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“Let us make man in our image.”

Genesis 1:26

From The President's Desk

Dr. Darrel R. Falk says he wrote his book “to explore the story of creation in light of what we know from science” (p. 228). He says that naturalistic science teaches all life forms appeared gradually over billions of years, and therefore Christians should accept the scientific past that God created gradually (p. 228).

What Dr. Falk does with the Cambrian period, a geological period that doesn't help his neo-Darwinian theory (trilobites with their magnificent eye structure should cause him an Excedrin headache), is to punt the ball to the atheist interpretation of the Cambrian fossils and contend that the “explosion is highly controversial” (p. 94). It is highly controversial only to those arguing for a gradual, evolutionistic interpretation of earth history.

For those interested in understanding the full ramifications of the Cambrian period and its fossils which appear suddenly and abruptly within a relatively brief period of time see Stephen C. Meyer et al., “The Cambrian Explosion: Biology's Big Bang,” in *Darwinism, Design, and Public Education*, p. 323ff.

How many Christians will be fooled by *Coming to Peace With Science*? I don't know. I have been told by Nazarene friends that 98% of all Nazarenes disagree with Darwinism, but I've also been told that 95% of all Nazarenes could care less about the issue.

I would like to hear from our Nazarene readers! I would like to see Focus on the Family arrange a friendly debate (Acts 15:2) between Darrel Falk and Stephen Meyer since Dr. James C. Dobson is extremely interested in the subject and how it is being taught at Point Loma Nazarene University. I would also like to see Christians recognize the terrible havoc wrought in the 20th Century by the likes of Darwin, Marx, Freud and Nietzsche. Communism, Fascism and Nazism were all founded on the

ideas of these men and the result was the destruction of millions (see R. J. Rummel's *Death By Government*). Why any Christian professor would wish to help establish among Christians one of the two basic planks of these deadly "isms" is beyond my comprehension.

Month In Review

Happy Thanksgiving!

Q "Then God said, 'Let us make man in our image, according to our likeness; let them have dominion over the fish of the sea, over the birds of the air, and over the cattle, over all the earth and over every creeping thing that creeps on the earth.' So God created man in His own image; in the image of God He created him; male and female He created them. Then God saw everything that He had made, and indeed it was very good. So the evening and the morning were the sixth day.

—Genesis 1:26, 27, 31

Q "Because God created the Natural—invented it out of His love and artistry—it demands our reverence."

—C.S. Lewis, *God in the Dock*

Q "No philosophical theory which I have yet come across is a radical improvement on the words of Genesis, that 'In the beginning God made Heaven and Earth.' "

—C.S. Lewis, *Miracles*

Q "In the sense that His world was modeled on an idea existing in God's mind, that God invented matter, that He 'thought of' matter as Dickens 'thought of' Mr. Pickwick. From that point of view it could be said that God 'contained' matter as Shakespeare 'contained' Hamlet."

—C.S. Lewis, *Preface, Paradise Lost*

Q "It [evolution] appeals to every part of me except my reason. I believe it no longer."

—C.S. Lewis, *Christian Reflections*

Q Darrel R. Falk, professor of biology and associate provost for research at Point Loma Nazarene University, Point Loma, California, recently authored *Coming to Peace With Science: Bridging the Worlds Between Faith and Biology* (Inter Varsity Press, 2004) and argues that there is "overwhelming scientific data supporting evolution" (p.10), and the "relatedness of all life forms" (p.10). According to the forward of the book written by Francis S. Collins, Falk "presents a loving Creator God who used the mechanism of evolution to create living things, including the human race" (p.10). Falk's position, says Collins, is referred to by theologians as "theistic evolution" (p.10).

Q “First John 4:1 states that we are to ‘test the spirits to see whether they are from God.’ It has been my task, as someone who has spent his life studying biology, to write about why there is no doubt in the minds of most biologists that new life forms appeared on this earth gradually. Those of us who are Christian biologists, of course, believe that it happened at the command and under the guidance of the Creator. Out of respect for the First John mandate, I have felt it important to give you opportunity to “test the spirits.” Now that we have thought together about the reason, regardless of how each of us personally ends up believing, it is extremely important that we allow for people of both creation persuasions, sudden and gradual, to exist side by side in Christ’s body. One of my primary goals in writing this book has been to lay before the church the reasons why almost all scientists (including Christian ones) believe in the gradual appearance of life on this earth. It is hoped that having done so, we will be able to go on in unity and love, despite the diversity that still exists. It is God’s kingdom, and we need to heartily follow God’s rules, not ours.

