheinenden Wandel von Arten in aufeinanderfolgenden Gesteinsschichten? Phänomene, die von uns beobachtbar sind, und die einer Erklärung bedürfen. *Die Evolutionstheorie ist eine solche Erklärung. Sie liefert kein Wissen, sie ist nicht bewiesen und auch nicht beweisbar, sie ist unsere Gedankenkonstruktion.* Gibt

es eine bessere? Die Diskussion sei eröffnet!“ P. 25: „Die Feststellung von Ordnung erfolgt unabhängig vom Evolutionsgedanken.“

⁷⁵ Quentin Wheeler, Leandro Assis and Olivier Rieppel, “Heed the father of cladistics”, *Nature* 295 (18 April 2013), 295-296. The authors state on p. 295: “In the history of biological classification, **the little-known Hennig arguably deserves a place alongside Aristotle, Carl Linnaeus and Darwin**” (emphasis added).

Jes Rust (2011) cites Ax: „Die phylogenetische Systematik kann ohne Berücksichtigung irgendeiner fossilen Überlieferung objektive Hypothesen über die Verwandtschaftsbeziehungen zwischen rezenten Arten und Gruppen rezenter Arten formulieren sowie die im Prüfungsverfahren favorisierten Verwandtschaftshypothesen in ein System mit hierarchischer Struktur umsetzen.“ Mit dieser deutlichen Feststellung hatte sich der Führungsanspruch der Paläontologie in der Stammesgeschichtsforschung tief greifend und nachhaltig verändert. Die Fossilien waren für die Ermittlung der verwandtschaftlichen Beziehungen der heutigen Organismen plötzlich scheinbar völlig bedeutungslos geworden. Gerade Willi Hennig trug offenbar wenig dazu bei, die Paläontologen für die Phylogenetische Systematik zu vereinnahmen. Dies mag die folgende Anekdote zeigen (zitiert nach SCHMITT 2001: 327): „...nach einem Vortrag von Willi Hennig über Phylogenetische Systematik im Museum für Naturkunde in Berlin am 30. Oktober 1950 behauptete der Paläontologie-Professor Walter Gross – wohl etwas ungehalten: phylogenetische Beweise seien nur mit Hilfe von Fossilien zu erbringen. Hennig entgegnete – ebenfalls etwas ungehalten: **„Ihre Fossilien interessieren mich nicht“**, worauf Gross rief: „Dann interessieren mich ihre Theorien auch nicht“ und Türen knallend den Saal verließ.“ Es wäre jedoch ungerecht und falsch, Willi Hennig zu unterstellen, dass er kein Interesse an Fossilien oder der Paläontologie gehabt hätte. Das Gegenteil ist der Fall. Hennig war nicht nur ein angesehener Entomologe, sondern er hat für seine spezielle Gruppe, die Dipteren (Mücken und Fliegen), zahlreiche Arbeiten über fossile Vertreter, insbesondere aus Bernsteinvorkommen publiziert.

...Der **Nachweis**, dass ein Fossil tatsächlich eine Position unmittelbar auf der direkten Stammlinie oder Ahnenlinie eines rezenten Monophylums einnimmt und damit einen echten Vorfahren darstellt, **kann dagegen nicht erbracht werden**“ (emphasis added). <https://static.onleihe.de/content/wbg/20180425/9783863126247/v9783863126247.pdf>

Die evolutionstheoretisch orientierte Wikipedia: <https://de.wikipedia.org/wiki/Kladistik> „Anders als ein Stammbaum hat das Kladogramm **nur terminale Taxa**. Es lässt damit also **nicht die Entwicklung einer rezenten Form aus einer anderen zu, oder, anders ausgedrückt, keine lebende (rezente) Art kann und darf Stammart einer anderen rezenten Art sein. Fossile Arten können in ein Kladogramm integriert werden, sie bilden dann aber ebenfalls terminale Taxa**. Das bedeutet, die Zuordnung einer fossilen Art als der tatsächlichen Stammart wird vermieden.“ (Retrieved 5 July 2019)

⁷⁶ Sherwood Washburn, “Fifty Years of Studies on Human Evolution,” *The Bulletin of the Atomic Scientists*, May 1982, pp. 37, 41. Quoted according to *Life – How did it get here? By evolution or creation?* Watch Tower Bible and Tract Society of Pennsylvania. International Bible Students Association (concerning the objection that this is a popular science book, I would say that the references I checked proved to be correct.)

Addendum 27 July 2019: In the interim I was able to check the original paper of Washburn. The Literature Reference was correct. The additional application of the second quotation to the time of the “the early theories of human evolution” could have been mentioned. However, the contents of the statement “People wanted to believe in evolution, human evolution, and this affected the results of their work” has – apart from some exceptions (as documented above) – been found true for almost the entire history of evolutionary anthropology from its very beginnings to the present day – as documented by many critical authors. As one former colleague (a stout Darwinian) at the University of Bonn said to me in the presence of several further colleagues (after I had raised some arguments against Darwinism). “Wir wollen glauben” (“we want to believe”).

⁷⁷ William R. Thompson, “*Introduction to Charles Darwin: The Origin of Species*”, London: Everyman's Library No. 811, reprint of the sixth edition of 1872. (1967).

⁷⁸ Marvin L. Lubenow, “The pigs took it all,” *Creation* 17(3) (June 1995), 36–38. <https://creation.com/the-pigs-took-it-all>

⁷⁹ Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First edition, Second [revised and enlarged] Printing 2019), 259. (Addendum 1 Nov. 2019: See also pp. 287-300). P. 297: “**If the KBS Tuff had not been re-dated closer to 1.8 million years old, Lucy’s kind (*Australopithecus afarensis*), could not have been promoted as the direct ancestor to the genus *Homo***. Lucy would have been seen as just another “side-branch,” an extinct australopithecine ape of little importance.” And what would have been the importance of Johanson in that case?

⁸⁰ Roger Lewin, *Bones of Contention* (London: Penguin Books, 1987), 192, 194.

⁸¹ Rupe and Sanford 2019, 80-81.

