

- tion. P. 118.
- ¹⁶⁷Siegler, H.R., 1972. Evolution or degeneration—which? Northwestern Publishing House. See also Reference 152, p. 37.
- ¹⁶⁸Reference 156, p. 124.
- ¹⁶⁹Reference 138.
- ¹⁷⁰Reference 151.
- ¹⁷¹Newman, H.H., 1915. Development and heredity in heterogenic teleost hybrids. *Journal of Experimental Zoology* 18, 511, 576.
- ¹⁷²Russel, A., 1939. Pigment inheritance in *Hundulus-Scomber* hybrids. *Biological Bulletin* 77, 423-431.
- ¹⁷³Reference 154.,
- ¹⁷⁴Reference 111.
- ¹⁷⁵Reference 138.
- ¹⁷⁶*Ibid.*
- ¹⁷⁷Reference 139.
- ¹⁷⁸Dooyeweerd, H., 1953-1958. A new critique of theoretical thought. 4 volumes. Presbyterian and Reformed.
- ¹⁷⁹de Wit, J.J.D., 1965. THE impact of Herman Dooyeweerd's Christian philosophy upon present day biological thought. (In) Philosophy and Christianity. J.H. Kok N.V., Kampen. Pp. 405-433.
- ¹⁸⁰de Wit, J.J.D., 1965. A new critique of the transformationist principle in evolutionary biology. J.H. Kok.
- ¹⁸¹Reference 141.
- ¹⁸²Reference 111.
- ¹⁸³Reference 133.
- ¹⁸⁴Newton, B., 1979. Monsters and men. Dunestone Printers Ltd.
- ¹⁸⁵Reference 6, p. 162.
- ¹⁸⁶Gould, S.J., and N. Eldredge, 1977. Punctuated equilibria: the tempo and mode of evolution reconsidered. *Paleobiology* 3, 147.
- ¹⁸⁷Reference 164.
- ¹⁸⁸Reference 1, p. 149.
- ¹⁸⁹Reference 6, p. 11.
- ¹⁹⁰Reference 1, p. 149.
- ¹⁹¹Mills, G.C., 1968. The evolutionary significance of the species variation in cytochrome c structure. *Journal of the American Scientific Affiliation* 20(2):52-54.
- ¹⁹²Edsall, J.T., 1968. (In) Structural chemistry and molecular biology (A. Rich and N. Davidson Eds.) W.H. Freeman. P. 88.
- ¹⁹³Reference 113, pp. 20-22.
- ¹⁹⁴Riggs, A.F., 1966. Respiratory pigments. McGraw-Hill Encyclopedia of Science and Technology, Volume 11, pp. 510-513.
- ¹⁹⁵Reference 7, p. 657.
- ¹⁹⁶Reference 113, p. 20.
- ¹⁹⁷Reference 14, p. 106.
- ¹⁹⁸*Ibid.*, pp. 79 & 96.
- ¹⁹⁹Paul, J., 1967. Cell biology, second edition. Heinemann Educational Books.
- ²⁰⁰Merritt, R.B., 1972. Geographic distribution and enzymatic properties of lactate dehydrogenase allozymes in the fathead minnow *Pimephales promelas*. *American Naturalist* 106(948):173-184.
- ²⁰¹Prosser, C.L., 1965. Levels of biological organization and their physiological significance. (In) Ideas in modern biology (J.A. Moore Ed.) Natural History Press, New York. Pp. 357-390.
- ²⁰²Reference 14,
- ²⁰³Reference 53, pp. 68 *et seq.*
- ²⁰⁴Reference 44, pp. 56-58.
- ²⁰⁵Cody, M.L., 1974. Optimization in ecology. *Science* 183 (4130):1156-1164.
- ²⁰⁶Reference 204.
- ²⁰⁷Ellacott, S.W., 1977. Mathematical problems in the evolutionary model. N.S.A. Report. London.
- ²⁰⁸*Ibid.*
- ²⁰⁹Moorehead, P.S., and M.M. Kaplan, (Eds.) 1967. Mathematical challenges to the Neo-Darwinian interpretation of evolution. Wistar Institute Press.
- ²¹⁰Reference 6, pp. 28, 29, and 434-437.
- ²¹¹Clark, R.E.D., 1977. Creation and the argument from design. *Faith and Thought* 104(2):99-108.
- ²¹²Clark, R.E.D., 1978. God beyond nature. Pacific Press Publishing Association.

