

Darwin on Trial
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Chapter 1: The Legal Setting

In the creation-evolution dispute "... the rules of argument seemed to be structured to make it impossible to question whether what we are being told about evolution is really true." (8)

"...the very persons who insist upon keeping religion and science separate are eager to use their science as a basis for pronouncements about religion." (8)

Dawkins: "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.)" (9)

Evolutionist Colin Patterson, American Museum of Natural History lecture in 1981, characterized both creationism and evolution as scientifically vacuous concepts which are held primarily on the basis of faith. (9) Patterson: "Can you tell me anything you know about evolution, any one thing ... that is true?" (10)

Irving Kristol claims that survival of the fittest is known to be valid only for variations within the biological species. (10) **Kristol: "... evolution ... has an unwarranted anti-religious edge to it." (11)**

Johnson: "When outsiders question whether the theory of evolution is as secure as we have been led to believe, we are firmly told that such questions are out of order." (11f.)

Johnson is going to "look at the evidence to see whether a mechanism is known that can accomplish the large-scale changes which the theory of evolution supposes to have occurred." (12)

Chapter 2: Natural Selection

3 principles in Darwin's *Origin of Species*:

1. "the species are not immutable"
2. This evolutionary process can be extended to account for all or nearly all the diversity of life
3. This process was guided by natural selection.

But "Darwin could not point to impressive examples of natural selection in action..."

"The point of Darwin's theory, however, was to establish that purposeless natural processes can substitute for intelligent design. That he made that point by citing the accomplishments of intelligent designers proves only that the receptive audience for his theory was highly uncritical." (17f.)

"Natural selection is a conservative force that prevents the appearance of the extremes of variation that human breeders like to encourage.

“What artificial selection actually shows is that there are definite limits to the amount of variation that even the most highly skilled breeders can achieve. **Breeding of domestic animals has produced no new species ...**” (18)

“Strange as it may seem, there are many statements in the Darwinist literature to the effect that the validity of the theory can be demonstrated simply as a matter of logic.” (20)

Karl Popper “wrote that Darwinism is not really a scientific theory because natural selection is an all-purpose explanation which can account for anything, and which therefore explains nothing.” (21)

C. H. Waddington, a Darwinist: “... the fittest individuals in a population (defined as those which leave most offspring) will leave most offspring.” (22)

Johnson: “The advantages in question were assumptions in a theorem, not qualities observed in nature...” (22) “As we shall see in Chapter Four, the prevailing characteristic of fossil species is *stasis*—the absence of change.” (23f.) “In fact, the stock is often highly successful at resisting improvement...” (24)

“None of the ‘proofs’ provides any persuasive reason for believing that natural selection can produce new species, new organs, or other major changes, or even minor changes that are permanent.” (27)

“... the peacock’s gaudy fan, which is obviously an encumbrance when a peacock wants to escape a predator.” (30)

Chapter 3: Mutations Great and Small

“Darwin was particularly anxious to avoid the need for any ‘saltations’—sudden leaps by which a new type of organism appears in a single generation.” (32)

“In a word (Darwin’s word), a saltation is equivalent to a miracle.” (32)

“Many organs require an intricate combination of complex parts to perform their functions.” For example, the eye and the wing. (34)

“... ‘5 per cent of an eye’ is not the same thing as ‘5 per cent of normal vision.’” (34)

“What we have to imagine is a chance mutation that provides this complex capacity all at once, at a level of utility sufficient to give the creature an advantage in producing offspring.” (35)

“If the eye evolved, it evolved many times.” “Dawkins admits to being baffled by the nautilus, which in its hundreds of millions of years of existence has never evolved a lens for its eye ...” (35)

“... forelimbs evolving into wings would probably become awkward for climbing or grasping long before they became very useful for gliding...” (35f.)