⁸² “News Staff”, “5.6-Million-Year-Old Hominin-Like Footprints in Crete Challenge Theories of Human Evolution,” *Science News* (1 September 2017) <http://www.sci-news.com/othersciences/anthropology/trachilos-hominin-like-footprints-05185.html>

⁸³ Günter Bechly, “Fossil Footprints from Crete Deepen Controversy on Human Origins,” <https://evolutionnews.org/2017/09/fossil-footprints-from-crete-deepen-controversy-on-human-origins/>

⁸⁴ <https://newsinteractives.cbc.ca/longform/human-footprints-greece>

⁸⁵ Pierre Teilhard de Chardin, *The Phenomenon of Man* (London: William Collins Sons & Co. Ltd and New York: Harper & Row, 1959), 219 <https://archive.org/stream/ThePhenomenonOfMan/phenomenon-of-man-pierre-teillard-de-chardin#page/n110/mode/1up/search/satisfy>

Original French: “L'évolution est-elle une théorie, un système ou une hypothèse ? C'est beaucoup plus : c'est une condition générale à laquelle toutes les théories, toutes les hypothèses, tous les systèmes doivent s'incliner et qu'ils doivent satisfaire maintenant si nous voulons qu'ils soient imaginables et vrais.”

⁸⁶ Wolf-Ekkehard Lönnig, “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>

⁸⁷ Herbert Wendt, *Ich suchte Adam* (Reinbeck bei Hamburg: Rowohlt Verlag, 1966).

⁸⁸ Hans Reck: https://en.wikipedia.org/wiki/Hans_Reck (retrieved 22. June 2019).

⁸⁹ Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First edition, Second [revised and enlarged] Printing 2019); extracts from 244-246.

⁹⁰ Michael A. Cremo and Richard L. Thompson, *Forbidden Archeology* ((San Diego: Bhaktivedanta Institute, 1993), 914; quotation from p. 640).

⁹¹ Again Michael A. Cremo and Richard L. Thompson, *Forbidden Archeology* (San Diego: Bhaktivedanta Institute, 1993), 914 pp.) About Reck: 628-649. As for a somewhat updated revision of 1995 *cf.*: <https://ia802804.us.archive.org/5/items/forbidden-archeology/forbidden-archeology.pdf> Concerning doubtful C14 dates by Reiner Protsch, see https://de.wikipedia.org/wiki/Reiner_Protsch

⁹² Ernest Albert Hooton, *Apes, Men and Morons* (New York: J. P. Putnam's Sons, 1937), 107. Quoted according to James Perloff, *Tornado in a Junkyard* (Burlington: Refuge Books 1999/2006), 102, as well as several further sources. Perloff subsequently cites a similar ‘confession’ by professor G. W. H Scheepers (anthropologist, University of Pretoria):

<https://s3.amazonaws.com/camppictures/CampArchive/Downloads/Tornado%20In%20A%20Junkyard.pdf>. I have tried to get Hooton's original book, but so far in vain. Douglas Dewar quotes Hooton as follows: "So convinced were anthropologists that Neanderthal man is an ancestor of modern man and a link with the ape, that all fossils of man of modern type found in Pleistocene deposits were received with incredulity and most were rejected. As Prof. E. A. Hooton well puts it ("Apes, Men and Morons"(1938) p. 107): "The Western European classic Neanderthal type was altogether a too complete answer to Darwinian prayer...Heretical and non-conforming fossil men were banished to the limbo of dark museum cupboards, forgotten or even destroyed.'" Dewar: *The Transformist Illusion* 1957, p. 139).

⁹³ Ernest Hooton: https://en.wikipedia.org/wiki/Earnest_Hooton (retrieved 6 July 2019).

⁹⁴ Tim White on Mary Leakey's findings, the Laetoli footprints: “Make no mistake about it...They are like modern human footprints. If one were left in the sand of a Californian beach today, and a four-year old were asked what it was, he would instantly say that somebody had walked there. He wouldn't be able to tell it from a hundred other prints on the beach, *nor would you. The external morphology is the same. There is a well-shaped modern heel with a strong arch and a good ball of the foot in front it. The big toe is straight in line. It doesn't stick out to the side like an ape toe, or like the big toe in so many drawings you see of australopithecines in books*” (emphasis added, also in the following quotation). Cited according to Christopher Rupe and John Sanford (2019, p. 137): *Contested Bones*. FMS Publications.

“Phillip Tobias (1980) noted in his criticism of the *A. afarensis* proposal that between Hadar and Laetoli specimens there is a distance of **1,600 km and a time gap of 800,000 years**, in addition to their morphological

differences, which strengthen the case for alternative proposals” (Camilo J. Cela-Conde and Francisco J. Ayala, *Processes of Human Evolution*. Oxford: Oxford University Press 2018), 146.

⁹⁵ Christopher Rupe and John Sanford, *Contested Bones* (Canandaiguam NY 14424: FMS Publications, First edition, Second [revised and enlarged] Printing 2019), Diagramm on p. 266.

⁹⁶ Michael Brandt, *Vergessene Archäologie: Steinwerkzeuge fast so alt wie Dinosaurier* (Neuhausen Stuttgart: Hänssler-Verlag, 2011/2019). “Die paläozänen, oligozänen, miozänen und pliozänen Steinwerkzeugfunde in Frankreich, Belgien, Portugal und England sowie in anderen Ländern widersprechen allen derzeitigen Abstammungstheorien des Menschen von tierischen Vorfahren“ (p. 459). (“The Paleocene, Oligocene, Miocene and Pliocene stone tool discoveries in France, Belgium, Portugal, England and other countries contradict all current theories of human descent from animal ancestors.”)

⁹⁷ Jay Mathers Savage (1963): *Evolution* (New York: Holt, Rinehart and Winston, 1963; quotations from p. V). Full quotation: “**No serious biologist today doubts the fact of evolution**, the development of all living organisms from previously existing types under the control of evolutionary processes. However, there have been and will continue to be differences of opinion on how evolution takes place, just as there are different ideas on the exact processes involved in, for example, the formation of mountain ranges. Thus, while **the fact of evolution is amply clear**, there are different theories regarding the significant processes that have brought about evolutionary change. In this book we are not concerned with enumerating so-called proofs of evolution. **The fact of evolution is demonstrated on every side in all fields of biology and indeed forms the basic unifying principle in the study of living systems. We do not need a listing of evidences to demonstrate the fact of evolution any more than we need to demonstrate the existence of mountain ranges.** Rather, the concern here will be with what is known about the process of evolution and a survey of the several theories proposed to explain the process.”

⁹⁸ Theodosius Dobzhansky “On methods of evolutionary biology and anthropology, Part 1, biology” *American Scientist*, 45(5), December 1957, p. 388.