PROFESSOR FRICK—AND THE THEORY IN STONE

HILTON HINDERLITER*

This is an analogy to the development and present status of evolution. Please read the story of Prof. Frick, in the left-hand column, all the way through. Then go back and re-read while following, according to the reference number, the point-by-point explanation in the right-hand column.

Once upon a time, in the small town of Academia, there was a professor of economics named Frick. Though he was not a stone-gatherer by training¹ Prof. Frick developed a strong desire to collect rocks. So one bright, sunny afternoon he trekked into the neighborhood hills, and came back with three outstanding specimens: one was bright blue, with jagged edges; another was dull gray, and smooth all over; and the third was grayish-blue, being moderately rough in texture. Relaxing on his patio, Frick began to exercise his imagination; and before long he had developed a new theory about the origin of rocks. Immediately he called together the local populace, and standing before them in the town square he began, "I have discovered that all rocks were originally gray and smooth, with blueness and sharpness developing simultaneously over long periods of time—and all by the action of natural processes." Then he continued into a lengthy discourse, by going on to say, "Just how, my friends, do you suppose that gray smooth rocks changed into blue sharp ones? I am going to explain to you today processes whereby this may have occurred."² No one in the group questioned

Note: the term *evolution* is used here to mean the development of all life forms from a common ancestor, and that from non-living materials, all by the spontaneous action of natural processes. In contrast, *creation*—although it allows for variation, *within kinds*—holds that life in its various forms was supernaturally brought into being, as was also the matter and organization of the universe in its totality. For a proof that scientific studies require the acknowledgement of supernatural events, see appendix I of *Does it belong here?—An Open Letter to Anyone Who Declares Evolution to be more Scientific than is Creation*, also by Hilton Hinderliter. Itemized references to the following points can be supplied; but they are omitted in this paper, for the sake of brevity.

1) The recognized founders of modern evolutionary theory were not acting in the fields for which they were qualified. Lyell was an attorney; Darwin eventually graduated from theological school, after having unsuccessfully tried classics and medicine.

2) Contemporary science textbooks typically use this approach; base the argument on the *assumption* of evolution; and imply that any evolutionary process that *might* have happened, *must* have happened.

*Hilton Hinderliter, Ph.D., is Assistant Professor of Physics at The Pennsylvania State University, New Kensington Campus.

why the other possible orders in which the rocks could just as well have been arranged were not mentioned, since the people of that area had certain common, underlying beliefs.³—call them mental biases, if you will. For one thing, they considered themselves to be quite intellectual; for another, their Civil War allegiances lay with the North⁴. Hence they would give no ear to a possibility of dullness replacing sharpness; and likewise they rebelled at any thought of gray superseding blue! So at the close of Fricks' oration the hearers cried "brilliant", and rose to give him a standing ovation.

When the applause finally subsided, a lone voice was heard from the periphery of the jubilant mass. It was that of a young man sitting on the grass, holding in his hand a book about science and logic—which he had been studying while the crowd gathered to hear Frick. "I noticed, sir, that you *stated* that rocks had developed according to your theory⁵, but you never *proved* that they had done so. Is it valid to build your argument on the mere assumption of that which you claim to show in the end? Even if rocks *could have* changed⁶ as you say they did, how do you *know* they must have? By the rules of logic, if your theory is to be at all convincing, you must show that all other possible schemes could not be correct.⁷ As the startled professor became noticeably reddened, the youth added, "Furthermore, if you wish to classify your theory as *scientific*, must you not subject it to test? Has anyone ever observed a rock changing as you say they have⁸? And can you help us to know whether your theory is right or wrong—by describing types of evidence which, if found, would *falsify* it⁹?" The professor really had no answer to any of this, but he thought of a way of escape: he turned dramatically away from the young fellow and quipped. "What does *he* know about rocks?" It worked—the crowd roared. And the new theory was on its way to fame.

Soon a school was founded; and students came from far and wide to learn from the real expert, Prof. Frick. *First* they were taught that the Frick theory was the only correct and reasonable explanation¹⁰ for the origin of different rock types. *Then* they were sent out into the hills in search of data. Along the way they encountered many samples which would have troubled anyone not trained in Frickology. But they were by that time *sure* that any evidence inconsistent with the theory could not be trusted¹¹. All smooth blue rocks—which they knew shouldn't exist—must have been filed from previous-jagged forms, so they reasoned; and gray sharp ones must have been only painted gray¹². For a long time nobody even bothered to check the credibility of such rationalizations, but one busy day a student dropped a sharp gray stone, and it broke into pieces. To her surprise, there was no blue color on the inside: nor was there any sign of paint on the outside¹³. This fact bothered her for a while, but she was embarrassed at the thought of mentioning it to the others, who knew it couldn't mean anything. And soon she forgot about it herself.