“Bird feathers must have evolved from reptilian scales if Darwinism is true, but once again the intermediates are hard to imagine.” (36)

“Darwin wrote that ‘If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.’ (36f.) (Charles Darwin, *The Origin of Species: A Facsimile of the First Edition*, Harvard University Press, 1964, p. 189)

“That evolution by macromutation is impossible does not prove that evolution by micromutation is probable, or even possible.” (37f.)

“... the mathematician D. S. Ulam argued that it was highly improbable that the eye could have evolved by the accumulation of small mutations, because the number of mutations would have to be so large and the time available was not nearly long enough for them to appear.” (38)

Chapter 4: The Fossil Problem

“... Darwin’s most formidable opponents were not clergymen, but fossil experts.” (45)

“Darwin acknowledged that his theory implied that ‘the number of intermediate and transitional links, between all living and extinct species, must have been inconceivably great.’ (46) ‘What geologists did discover was species, and groups of species, which appeared suddenly ...’ (46)

Darwin: “His main point was that the fossil record is extremely imperfect.” (47) Darwin: “Nature may almost be said to have guarded against the frequent discovery of her transitional or linking forms.” (47)

“Opposition to Darwin’s theory could hardly be attributed to religious prejudice when the skeptics included the leading paleontologists and geologists of the day.” (47f.)

“Still, it is one thing to say that there are gaps, and quite another thing to claim the right to fill the gaps with the evidence required to support one’s theory.” **“Darwin was emphatic that the number of transitional intermediates must have been immense...”** “Darwin apparently passed the fossil test, but only because it was not allowed to fail.” “Darwin’s theory ... implied that a truly complete fossil record would be **mostly transitionals...**” (48)

“... the fossil record today on the whole looks very much as it did in 1859...” It has two prominent features: stasis and sudden appearance

“... the outstanding characteristic of the fossil record is the absence of evidence for evolution.” (50)

According to Steven Stanley, *The New Evolutionary Timetable* (1981), pp. 71, 93-95, 104, “... species that were once thought to have turned into others turn out to overlap in time with their alleged descendants, and ‘the fossil record does not convincingly document a single transition from one species to another.’” (51)

“Speciation and change in form therefore seem to be different phenomena.” (52)

“... the problem presented by the fossil record is how Darwinist evolution always happened in such a manner as to escape detection.” (53)

“No doubt a certain amount of evolution could have occurred in such a way that it left no trace in the fossil record ... Was there never anything but invisible peripheral isolates in between?” (54).”

“The single greatest problem which the fossil record poses for Darwinism is the ‘Cambrian explosion’ of around 600 million years ago.” (54)

“... the fossil problem for Darwinism is getting worse all the time.” (57)

“... orthodox interpretations of the fossil record often owe more to Darwinist preconception than to the evidence itself.” “the trade secret of paleontology.” “... T. H. Huxley himself, who muted ‘his negative attitudes toward gradual change and natural selection,’ ...” **“Niles Eldredge has been even more revealing: “We paleontologists have said that the history of life supports [the story of gradual adaptive change], all the while really knowing that it does not.”** Eldredge: “This extraordinary conservatism looked, to the paleontologist keen on finding evolutionary change, as if no evolution had occurred.” (59)

“What was required was a theory that was saltationist enough to allow the paleontologists to publish, but gradualistic enough to appease the Darwinists.” “... saltationism... turns out to be only a meaningless middle ground somewhere between evolution and special creation.” (61)

Chapter 5: The Fact of Evolution

“Darwin ended his chapter by saying that the argument from classification was so decisive that on that basis alone he would adopt his theory even if it were unsupported by other arguments. ... The same logic inspires today’s Darwinists....” (65)

“Gould is right: everyone agrees that microevolution occurs, including creationists.” (68)

“Gould himself has written that even the first step toward macroevolution (speciation) requires more than the accumulation of micromutations.” (68f.)