⁹⁹ Bernward Nüsslein commented in a letter to the magazine *Focus* on the motto of the Giordano Bruno Foundation, “Knowledge instead of faith” (*Focus* 35/2005): “Der fatale Irrtum ist doch, nicht zu erkennen, dass jeder Mensch eine wie auch immer geartete Religion hat, d. h. er ist – ob er das nun realisiert oder sich dessen nicht bewusst ist – an ein Postulat (rück-)gebunden (*re-ligio*), und sei es die “Religion der Vernunft” oder das Postulat der Sinnlosigkeit der Welt. Diese unbewussten Religionen sind deshalb so gefährlich, nicht weil sie Religion sind, sondern weil ihre “Bekenner” nicht wissen, dass sie einem Glauben anhängen, also auch nicht durch selbstkritischen Skeptizismus den Mitmenschen verstehen können.“

¹⁰⁰ Michael Egnor, “Atheism Is a Catastrophe for Science,“ https://evolutionnews.org/2016/09/atheism_is_a_ca/ (September 2016).

¹⁰¹ Konrad Lorenz, “Über die Wahrheit der Abstammungslehre,“ <http://klha.at/papers/1964-Abstammungslehre.pdf> (“Die wichtigste Wissensquelle stammesgeschichtlicher Forschung ist der Vergleich von Ähnlichkeiten und Unähnlichkeiten lebender Organismen,...“) (1964, p. 9):

¹⁰² Oskar Kuhn, *Die Deszendenztheorie* (München: Koesel-Verlag; 2. Auflage 1951, citation pp. 14/15).

¹⁰³ Wilhelm Troll, *Vergleichende Morphologie der höheren Pflanzen* (Berlin: Gebrüder Bornträger 1937), 45 („Die morphologische Ähnlichkeit wurde darin zur stammesgeschichtlichen Verwandtschaft. Der Typus verwandelte sich in die Urform und die Homologien erklärte man für Erbstücke gemeinsamer Vorfahren oder, wie Darwin [sinngemäß] sagt, für „Modifikationen eines und desselben uralterlichen Organs.““

Wilhelm Troll, *Gestalt und Urbild. Gesammelte Aufsätze zu Grundfragen der organischen Morphologie* (Köln und Wien: Böhlau Verlag, 3. Auflage 1984: mit einer Vorbemerkung und einem Nachwort herausgegeben von Lottlisa Behling; translation by Granville Sewell), 73-75:

“The explanation of homologies simply through common descent is thus no longer tenable. Nor is the so-called “law of Conditions of Existence”, that DARWIN even wanted to place above the “law of the Unity of Type”. [Quotation from Darwin]: “The expression ‘conditions of existence’ is fully embraced by the principle of natural selection. For natural selection acts by either now adapting the varying parts of each being to its organic and inorganic conditions of life; or by having adapted them during past periods of time, the adaptations being aided in many cases by the increased use or disuse of parts, being affected by the direct action of external conditions of life, and subjected in all cases to the several laws of growth and variation. Hence,

in fact, the law of the Conditions of Existence is the higher law, as it includes, through the inheritance of former variations and adaptations, that of Unity of Type" (116). Ergo: Darwin eliminates the ideational [non-material] nature of the [biological basic] type, which is completely independent of the external world. According to him the "Unity of Type", was due to common descent as well as an adaptation of the organism to the environment, and thus to be understood entirely as an effect of the environment, which D. H. SCOTT (117) states even more concisely when he directly says, "All the characters which the morphologist has to compare are, or have been, adaptive." By this, Darwinism reveals itself to be a teleological system, for which it doesn't matter if problems of organic forms are viewed by final causes, that is, causes which, so to speak, preconstructed the organs for suitability, or a mechanism which constructs suitable structures. In any case, it appears to be really grotesque that Darwin in the 14th chapter of his main work rejects the consideration of final causes, which for him are identical with creationism (118), by the words: "Nothing can be more hopeless than to attempt to explain this similarity of pattern in members of the same class, by utility or by the doctrine of final causes", while, in fact, his entire system is built on the point of view of utility, and is directly described by NÄGELI (110) as "doctrine of utility". In fact, teleology was inserted all the more into biology under the influence of Darwin's work (120), yet a kind of teleological view of nature, to be sure that is as far away from the classical idea of teleology as Darwinism is from "Natura", of the "Physis", which lives by creative powers. As previously stressed, selection theory knows only the external or ecological usefulness, which to be sure cannot be strictly separated from the constitutive or inner usefulness [or suitability], but is nevertheless of subordinate significance as compared to the latter. This is shown by the low resistance of the relevant phenomena to a critical [non-Darwinian] examination. There is hardly a single case, for which one could not say with Goebel (121): "So it is [constituted], but it could also be different."

For the reader also reading German, I repeat the paragraphs just quoted from Wilhelm Troll also in the original language:

"Die Erklärung der Homologien bloß aus der Gemeinsamkeit der Abstammung ist also nicht mehr haltbar. Ebenso wenig aber das sogenannte "Gesetz von den Daseinsbedingungen" (law of Conditions of Existence), das DARWIN sogar über das "Gesetz von der Einheit des Typus" (law of the Unity of Type") gestellt wissen wollte. [Zitat Darwin]: "Der Ausdruck 'Daseinsbedingungen' wird durch das Prinzip der natürlichen Zuchtwahl voll umfaßt. Denn die natürliche Zuchtwahl wirkt entweder dadurch, daß sie die veränderlichen Teile jedes Wesens seinen organischen und anorganischen Lebensbedingungen jetzt anpaßt oder während früherer Zeiten angepaßt hat, wobei die Anpassungen in vielen Fällen durch den zunehmenden Gebrauch oder Nichtgebrauch einzelner Teile unterstützt, durch die unmittelbare Einwirkung der äußeren Lebensbedingungen beeinflußt werden und in allen Fällen verschiedenen Gesetzen des Wachstums und der Abänderung unterworfen sind. Daher ist in der Tat das Gesetz von den Daseinsbedingungen das höhere Gesetz, da es vermittelt der Vererbung früherer Veränderungen und Anpassungen das der Einheit des Typus einschließt" (116). Ergo: DARWIN eliminiert die aller Äußerlichkeit entzogene ideenhafte Natur des Typus. Nach ihm ist das Phänomen der "Einheit des Typus", über die Gemeinsamkeit der Abstammung hinaus, eine Anpassungserscheinung der Organismen an die Umwelt und somit durchaus als Wirkung der Umwelt zu verstehen, was D. H. SCOTT (117) noch prägnanter ausspricht, wenn er geradewegs sagt: "All the characters which the morphologist has to compare are, or have been, adaptive." Der Darwinismus erklärt sich damit selbst als teleologisches System, wobei es schon gleichgültig ist, ob die Probleme der organischen Gestalt nach Endursachen, d. h. die Zweckmäßigkeit der Organe gleichsam vorkonstruierenden Ursachen, oder nach einem Mechanismus beurteilt werden, der zweckmäßige Strukturen schafft. Jedenfalls nimmt es sich geradezu grotesk aus, wenn DARWIN im 14. Kapitel seines Hauptwerkes eine Betrachtung nach Endursachen, die für ihn identisch mit der Schöpfungstheorie ist (118), mit den Worten ablehnt: "Nothing can be more hopeless than to attempt to explain this similarity of pattern in members of the same class, by utility or by the doctrine of final causes", wo doch sein ganzes System auf dem Nützlichkeitsgesichtspunkt aufgebaut und von NÄGELI (110) geradezu als "Nützlichkeitslehre" bezeichnet wurde. Tatsächlich zog unter dem Einflüsse der Werke DARWINS die Teleologie erst recht in die Biologie ein (120), freilich eine Art der teleologischen Naturauffassung, die vom klassischen Teleologiebegriff ebenso weit entfernt ist wie der Darwinismus von der "Natura", der "Physis", die im Schaffen lebt. Wie schon früher betont wurde, kennt die Selektionstheorie nur die äußere oder ökologische Zweckmäßigkeit, die sich zwar von der konstitutiven oder inneren nicht streng scheiden läßt, ihr gegenüber aber dennoch von untergeordneter Bedeutung ist. Das zeigt namentlich die geringe Widerstandskraft der einschlägigen Erscheinungen gegen die kritische Prüfung. Gibt es doch kaum einen derartigen Fall, bei welchem man nicht mit GOEBEL (121) sagen könnte: "Es geht so, aber es ginge auch anders."