As time went on, and many rock samples piled up outside the laboratory buildings, other oddities began to puzzle some of the students. It had been anticipated that

3) Even persons labelled *scientist* have biases—especially on the subject of *origins*.

4) a) Some people have a strong tendency, when they don't know the answer to some question, to pretend that they do know—due to intellectual conceit alone. Many things now taught as *known* are only guesses.

b) The denial of supernatural events is nothing but a mental bias. It certainly could never be proven. (See also the note above.) If one's meaning of the word *science* involved the acquisition of *truth*, and if supernatural events were involved in our origin, then it surely would not be scientific to deny reality, by refusing to consider the possibility that such may be occurred. On the other hand, it is widely known that some of the outspoken founders of evolution were desirous of explaining how the universe could have come into being without the act or purpose of a Designer; that is, their bias was obviously atheistic. Although it is by no means true that all who now accept evolution are motivated by atheism, there are still those who use evolutionary fantasies to convince others that there is no reason behind our existence. It is easy to see, however, that such persons are not talking science. There is no detail of a bone, for example, that implies that it had no *reason* for existing—that it was merely the result of chance.

5) For a sample of this from a recent textbook., see *Does it belong here?*

6) It cannot even be said that evolution *could have* occurred (much less that it did occur). Both science (thermodynamics and probability) and logic (as with the inability to explain the evolution of complex structures as in the bombardier beetle) amount to impassable roadblocks to evolution.

7) It is logically impossible to *disprove* creation. *Appearance of age* could well have been characteristic of creation. (Could a created tree have had growth rings? Would that prove it had grown for many years?) And, although neither this author nor any of the creationists he has known claim it to be true, fossils could have been created in place. Any argument against this possibility (such as "Surely you don't think God would do such a thing to trick us") are purely religious in nature—and not theologically sound, at that. And nowadays it is rarely considered that the creation of a detailed earth is well within the ability of One who made every electron in the universe to be just like every other electron, etc.

8) Some things have been called examples of evolution in progress (such as peppered moths, fruit flies, and antibiotic-resistant bacteria). However, these have been shown to be no support for evolution in the larger sense, at all. And the evolution of one kind of organism to a significantly different kind has been admitted as being outside the realm of human observability—because of the vast time said to have been involved.

9) For more on *falsifiability*, see *Does it belong here?*

10) The reader is challenged to show that the way students typically are introduced to evolution is not outright *indoctrination*.

11) When informed of findings which contradict the *geologic column*, a guide at Dinosaur National Monument declared, "That just couldn't be!" (What a scientific attitude: discounting the facts on the basis of the theory!) In radiometric dating, samples giving ages not in agreement with *accepted values* have been merely discarded as being *contaminated*.

12) a) The first answer to the finding of human and dinosaur footprints in the same strata (which defies evolutionary belief that 70 million years separated the two) was that someone *carved* the footprints.

b) When rock layers were found in orders *opposite* to that in which they were supposedly deposited, it was said that *overthrusting* had pushed older rock on top of younger, with erosion washing away the uppermost young layers—so that it only *looked like* they were in the wrong order.

13) a) Digging under the bank of the Paluxy River showed that the human footprints had not been carved. The only excuse left was that "some dinosaurs must have had feet like people" (Tell that to Mary Leakey: she may be tracking dinosaurs in East Africa!)

b) The vast areas that would have had to slide to get Chief Mountain where it is (in Glacier National Park) pose grave problems in rock mechanics, neither can there be found any scratches or rubble that would have resulted from such sliding. Pollen from highly-developed plants, found in the lower layers of the Grand Canyon, bring the Geologic Column crashing to the ground; and the publication of these findings cost one man his academic reputation (truth isn't always welcomed with open arms!)

specimens of all types along the progression from gray smooth to blue rough would be found—but such had not happened. Oh, for a while it was claimed that they had been found. Some small pieces of minimal roughness were claimed to be intermediate in color between gray and blue. But the truth was that some of them were so dim in hue that their color was only existent in they eye of the beholder. In fact, when more accurate methods of color determination were discovered, it was found that the researchers were mistakenly seeing colors that they had only *hoped* to find¹⁴. And in some other cases the “missing pebbles” were learned to be dishonest fabrications¹⁵.

It was now true that even within Frickdom there was a lot of difference of opinion. Some were for ascribing all changes in rocks to pressure; others held that all changes were completely random. And the situation was not clarified by still others who put in, as their two bits’ worth, that: “Gradual change over vast periods of time is the way in which sudden change in the nature of rocks comes about”.