Footnote: “...nobody has found a naturalistic alternative to micromutation and selection...” (68)

What the Darwinists need to supply is not an arbitrary philosophical principle, but a scientific theory of how macroevolution can occur.” (69)

Page 69, footnote 2: “Creationist-bashing as a substitute for evidence is common in Darwinist polemics. For example, Isaac Asimov’s 884-page *New Guide to Science* has a half-page section on the evidence for Darwinism, which cites the peppered moth example as sufficient to prove the whole theory.”

Darwinists generally resist the separation of “micro” and “macro.” (69)

Could suggest that “A proper Creator should have designed each kind of organism from scratch to achieve maximum efficiency.” This is speculation.

“Douglas Futuyma also leans heavily on the ‘God wouldn't have done it’ theme...” (70)

“How can Darwin’s hypothesis of descent with modification be confirmed or falsified?” (71)

Von Baer’s Law “asserts that resemblances among embryos reflect levels of biological classification, so that all vertebrates, for example, look very similar in early development but become increasingly dissimilar as they approach their adult forms.” (72)

“The facts of homology and embryology have been alleged as straightforward confirmation of the ‘fact of evolution,’ and they are nothing of the kind.” (73)

Chapter 6: The Vertebrate Sequence

“... the evidence must be evaluated independently of any assumption about the truth of the theory being tested.” “Paleontology ... has sought to flesh it out in detail rather than to test it.” (75)

Barbara Stahl’s textbook, *Vertebrate History*, says that “none of the known fishes is thought to be directly ancestral to the earliest land vertebrates. Most of them lived after the first amphibians appeared, and those that came before show no evidence of developing the stout limbs and ribs that characterized the primitive tetrapods.” (76)

“When the modern coelacanth was dissected, however, its internal organs showed no signs of being preadapted for a land environment...” (76)

“No explanation exists for how an amphibian could have developed a reptilian mode of reproduction by Darwinian descent.” (77)

“Huge numbers of intermediate species in the direct line of transition would have had to exist, but the fossil record fails to record them.” (79f.)

On *Archaeopteryx* ... “The question is whether it is proof of a reptile (dinosaur) to bird transition, or whether it is just one of those odd variants, like the contemporary duck-billed platypus...” “The next oldest bird fossils were specialized aquatic divers that did not look like they could be its direct descendants.” (80)

1990 article by Peter Wellnhofer, a recognized authority: “it is impossible to determine whether *Archaeopteryx* actually was the ancestor of modern birds.” (80)

“the distinctive avian lung” would not easily evolve (81)

On ape to human evolution, “the theory was accepted first, and the supporting evidence was discovered and interpreted in the course of a determined effort to find the ‘missing links’ that the theory demanded.” (82)

“Physical anthropology ... has been more heavily influenced by subjective factors than almost any other branch of respectable science.” (82)

“... persons who doubt the basic premise are by definition creationists, and hence not to be taken seriously.” (83)

Solly Zuckerman, a scientific materialist and evolutionist, the record of reckless speculation in human origins “is so astonishing that it is legitimate to ask whether much science is yet to be found in this field at all.” On the *Australopithecines* he concluded that “the anatomical basis for the claim that [they] walked and ran upright like man is so much more flimsy than the evidence which points to the conclusion that their gait was some variant of what one sees in subhuman Primates, that it remains unacceptable.” (84)

“The most exciting hypothesis in the field right now is the ‘mitochondrial Eve’ theory based upon the molecular clock hypothesis ... which asserts that modern humans emerged from Africa less than 200,000 years ago.” (85)

“That 130 years of very determined efforts to confirm Darwinism have done no better than to find a few ambiguous supporting examples is significant negative evidence.” (86)

“The Darwinist approach has consistently been to find some supporting fossil evidence, claim it as proof for ‘evolution,’ and then ignore all the difficulties.” (86)

Chapter 7: The Molecular Evidence

“Every creature belongs to one and only one phylum, class, and order, and **there are no intermediates.**”
“**Today, just as when Darwin first published *The Origin of Species* in 1859, the fossil record as a whole is something that has to be explained away.**” (89)