(see also http://ad-multimedia.de/evo/long-necked-giraffe_mU.pdf, p. 70)

¹⁰⁴ Oskar Kuhn, *Die Deszendenz-Theorie* (München: Koesel-Verlag, 1949), 5: „Die Phylogenie ist ... nur indirekt erschließbar und als mehr oder weniger Anhang zur systematischen Morphologie möglich. Naef setzte

auseinander, dass die Grundbegriffe der alten, vordeszendenztheoretischen Morphologie später einfach in die Sprache der Phylogenie „übersetzt“ wurden.

Dabei wurde dann:

aus FormverwandtschaftBlutsverwandtschaft
 aus SystematikPhylogenetik
 aus Metamorphosen.....Stammesentwicklung
 aus Typus.....Stammform
 aus typischen Zuständenursprüngliche
 aus atypischenabgeänderte
 aus niederen Tieren.....primitive
 aus atypische Ähnlichkeit.....Konvergenz
 aus Ableitung.....Abstammung usw. usw.“

¹⁰⁵ Wolf-Ekkehard Lönnig, *Artbegriff, Evolution und Schöpfung* (Köln: Naturwissenschaftlicher Verlag Köln, 3. Auflage 1993, Internet Edition 2002) Chapter VI. <http://www.weloennig.de/AesVI.html>

¹⁰⁶ Concerning that scenario, a very intelligent lady, Lore Murdock (USA), just recently raised the following question: “Who has ever clearly identified these animals that could run faster and farther etc. than its predecessors when no one has ever observed these predecessors in action?” Very good point. Indeed, so far I do not know of any concrete research that has ever made as a careful and convincing investigation of that question in mammals, which could look like the following scenario: Find a new mutant in a hare and show that the mutant hare runs faster and has a better survival value than the others.

¹⁰⁷ Litynski, Z. (1961). “Should we burn Darwin?” *Science Digest* 51 (1961): 61-63.

Cuenot, L. (1951) *L'Évolution Biologique. Les Faits. Les Incertitudes* (Paris: Masson et Cie Éditeurs, 1951):

Pp. 400/401: “De cet examen rapide, il ressort – et celui de n’importe quelle vegetal ou animal nous conduirait à la même conclusion – que la lourde contribution exigée par la Nature pour le maintien de l’équilibre est payée presque entièrement par les jeunes stades. C’est pourquoi une corrélation constant s’observe, comme nous l’avons fait ressortir au chapitre de la Fécondité, entre le nombre des germes émis et le degré de protection des jeunes stades. Il y a égalité de chances pour les 800.000 oeufs pondus annuellement par une Carpe et abandonnés au hasard, et de 200 oeufs de l’Épinoche abrités dans un nid surveillé par le mâle, entre les 120.000 oeufs (1) de nos Grenouilles et Crapauds, et les 9 oeufs portés sur le dos de la femelle du Leptodactyle Ceratohyla (Équateur) (fig. 155), ou l’oeuf unique de *Sminthillus* [*Eleutherodactylus limbatus*] dont le développement ne comporte pas la phase de têtard libre. La mortalité intraspécifique n’a donc, à part les quelques morts du début, aucun caractère sélectif; lorsqu’il n’échappe que 2 individus sur 120.000, comme chez la Grenouille verte, comment admettre que ces deux sont élus en raison de petits avantages anatomique ou physiologiques? C’est tout a fait invraisemblable, puisque ce sont les jeunes qui sont sacrifiés alors qu’ils n’ont pas leur perfection définitive. Enfin les observations positives montrent que la sélection suppose n’a nullement la rigueur et l’infaillibilité que requiert la conception darwinienne; il ne pas rare du tout de trouver à l’état sauvages des animaux handicapés par des malformations ou de mutilations, et qui cependant se maintiennent comme les intacts. (1) La Grenouille verte vit au moins 12 ans et sa ponte annuelle est de 10.000 oeufs.“

¹⁰⁸ Wolf-Ekkehard Lönnig, “*Natural selection*” in: W. Edward Craighead & Charles B. Nemeroff (eds.): *The Corsini Encyclopedia of Psychology & Behavioral Science* (Hoboken: John Wiley & Sons, Vol. 3, 3rd Edition), 1008-1016. <http://www.weloennig.de/NaturalSelection.html>

¹⁰⁹ For Allelopathy, see, please: <https://en.wikipedia.org/wiki/Allelopathy> (retrieved 6 July 2019).

¹¹⁰ “Die Wanderungen der Pflanzen“ *Veröffentlichungen des Geobotanischen Institutes der Eidg. Tech. Hochschule, Stiftung Rübel, in Zürich* (1977) <https://www.e-periodica.ch/cntmng?pid=gbi-002:1977:61::201>(PDF erstellt 2019).

¹¹¹ Rainer Flindt, *Biologie in Zahlen* (Heidelberg: Spektrum Akademischer Verlag, 2000; 5.Auflage).

¹¹² Perhaps one may advice Dawkins to revive his late coming “devotion to outdoor pursuits and field natural history” – the tradition of his family, which he had left as a youth. “...I have learned late to love wild creatures and I have never been an outdoor person as either my father or grandfather” (emphasis added). Or: “Indeed, my interest in biology has been largely driven by questions about origins and the nature of life, rather than – as is the

case for most young biologists I have taught – by a love for natural history.” Possibly the zoologist and other likeminded scientists could extent their interest to trees and wild flowers and their often copious seed productions.” For the quotations see Richard Dawkins *An Appetite for Wonder* (London: Bantam Press 2013), 13.