Finally matters reached the point that dyed-in-the-wool graduates of the school were admitting that intermediate forms had not been found, and likely never would be found.¹⁶ About the same time it was noted that, among stones subjected to the elements, blue color faded to gray, and sharpness wore down to smoothness. By this time Prof. Frick had gone on to his reward; so it was up to his progeny to provide explanations for the fact that things naturally happened opposite to the ways specified in the theory.¹⁷ The best that they could do was to contrive dating methods that would make it seem that oodles of time had been available—as they proclaimed: “Given enough time, anything can happen”. The trouble was, though, that time really worked against them. And worse yet, to make the vast-age-dating methods look consistent, they had to do some unfounded (and even unethical) manipulation of numbers; and at the same time they had to suppress dating methods which gave “young” ages.¹⁸ Oh, they did manage to put together a few specific scenarios, such as: “There is at least a small chance that a smooth rock could fall from a cliff, thereby breaking into pieces with sharp edges”. Few people, however, were satisfied by such attempts to sidestep contradictions between the theory and the evidence.¹⁹ As for discrepancies in color, the best which they could suggest was that: “Blue would now have faded to gray if there was no sunlight when the rocks were forming”.²⁰ But then an oak leaf was found encased in a gray rock; and even loyal Frickites were driven to ask: “How could a leaf have grown without sunlight?”²¹

Indeed, there was now much disarray beneath the facade of Frickianism. Some eminent Frickians were saying that once a smooth gray rock had suddenly flown into sharp blue ones; although, of course, nobody had even seen such a thing happen. And a noted astronomer was maintaining that the sharp blue rocks had fallen from the sky.

Not only was there dissention within the ranks of Frickianism, but significant numbers of students trained in the school itself were defecting.²² Some students were even setting up counterprograms of investigation,

14) *Missing links* have generally proven to be more the imagination of the finders than reality. Archaeopteryx was forcefully declared to have been the ancestor of birds, but it has since been found that birds existed at the same time, along with it. And the story of *ape men* has proved to be a comedy of errors. The ladder to humanity has had its rungs kicked out repeatedly. One tooth used to construct a half man—half ape creature turned out belonging to an *extinct pig* instead! Still, recent efforts of government-funded programs for studying fossils have religiously stated that they would consider no alternative to evolution. (Open-minded scientists, no?)

15) Piltdown Man was a deliberate fake; but the experts were so anxious to find ape-men that they were fooled by it for 41 years.

16) Numerous well-known evolutionists have lately admitted to the consistent *gaps* in the fossil record, and are trying to concoct new, *believable* varieties of evolutionary theory. Whereas the old versions had frogs changing gradually to princes over millions of years, the new have it happening in spurts!

17) Examples of evolutionary reasoning that science eventually discounted have abounded since the time of Darwin—including the inheritance of acquired characteristics, spontaneous generation, vestigial organs, the hope of finding homologous genes, etc.

18) The invention of radiometric dating came decades after the scheme called the *geologic column* (which is built totally on the assumption that evolution did occur) had reached the status of *dogma*. Hence the three major untestable suppositions involved in the dating calculations—constancy of decay rates, unimportance of transport phenomena, and the guessed values of initial isotopic abundance ratios (IIAR’s)—were made to conform with evolution. When potassium-argon ages were calculated, the value of a crucial branching ratio was *fudged* to give agreement with uranium-lead ages. The assumed IIAR’s for potassium-argon dating were later dealt a fatal blow by knowledge gained from space exploration. (By the way, this is the dating method on which all the ages of Richard Leakey’s “People of the Lake” fossils depend.) The IIAR’s for uranium-lead dating have, themselves, been scrutinized by researchers, and found to be untrustworthy. Then, too, ages computed for samples of *known* age—a simple check of the reliability of radiometric dating—have repeatedly missed by a mile! In addition to all the problems with radiometric dating, there are many other dating methods which give ages for the earth, solar system, etc in thousands of years (as opposed to millions or billions). Curiously the methods that yield young ages—though every bit as scientific as radiometric dating—are rarely mentioned in textbooks.

19) This is comparable to the *open systems* attempt to sidestep the second law of thermodynamics—and just about as impressive.

20) To allow for any ghost of a chance of life evolving from non-life, it must be *assumed* that earth’s early atmosphere contained no free oxygen.