“We would need to find evidence that the common ancestors and transitional intermediates really existed in the living world of the past, and that natural selection in combination with random genetic changes really has the kind of creative power claimed for it.” (91)

“... it is possible to classify species and larger groups by their degree of similarity at the molecular level.” “Moreover, there seems to be no necessary relationship between the degree of molecular difference between two species and any differences in tangible characteristics.” (92)

“The genetic similarity confirms Linnaeus, not Darwin.” (93) Linnaeus was a creationist. Darwinism “does not tell us how either the similarities or the dissimilarities came to exist.” (94)

“One thing the molecular evidence does confirm is that the groups of the natural order are isolated from each other, which is to say that they are not connected by any surviving intermediate form.” (94)

“Judged by cytochrome c comparisons, sesame plants and silkworms are just about as different from bacteria as humans are.” “... there is no surviving trace of any intermediates that might have filled the ‘space’ between single-celled and multicellular life.” “This means that there are three primary divisions of the living world (in terms of cellular construction) rather than two.” That is, plants, animals, and bacteria. (94)

“We have already seen that the hypothesis of creative natural selection lacks experimental support, and that it is disconfirmed by the fossil record. The molecular evidence adds further doubt, because of the previously described phenomenon of molecular *equidistance*.” (95)

“... whales and bats ... are each at roughly equal molecular distances from comparison molecules of any modern reptile like the snake ...” (96)

The survival of the fittest is a tautology. (97)

“... the molecular evidence does nothing to provide the hypothesis of creative natural selection with the empirical confirmation it so badly needs.... Whenever natural selection is actually observed in operation, it permits variation only within boundaries and operates as effectively to preserve the constraining boundaries as it does to permit the limited variation.” (98)

“The molecular clock was put to effective use by Berkeley’s Allan Wilson and Vincent Sarich.... Their conclusion is that all contemporary humans are descendants of a woman who lived in Africa less than 200,000 years ago.... Conflict is developing between fossil experts and molecular biologists... What the molecular evidence actually provides is a restatement of the arguments from classification.” (99)

“The hemoglobin molecule, for example, is so complex in its architecture and function that it is sometimes called the ‘molecular lung.’” “... testing Darwinism by the molecular evidence has never even been attempted.” (101)

Chapter 8: Prebiological Evolution

“Darwinian selection cannot perform the designing even in theory until living organisms already exist and are capable of reproducing their kind.” (103)

“The challenge of chemical evolution is to find a way to get some chemical combination to the point where reproduction and selection could get started.” (104)

“... there is no reason to believe that life has a tendency to emerge when the right chemicals are sloshing about in a soup.” “... **the prokaryote bacterial cell ... makes a spaceship seem rather low-tech.**” (105)

“Conceivable is a long way from probable or experimentally verifiable, of course.” (108)

“... Cairns-Smith thinks that clay crystals have qualities that might make possible their combination into a form of pre-organic mineral life.... It is altogether lacking in experimental confirmation.” (108)

“... the more enterprising researchers have turned to computer simulations that bypass the experimental roadblocks ...” (109)

Francis Crick: “directed panspermia” (110)

“Scientific investigation of the origin of life is as effectively closed off as if God had reserved the subject for himself.” (111)

Cairns-Smith: “After all what impresses us about a living thing is its in-built ingenuity, **its appearance of having been designed**, thought out—of having been put together with a purpose ... The singular feature is the [enormous] gap between the simplest conceivable version of organisms as we know them, and components that the Earth might reasonably have been able to generate. . . . But the real trouble arises because too much of the complexity seems to be necessary to the whole way in which organisms work.” (Johnson, 111f., citing A. G. Cairns-Smith, *Seven Clues to the Origin of Life*, Cambridge University Press, 1985.)