¹¹³ Richard Dawkins “The ‘Alabama Insert’” Chapter 1 (pp. 5-22) in: *Charles Darwin – A Celebration of His Life and Legacy*. (Edited by James Bradley and Jay Lamar. Montgomery Alabama: NewSouth Books 2013), 14.

¹¹⁴ Richard Buggs; see detailed references in <http://www.weloennig.de/KutscheraPortner.pdf> (2019, 46/47)

¹¹⁵ Jeffrey P. Tomkins, “Comparison of 18,000 De Novo Assembled Chimpanzee Contigs to the Human Genome Yields Average BLASTN Alignment Identities of 84%,” *Answers Research Journal* 11 (2018), 205-209. <https://answersingenesis.org/genetics/dna-similarities/comparison-chimp-contigs-human-genome/>

¹¹⁶ Casey Luskin “Problem 10: Neo-Darwinism’s Long History of Inaccurate Predictions about Junk Organs and Junk DNA”: https://evolutionnews.org/2015/02/problem_10_neo/ (2015).

¹¹⁷ Eric Hovind (one of those an ‘uncitable creationists’), “Things That Negate Evolution: Wisdom Teeth” Creation Today: <https://creationtoday.org/things-that-make-evolutionists-look-stupid-wisdom-teeth/> (2007)

¹¹⁸ David Klinghoffer, “The Spine’s Design“: https://evolutionnews.org/2011/08/the_spines_design/

¹¹⁹ Carla Sustek D'Angelo and Celia Prizskulnik Koiffmann, “Copy Number Variants in Obesity-Related Syndromes: Review and Perspectives on Novel Molecular Approaches” *Journal of Obesity* (Volume 2012, Article ID 845480, 15 pages doi:10.1155/2012/845480): <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3534325/> and additionally: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5656385/>

¹²⁰ See again: https://evolutionnews.org/2015/02/problem_10_neo/

¹²¹ ‘Adonizedek’ “Vestigial Organs? No more!” <https://releasingthetruth.wordpress.com/category/evolution-2/vestigial-organs/> (2013). See also Anatomist David Menton, David (1994). “The human tail and other tales of evolution” Originally published in *St. Louis Metro Voice*, January 1994, Vol. 4, No. 1. Now in: <https://answersingenesis.org/human-body/vestigial-organs/human-tail-and-other-tales-of-evolution/>

¹²² https://en.wikipedia.org/wiki/Human_vestigiality (retrieved 10 June 2019)

¹²³ [https://en.wikipedia.org/wiki/Proconsul_\(mammal\)](https://en.wikipedia.org/wiki/Proconsul_(mammal))

¹²⁴ http://www.ad-multimedia.de/id/intelligent-design-hypothese_kassel_fragen.mp3 0:51:01

¹²⁵ Reinhard Junker und Siegfried Scherer (eds.), *Evolution – ein kritisches Lehrbuch* (Weyel Biologie. Weyel Lehrmittelverlag. Aktualisierte und erweiterte Auflage 2013).

¹²⁶ Reinhard Junker, *Ähnlichkeiten, Rudimente, Atavismen. Design-Fehler oder Design-Signale?* (Holzgerlingen: Hänssler-Verlag, 2002).

¹²⁷ Rui Diogo, Brian G. Richmond and Bernard Wood (2012): “Evolution and homologies of primate and modern human hand and forearm muscles, with notes on thumb movements and tool use.” *Journal of Human Evolution* 63:64-78 <https://cashp.columbian.gwu.edu/sites/g/files/zaxdzs1746/f/downloads/2012-Diogo,%20et%20al.pdf> <https://www.ncbi.nlm.nih.gov/pubmed/22640954>

For many further details, see: Michael Brandt, *Frühe Hominiden* (Holzgerlingen: SCM im SCM-Verlag GmbH & Co. KG, 2017), 84-92.

¹²⁸ Ascribed to Albert Einstein: <https://quoteinvestigator.com/2011/05/13/einstein-simple/> “In conclusion, Einstein may have crafted this aphorism, but there is no direct evidence in his writings.”

¹²⁹ Bill Gates, *The Road Ahead* (London: Penguin 1996), 228. See for the context also X-Evolutionist.com: <https://x-evolutionist.com/2010/04/14/dna-is-like-a-computer-program-but-far-far-more-advanced-than-any-software-ever-created-bill-gates/>

¹³⁰ Bill Gates <https://www.rollingstone.com/culture/culture-news/bill-gates-the-rolling-stone-interview-111915/?print=true>

See also Mark Zuckerberg: <http://www.siliconbeat.com/2016/12/30/facebook-ceo-mark-zuckerberg-says-isnt-atheist-believes-religion-important/> (2016).

¹³¹ Siegfried Strugger: *Botanik* (Frankfurt am Main: Das Fischer Lexikon. Fischer-Taschenbuch-Verlag, 1962), 59. Comment in square brackets added. As for the question concerning comparability and identity of cybernetic systems in organisms and machines, see please <http://www.weloennig.de/AuEnt.html>

Short Supplement

9 September 2019: Short supplement on article by Haile-Selassie, Stephanie M. Melillo, Antonino Vazzana, Stephano Benazzi and Timothy M. Ryan (2019):
 “A 3.8-million-year-old hominin cranium from Woranso-Mille, Ethiopia”,
 published in *Nature* 28 August 2019
<https://www.nature.com/articles/s41586-019-1513-8>

(p. “With MRD [according to the authors “the cranium MRD-VP-1/1, hereafter MRD”] assigned to *A. [Australopithecus] anamensis*, it indicates that *A. anamensis* can be clearly distinguished from *A. afarensis* such that the latter species **may not have been a result of phyletic transformation within an unbranched lineage.**”

... “Most importantly, MRD shows that despite the widely accepted hypothesis of **anagenesis**, *A. afarensis* **did not appear as a result of phyletic transformation**. [Thus, *A. afarensis* is not a direct descendent of *A. anamensis*.] It also shows that at least **two related hominin species co-existed** in eastern Africa around 3.8 Myr ago, further lending support to mid-Pliocene hominin diversity.”

Just for those readers who are not yet acquainted with the terminology: “Anagenesis is the gradual evolution of a species that continues to exist as an interbreeding population. This contrasts with cladogenesis, which occurs when there is branching or splitting, leading to two or more lineages and resulting in separate species” <https://en.wikipedia.org/wiki/Anagenesis>. “Phyletic gradualism is a model of evolution which theorizes that most speciation is slow, uniform and gradual. When evolution occurs in this mode, it is usually by the steady transformation of a whole species into a new one (through a process called anagenesis)” https://en.wikipedia.org/wiki/Phyletic_gradualism.