21) a) Studies of rock prove that the present amount of oxygen was in the atmosphere during *all* ages. By evolutionists’ own admissions, this requires that life did *not* evolve on earth (the atheist’s only hope are *little green men!*)

b) Equally demolishing to evolution is the study of *radiohalos*. A scientific analysis of these tiny rings in certain micas shows that the crust of the earth came into being (in solid form) in a time of a few minutes or less! (Uniformitarianists, try that one on for size!)

22) The Creation Research Society now numbers some 700 members with master or doctorate degrees in scientific discipline, essentially all of whom were taught evolution. Many (including the present author) had accepted it (having accepted the testimony of *experts*), until enlightened by evidence.

to get at the truth about rocks. Sensing the likely danger that the trickle would grow into a mighty current, the faithful disciples of Frick turned to last-ditch extremes: they announced that anyone who denied the credibility of the *theory in stone* was no scientist at all. Their articles solemnly declared that: "All serious rock experts adhere to the theory of Frick"—thus implying that anyone who dared to question the acclaimed theory was incompetent. This included even those who had been thoroughly brainwashed in the halls of Frickdom, but

who had later allowed the evidence to change their minds.

However, the winds of free investigation and discussion were bringing some fresh air into even the innermost recesses of Frickdom. Even the most loyal were admitting that the Frickian theory was untenable without serious amendment. So in due time, investigators of rocks, who still called themselves Frickians, were teaching that the gray and the blue rocks had existed together from the beginning. "And," they added, "that is what we have really been saying all along!"

PRINCIPLES OF CREATIONISTIC BIOLOGY

TERRANCE L. SMITH*

Received 23 December, 1981

Three principles which can be used as a basis for biological research in a Creationistic framework are discussed.

A great deal of effort has been expended over the past few years in reinterpreting old data and compiling new data in a creationist framework. However, it has been my feeling that this work has been hampered by the lack of well-stated principles on which to base creation science. The consequence of this has been apparent both on the internal and external levels. On the internal level the various papers are sometimes difficult to compile into a unified whole due to a lack of universal principles. On the external level, involving confrontation with evolutionists, it has been difficult to be taken seriously as they reject any Biblical authority and we have not had a set of scientific principles to fall back on.

In this paper I will suggest a set of principles which can form a unified base for research and provide a scientific foundation from which to approach evolutionists.

The General Principle of Creation

The general principle of creation can be stated as follows: Increasing levels of complexity of an organism requires increasing amounts and/or detail of information. This predicts that advancement from colonial grade to tissue grade,¹ for example, would require more genetic information to control the greater physiological complexity. This increase in information should be reflected in an increase in the amount of DNA per cell. Thousands of organisms have had the amount of DNA in their cells determined and an increase has been observed in the amount of DNA per cell as the organismic complexity increases.² It should be noted that this increase holds in the invertebrates but not in the vertebrates where frogs and amphiuma³ have more than two times and twenty six times respectively the DNA of man.⁴ Thus, the prediction based on DNA content does not seem to always hold within grades. To an extent this is to be expected as differences between dif-

ferent types of animals within grade may be largely due to regulatory differences. It has been proposed that the highly repetitive sequences of DNA which are not structural genes (satellite DNA or introns) may be involved in this regulation.⁵ Whether different types of organisms have widely differing amounts of satellite DNA has not been determined. At any rate why the frog needs so much more DNA than man is unclear.

The general principle of creation also holds for the origin of life and its precursors. Before a nucleotide or amino acid sequence can be put to biological use it must have information impressed upon it. The formation of biologically active proteins from amino acids is an increase in complexity or order in the sense that they are polymers and in that a specific sequence of amino acids is required. To obtain the required sequence requires the input of information. In living cells this information comes ultimately from the DNA which is also constrained to have a specified sequence to serve as a template for a viable protein. With the origin of the first functional DNA (or RNA according to one theory⁶) from a mix of chemicals the need for information input is even more pointed. All nucleotides in a cell are dextrarotatory. No method is known to randomly isolate a pure optically active compound. Information input is required. Even if a DNA of pure optically active nucleotides were formed it would only reflect that information superimposed on it. This is because information is not simply an increase in order but a specified increase in order.⁷ This is not to suggest that prebiotic creation proceeded by the paths suggested by the evolutionist with only the addition of directiveness. We can not know the details of this stage of creation any more than can the evolutionist. It does point out that any scheme must include informational input.

The Principle of Limited Variation

The general principle of creation deals with the progression to higher forms of life. As this is a historical event it must by nature be highly theoretical. Creation

*Terrance L. Smith, Ph.D., is a Research Associate in the Department of Microbiology at the University of Illinois. He receives mail at 2716 East California, Urbana, Illinois 61801.