“Everyone uses the vocabulary of intelligent communication to describe protein synthesis: messages, programmed instructions, languages, information, coding and decoding, libraries.” (112)

Chapter 9: The Rules of Science

“In the Darwinist view, which is the official view of mainstream science, God had nothing to do with evolution.” (116) Footnote 1, p. 116: **George Gaylord Simpson, *The Meaning of Evolution*: “There is neither need nor excuse for postulation of nonmaterial intervention in the origin of life, the rise of man, or any other part of the long history of the material cosmos. Yet the origin of that cosmos and the causal principles of its history remain unexplained and inaccessible to science. Here is hidden the First Cause sought by theology and philosophy. The First Cause is not known and I suspect it will never be known to living man. We may, if we are so inclined, worship it in our own ways, but we certainly do not comprehend it.”**

“The conflict arises because creation by Darwinist evolution is hardly more observable than supernatural creation by God.” “As an explanation for how complex organisms came into existence in the first place, it is pure philosophy.” (117)

“Without Darwinism, scientific naturalism would have no creation story.” (118)

Naturalists “treat ‘science’ as equivalent to truth and non-science as equivalent to fantasy.” (118)

Naturalists “are blind to the arbitrary elements in their thinking. For example, ... *The Dreams of Reason* ... by Heinz Pagels: ‘So powerful is [the scientific-experimental] method that virtually everything scientists know about the natural world comes from it. What they find is that **the architecture of the universe is indeed built according to invisible universal rules, what I call the cosmic code—the building code of the Demiurge. Examples of this universal building code are the quantum and relativity theory, the laws of chemical combination and molecular structure, the rules that govern**

protein synthesis and how organisms are made, to name but a few. Scientists in discovering this code are deciphering the Demiurge's hidden message, the tricks he used in creating the universe. No human mind could have arranged for any message so flawlessly coherent, so strangely imaginative, and sometimes downright bizarre. It must be the work of an Alien Intelligence!

"... Whether God is the message, wrote the message, or whether it wrote itself is unimportant in our lives. We can safely drop the traditional idea of the Demiurge, for there is no scientific evidence for a Creator of the natural world, no evidence for a will or purpose that goes beyond the known laws of nature. Even the evidence of life on earth, which promoted the compelling 'argument from design' for a Creator, can be accounted for by evolution." (1988, 156-158) (118)

"... the presence of intelligent design in the cosmos is so obvious that even an atheist like Pagels cannot help noticing it ..." (119)

"To a scientific naturalist, however, 'outside of science' means outside of *reality*." (120)

Karl Popper "thought that a theory or hypothesis was scientific only to the extent that it was in principle capable of being shown to be false through empirical testing." (122)

"...distinguished scientists have praised Darwin's theory as a profound tautology or declared it to be a logically self-evident proposition requiring no empirical confirmation." (122)

Chapter 10: Darwinist Religion

Irvin Kristol charges neo-Darwinism has "an ideological bias against religious belief." (126)

William Provine: "There are no gods and no designing forces that are rationally detectable. . . . there are no inherent moral or ethical laws ..." (126) Provine "reports that most evolutionary biologists are atheists...." (127)

"Scientific organizations hide the conflict for fear of jeopardizing the funding for scientific research, or because they feel that religion plays a useful role in moral education." (127)

"Most scientific naturalists accept what is called the 'fact-value distinction' ..." (127)

"Science for them is the realm of objective knowledge; religion is a matter of subjective belief." (128)

Chapter 11: Darwinist Education

Cladism "assumes that no species can be identified as the ancestor of any other species." (136)

Nature editorial, "Darwin's Death in South Kensington," Feb. 26, 1981, Vol. 289, p. 735. "... implied that Darwinism is a metaphysical system sustained partly by faith ..."