Three year earlier, the authors Yohannes Haile-Selassie, Stephanie M. Melillo, and Denise F. Sud had stated in *the Proceedings of the National Academy of Sciences*, June 2016: “Currently available fossil evidence suggests that ***Au. afarensis* is a direct descendent of *Au. anamensis* and this phylogenetic relationship is considered to be the best example of phyletic gradualism in early hominin evolution** (13, 15)” (13: referring to White TD (2002) *Earliest hominids. The Primate Fossil Record*, ed Hartwig W (Cambridge Univ Press, Cambridge, UK), pp 407–417 and 15 to Kimbel WH, et al. (2006) “Was *Australopithecus anamensis* ancestral to *A. afarensis*? A case of anagenesis in the hominin fossil record.” Kimbel et al.: <https://www.ncbi.nlm.nih.gov/pubmed/16630646>

“The most parsimonious reconstruction of character-state evolution suggests that each of the hominin OTUs [operational taxonomic units] shares apomorphies [“an apomorphy a character that is different from the form found in an ancestor, i.e., an innovation, that sets the clade apart from other clades”] only with geologically younger OTUs, as predicted by the hypothesis of ancestry (tree length=31; Consistency Index=0.903). This concordance of stratigraphic and character-state data **supports the idea that the *A. anamensis* and *A. afarensis* samples represent parts of an anagenetically evolving lineage**, or evolutionary species.”

Comment by Max Planck Society (anonymous): <https://phys.org/news/2019-08-million-year-old-fossil-ethiopia-reveals-lucy.html>

“Among the most important findings was the team's conclusion that *A. anamensis* and its descendant species, the well-known *A. afarensis*, **coexisted for a period of at least 100,000 years** [at least 4,000 generations!]*] This finding contradicts the long-held notion of an anagenetic relationship between these two taxa, instead supporting a branching pattern of evolution. Melillo explains: "We used to think that *A. anamensis* gradually turned into *A. afarensis* over time. **We still think that these two species had an ancestor-descendent relationship** [how do they know this? Seems **they think it (not to say 'believe it') without testable scientific evidence**], but this new discovery suggests that the two species were actually living together in the Afar for quite some time. It changes our understanding of the evolutionary process and brings up new questions—were these animals competing for food or space?"

The following pictures (reconstructions plus some photos from the skull, see <https://www.youtube.com/watch?v=Ard0V7ldjcY>) reveal a strong bias, because:

“**Unlike other primates, human beings have eyes with a distinct colour contrast between the white sclera, the coloured iris, and the black pupil.** This is due to a lack of pigment in the sclera. Other primates have pigmented sclerae that are brown or dark in colour. There is also a higher contrast between human skin, sclera, and irises. Human eyes are also larger in proportion to body size, and are longer horizontally. Among primates, humans are the only ones where the outline of the eye and the position of the iris can be clearly seen.[2][4]” https://en.wikipedia.org/wiki/Cooperative_eye_hypothesis (retrieved 8 September 2019)

Thus, it is highly unlikely that this extinct ape (*Australopithecus*, “from Latin *australis*, meaning 'southern', and Greek *πίθηκος* (pithekos), meaning 'ape'” (Wikipedia)), ever displayed a humanlike white sclera. “In decades of observations at Gombe National Park in Tanzania, Jane Goodall observed [only] two chimps, probably brothers, who had white sclerae. A third, female chimp developed white sclerae as an adult. **But the trait has not spread or reappeared in that population**” <https://www.americanscientist.org/article/do-the-eyes-have-it>. To reconstruct *Australopithecus anamensis* with entirely white scleras seems to be a doubtful reconstruction to further promote the idea of man’s evolution from extinct apes**.



Fact is that **entirely** human-like white scleras (sclerae) can hardly be detected in the animal kingdom (if at all), coloured scleras are the overwhelming rule.

Nevertheless, Melissa Hogenboom reports that in a minority of cases *nearly* “White sclera may be found in other primates [in addition to gorillas] too. Mayhew discovered other apes including chimpanzees, bonobos and orangutans also show a *differing degree of whiteness* in their sclera. *Though not as white as ours*, this shows that they, and our common ancestor, may have had a variation of the gene needed for white eyes. The change to the all-white scleras that humans have, must therefore have been gradual rather than sudden, Gomez says” (<http://www.bbc.com/earth/story/20150808-gorillas-with-human-eyes>).

However, the special properties/details/differences of the eyes of gorillas in comparison to those of humans have, in my opinion, not adequately been considered.

Hence, even on evolutionary presuppositions, to reconstruct the eyes of an *Australopithecus* – dated to be 3.8 million years old – with entirely white human-like scleras and additionally human-like features is scientifically improbable.

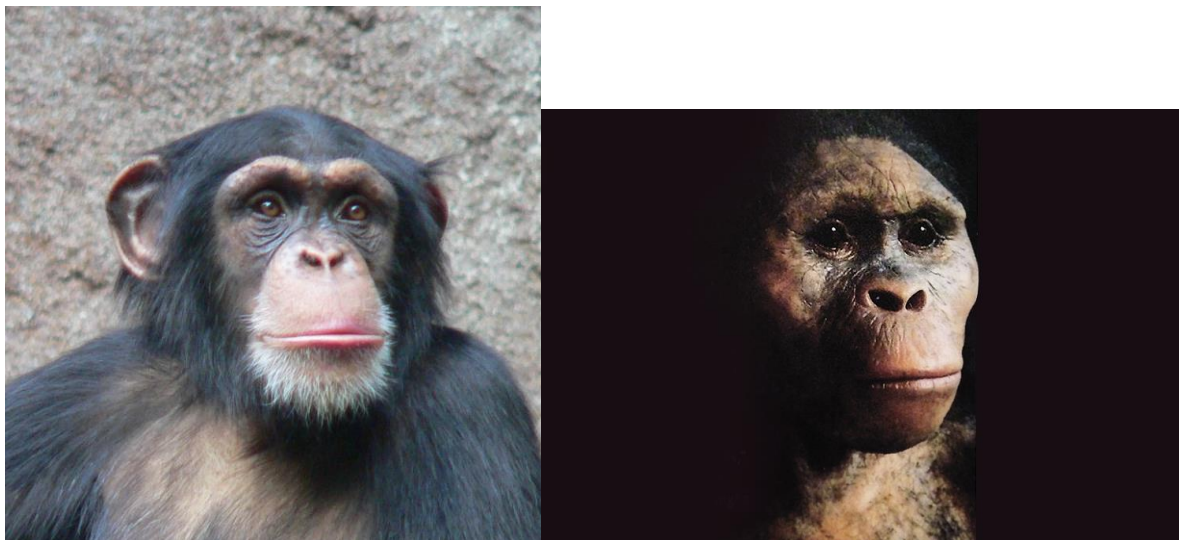
Let’s keep in mind that “*Human eyes are also larger in proportion to body size, and are longer horizontally*. Among primates, humans are **the only ones where the outline of the eye and the position of the iris can be clearly seen**” (see quotation above).