Chapter 12: Science and Pseudoscience

“Popper saw that a theory that appears to explain everything actually explains nothing.” “According to Popper, however, **a theory with genuine explanatory power makes risky predictions ...**” “Einstein almost recklessly exposed his General Theory of Relativity to falsification by predicting the outcome of a daring experiment.” (148)

“The validity of induction as a basis for science was not only philosophically insecure, it was also inaccurate, because scientists do not work as the induction model prescribes. In scientific practice the theory normally precedes the experiment ...” **“Progress is made not by searching the world for confirming examples, which can always be found, but by searching out the falsifying evidence that reveals the need for a new and better explanation.”** Popper: “The wrong view of science betrays itself in the craving to be right.” “Fear leads such people to embrace uncritically any device that preserves the theory from falsification.” (149)

“Popper’s logic implies that a theory’s scientific status depends less upon its subject matter than upon the attitude of its adherents towards criticism.” “Scientific methodology exists wherever theories are subjected to rigorous empirical testing, and it is absent wherever the practice is to protect a theory rather than to test it.” “The point of scientific investigation is not to reject metaphysical doctrines out of hand, but to attempt where possible to transform them into theories that can be empirically tested.” (150)

Popper made “some frequently overlooked points about intellectual integrity that are equally important for scientists and non-scientists.” **Popper’s point about Darwin “was that the common ancestry thesis was so logically appealing that rigorous empirical testing was not required. He proposed no daring experimental tests, and thereby started his science on the wrong road.”** (151)

“The descent to pseudoscience was completed with the triumph of the neo-Darwinian synthesis....” (152)

“Their most important device is the deceptive use of the vague term ‘evolution.’” “Because ‘evolution’ means so many different things, almost any example will do.” (153)

“What they never find is evidence that contradicts the common ancestry thesis, because to Darwinists such evidence cannot exist.” (154)

“Common ancestry is a hypothesis, not a fact ...” (155)

Popper: “Confirmations should count only if they are the result of risky predictions.” “Darwinists did not predict the extreme regularity of molecular relationships that they now call the molecular clock, but this phenomenon became ‘just what evolutionary theory would predict’—*after* the theory was substantially modified to accommodate the new evidence.” (155)

“When analyzed by Popper’s principles, the examples Darwinists cite as confirmation look more like falsification.” “Prejudice is a major problem ...” (155)

Epilogue: The Book and Its Critics

“The argument of *Darwin on Trial* is that we know a great deal less than has been claimed.” **“... its mechanism ... is therefore not really part of empirical science at all, but rather a deduction from naturalistic philosophy.”** “I distinguish between naturalistic philosophy and empirical science, and oppose the former when it comes cloaked in the authority of the latter.” (158)

“When critics ask, ‘Is your theory really true?’ we should not be satisfied to be answered that ‘it is good science, as we define science.’” (159)

On Gould: “That he could do no better than a hit-and-run attack was an implicit admission that he had no answer on the merits.” “In attempting to refute my point, Gould resoundingly confirmed it.” (161)

“... naturalistic metaphysics relegates both morality and God to the realm outside of scientific knowledge, where only subjective belief is to be found.” “Steven Weinberg ... remarked ... that most people who believe in God would be very surprised to learn that their belief has nothing to do with factual reality.” “The most dramatic acknowledgement of the philosophical roots of Darwinism came from Michael Ruse ...” (162)

“The usual NCSE line is that all critics of naturalism are either overt or covert Biblical literalists...” (163)

“To scientific naturalists, recognition of a supernatural reality amounts to superstition, and hence to an abandonment of science. To theists, on the other hand, the concept of a supernatural Mind in whose image we are created is the essential metaphysical basis for our confidence that the cosmos is rational and to some extent understandable. Scientific naturalists insist, paradoxically, that the cosmos can be understood by a rational mind only if it was not created by a rational mind.” (164)

“... naturalistic science takes the entire realm of reality as its share.” (164)

Phillip E. Johnson, “Creator or Blind Watchmaker” January 1993, *First Things*.

Most theistic evolutionists “would like to reject the accompanying metaphysical doctrine that the scientific understanding of evolution excludes design and purpose.” “... the creative power of mutation and selection is never demonstrated directly...” (168)