On a closer analysis one may say that the entire story about the human-like eyes of the gorilla and other apes appears to be strongly exaggerated. Google, please, *pictures* for “western lowland gorillas”, and also *pictures* for “chimpanzees” and “orangutan”: entirely white sclerae as in humans are the very rare exception. In some cases white sclerae similar to those of the gorilla can also be seen in horses (Appaloosa horses: <https://good-horse.com/genetics-evolution/introduction-appaloosa-patterns-genetics/>) “A white sclera (the ‘white’ of the eye surrounding the iris which is normally dark in horses) is also characteristic of these patterns” and some other animals (google, please, quora animals with white sclera). Dog below by: <https://www.agila.de/agila-magazin/1083-6-irrtuemer-ueber-hunde>.



Back to chimps and *Australopithecus*: Although there is a strong tendency to reconstruct *Australopithecus* with fully white scleras (and further attributes of typically human eyes), more realistic face reconstructions would probably look much more like the face of the chimpanzee shown on the left of the next page

(<https://upload.wikimedia.org/wikipedia/commons/8/87/Chimpanzee-Head.jpg>) or perhaps somewhat according to the following reconstruction of *A. afarensis* of the Bradshaw Foundation (on the right although the fur could have been better distributed more like that of the chimp – in the reconstructions the artists are regularly evolutionarily motivated to insert more or less strongly human-like features without any scientific proofs)***:



For further information on the paper of Haile-Selassie et al. of 28 August 2019 see, please, the information-rich article by paleontologist Günter Bechly: “*Apeman Waves Goodbye to Darwinian Gradualism*” of 6 September 2019, introducing his considerations as follows:

“A few days ago a sensational new paleontological discovery made **headlines around the globe**. After 15 years of searching, and the recovery of 12,600 fossils including 230 hominin remains (Leakey Foundation 2019), finally a rather complete skull has been found and described for *Australopithecus anamensis*, which is the oldest and most primitive representative of the australopithecines, living 4.2-3.9 million years ago. It was generally considered to be the direct ancestor of Lucy’s species, *Australopithecus afarensis*, that lived in the same region 3.8-2.9 million years ago. The former species was previously known only by some fragments. Now we can finally give it a face. Actually, **this face turns out to be very much ape-like, with a small chimp-sized braincase and a protruding jaw**, but that is not the really interesting thing about this discovery. I will come back to that in a moment.”

See the entire article of Bechly at:

<https://evolutionnews.org/2019/09/apeman-waves-goodbye-to-darwinian-gradualism/>
(As for the adjective “primitive”, see please, <http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>, p. 287/288.)

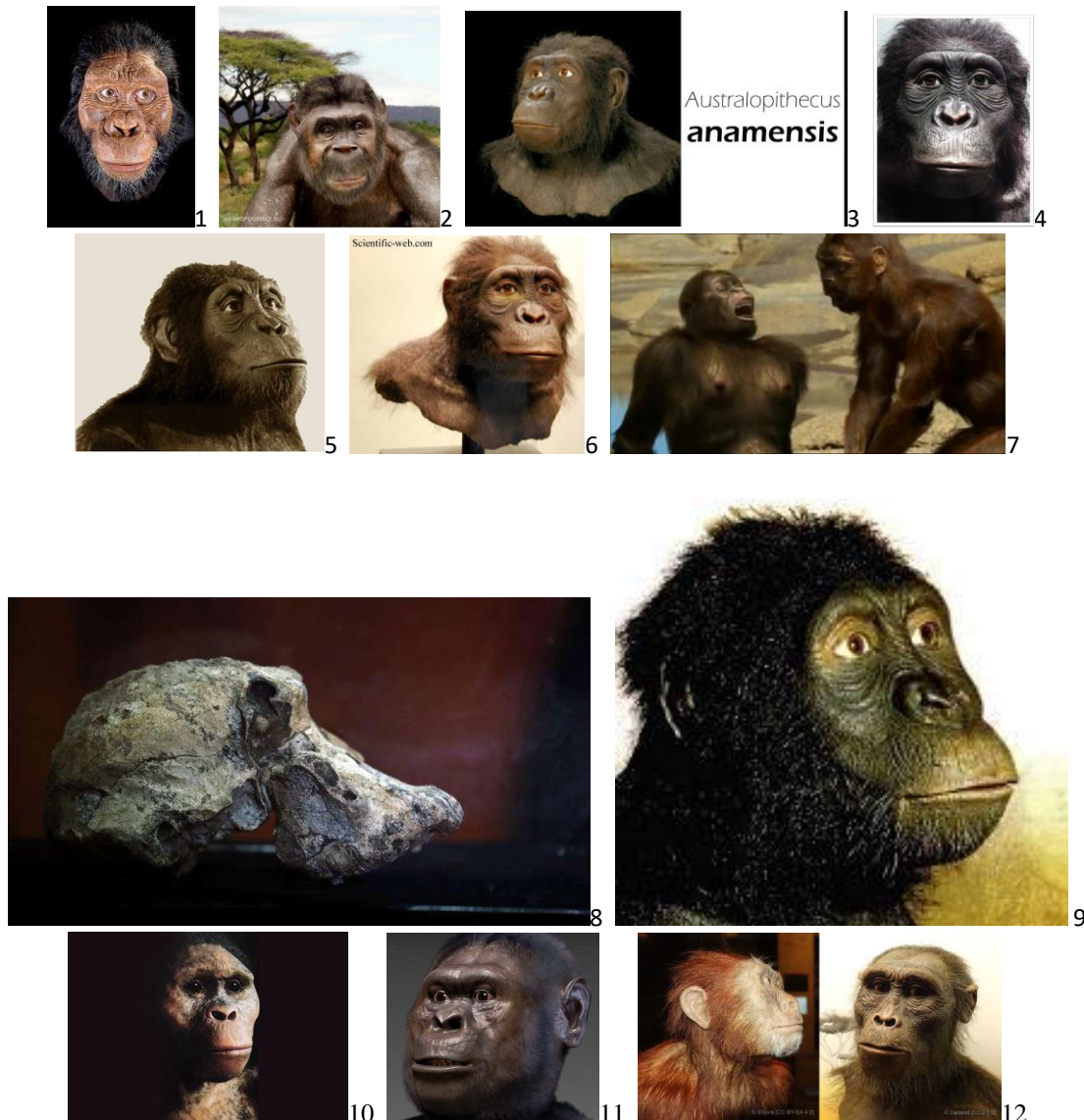
Among the “headlines around the globe” was, for example, the German TV News Program *heute-journal* (“ZDF’s flagship newscast”, ca. 4.1 million viewers****) on Friday, 30 August 2019, 19:00 stating near the end of the news (19:19), which was presented by the sympathetic moderator Christian Sievers:

„Jetzt schauen wir uns einmal gemeinsam den Ursprung der Menschheit an. Die Frage: Wann war eigentlich der Ursprung der Menschheit, wann hat unsere Geschichte angefangen? Auf die Frage haben Forscher jetzt möglicherweise neue Antworten. Denn sie haben in Äthiopien den Schädel eines **Urmenschen** gefunden, der ist geschätzt rund 4 Millionen Jahre alt und könnte so ausgesehen haben [vgl.

Abbildung unten ganz links]. Die Wissenschaftler untersuchen jetzt, ob und wenn, wie eng der *Urmensch* mit uns verwandt ist. Ich find ihn eigentlich ganz sympathisch.“

English: "Now let's together have a look at the origin of mankind. Researchers may now have new answers on the question of when was the origin of mankind, when did our story begin. For they have found the skull of a primitive man (*Urmensch* or original man) in Ethiopia, which is estimated to be around 4 million years old and could have looked like this [cf. figure below left]. Scientists are now investigating if and how closely the prehistoric man (*Urmensch* or original man) is related to us. I actually like him very much."

Below: Some different reconstructions of *Australopithecus anamensis* and *A. afarensis* (last row) (see the links to the references of the figures below; note especially the human-like white sclerae in many of the reconstructions)



References for the reconstructions from left to right: *A. anamensis* (1 to 9) and *afarensis* (10-12) according to:

- 1 <https://www.derstandard.de/story/2000107908137/ueberraschender-blick-in-ein-vormenschen-gesicht>
 - 2 <https://www.pinterest.de/pin/505529126901390057/> (There several more reconstructions)
 - 3 <https://www.youtube.com/watch?v=V2wAGAdVtLo>
 - 4 <https://www.pinterest.de/pin/624170829576017787/>
 - 5 <https://sites.google.com/site/bbarth1998/home/hominid-hook-up/australopithecus-anamensis>
 - 6 <http://www.scientificlib.com/en/Biology/Anthropology/AustralopithecusAnamensis01.html>
 - 7 <https://www.pinterest.de/pin/505529126901444114/> (*A. afarensis* and *A. anamensis*)
 - 8 <https://m.dailyhunt.in/news/india/english/asiaville+english-epaper-asiveng/scientists+discover+skull+of+an+early+human+ancestor+that+lived+3+8+million+years+ago-newsid-133404188>
 - 9 <https://memim.com/australopithecus-anamensis.html>
- Number 9 is, apart from the human-like white sclera and the probably too short lower part of the face, perhaps the best reconstruction of A. anamensis.*
- 10 *A. afarensis* according to the Bradshaw Foundation (see long link below***) and <https://twitter.com/laluzjose/status/707216378453864452>
 - (11) <https://milnepublishing.geneseo.edu/the-history-of-our-tribe-hominini/chapter/australopithecus-afarensis/> (probably much too human-like)
 - (12) <https://www.nhm.ac.uk/discover/australopithecus-afarensis-lucy-species.html>

Well, it wasn't an „*Urmensch*“, just a rather falsely reconstructed ape “with a small chimp-sized braincase and a protruding jaw”. And there is absolutely no scientifically

valid proof that our history has started with him. But this *genre of news* has the effect that the viewers and readers around the globe are continually reminded that today's science putatively knows it all (in the final analysis that “nothing made everything for no reason”) and hence that there was definitely *no intelligent design* involved in the origin of man – materialist propaganda without real substance in the name of science.

Brief Postscript 31 October 2019



Left: Monument at Cologne Zoo of Dr. Johann Caspar Garthe (1796 – 1876):
Founder of Cologne Zoo (1858/1860).

Right: Bonobo (*Pan paniscus*) at Cologne Zoo (30 Oct. 2019).

Both photographs on Wednesday 30 October 2019 by W.-E. L. Bonobo blurred because of the glass pane in front of the cage of the ape. Nevertheless, some basic differences, for example, of the profile, can already be seen (the form of the Bonobo head may also be compared with the skull of *Australopithecus anamensis* shown on the previous page (figure no. 8).

*<https://www.sciencemag.org/news/2012/08/generation-gaps-suggest-ancient-human-ape-split>

Ann Gibbons, a contributing author for Science (2012): “As they [Linda Vigilant, Kevin Langergraber et. al.] report today in the Proceedings of the National Academy of Sciences [<https://www.pnas.org/content/109/39/15716.abstract>] chimpanzee mothers ranged in age from 11.7 to 45.4 years at the birth of their offspring. The average age of reproduction was 25 years for females and 24 years for males, giving them an average generation time of about 25 years. Gorilla females ranged in age from 7.3 to 38 years when they gave birth, and the average generation time for both sexes was about 19.3 years.”

**<https://www.derstandard.de/story/2000107908137/ueberraschender-blick-in-ein-vormenschen-gesicht>
<https://www.dailystar.co.uk/news/world-news/mankinds-oldest-ancestor-revealed-38million-19022007>
<https://www.youtube.com/watch?v=Ard0V7ldjcY>
<https://www.france24.com/en/20190829-ancient-skull-discovery-yields-new-clues-human-evolution>

***https://www.google.de/search?q=Australopithecus+bradshaw+foundation&tbm=isch&source=iu&ictx=1&fir=mwsea1W2EzLC5M%253A%252CW-trKXfs20GdbM%252C_&vet=1&usg=AI4_kSbq-4KdlhwQhRrcqoaguQyElz92A&sa=X&ved=2ahUKEwjkc3TtsPkAhVAxMQBHaqfB8oQ9QEwC3oECAQQCQ#imgrc=mwsea1W2EzLC5M:&vet=1

***<https://www.morgenpost.de/kultur/tv/article216121861/Die-Tagesschau-bleibt-die-beliebteste-Nachrichtensendung.html>
(Almost all of the links above were checked or retrieved 9 September 2019)

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