—Darrel R. Falk, *Coming To Peace With Science*, p.224

Q “Is the account of God reaching down and creating Adam from the dust of the ground, and God reaching in and creating Eve from the rib of Adam, real history or figurative language? The genes on our chromosomes are arranged in almost the same order as the genes in the chimpanzee and gorilla. Geneticists are convinced that this specific gene order is not particularly important: the genes can be rearranged and put into different orders that would work just as well. The similar order, geneticists believe, is a reflection of our shared ancestry. The same is true for the language of the genes. The genes in our cells use the same ‘dialect’ in providing instructions on how to make proteins as the genes in chimpanzee cells. The ‘dialect’ has changed some, but the change, geneticists believe, is what one would expect if it has been a while since we had a common ancestor. Humans have many of the same marked genes as the great apes. We have many retroposons and silenced virus genes inserted into introns in the exact same position as chimpanzees and gorillas. There is no ‘break’ in the genetic data that implies that the human body was created in a manner that is different than the way in which God created other living creatures.

—Darrel R. Falk, *Coming To Peace With Science*, p. 224, 5

Q “Hence it seems likely that when God’s Word to us shows God reaching down to the ground and making Adam, it is telling us that God created humanity from the dust of the earth, but not necessarily in an instant. Moreover, when it tells us that Eve was created from Adam’s rib, it seems likely that it is telling us that husband and wife in God’s kingdom are one flesh and that they must live their lives that way. Given the notion that Eve is Adam’s bride, just as the church is the bride of Christ, so God’s Word to us also foreshadows the fact that the church itself is one body, derived at the expense of Christ himself.

“The story of Adam and Eve is an inspired message that comes to us as revelation from God, told for our edification. Even if humans were created gradually at the physical level, it certainly is still possible that Adam and Eve were real individuals who lived in real time. If that were the case, the creation

account might be viewed as the creation of humans as spiritual beings, and Adam and Eve would simply have been the first humans to experience what it really means to live in the image of God—in full communication with God as God. If so, then in an historical and figurative sense, their story becomes our story. They sinned. We have sinned. Their action resulted in them becoming separated from the Presence of God. Our sin resulted in our separation from God. They were not restored, but we (through Jesus) bring completion to their story, for we are able to enter the garden of God’s Presence again. Hence, regardless of whether it is historical and figurative, or purely figurative, their story becomes our story—a story for all humankind.

“No matter how we interpret its historicity, humans are spiritual beings created in God’s image and able to know God and love him because of his revelation to us through his written Word, the Bible, and his living Word, Jesus.”

—Darrel R. Falk, *Coming To Peace With Science*, p. 225, 6

Q “Darrel Falk... presents evidence from cosmology, geology, paleontology, and genetics to make a compelling case for an ancient earth and the relatedness of all life forms.”

—Francis S. Collins, *Coming To Peace With Science*, p. 10

Q Dr. Falk argues the basic Darwinian theory of mole to man, particle to pope, fish to Gish, atom to Adam, bacteria to Bill, viruses to Victoria, cells to Clinton, reptiles to birds (p.132), chimps to man (p.177), hippopotamuses to whales (p.109, 191), fish to land animals (p.115), etc., etc., etc.

Q For serious students of this issue who are looking for solid scientific answers to every one of Darrel Falk’s so-called evolutionary “proofs” I am strongly recommending the following: Stephen C. Meyer, “The Origin of Biological Information and the Higher Taxonomic Categories” in *Proceedings of the Biological Society of Washington* (vol. 117, no. 2, pp. 213-239); John Angus Campbell and Stephen C. Meyer, *Darwinism, Design, and Public Education*; William A. Dembski, editor, *Uncommon Dissent: Intellectuals Who Find Darwinism Unconvincing*; Jonathan Wells, *Icons of Evolution*; Michael J. Behe, *Darwin’s Black Box*; Geoffrey Simmons, *What Darwin Didn’t Know*; Richard Milton, *Shattering the Myths of Darwinism*, James Perloff, *The Case Against Darwin*; Jonathan Sarfati, *Refuting Evolution*; Duane Gish, *The Fossils Say No*; Henry Morris, *The Long War Against God*; Richard Weikart, *From Darwin to Hitler*, etc., etc., etc. The following quotes in the issue of the *Journal* will speak to Darrel Falk’s theistic evolution stance. Summit students attending Point Loma Nazarene University will also find these quotes timely. Thankfully, Dr. Falk does admit that hard-core creationists (God created Adam & Eve directly) and theistic evolutionists (God evolved Adam & Eve through apes & chimps) should get along in the church and Christian colleges.

Hopefully this means that Point Loma students, for example, will be graduated in spite of their hard-core creationists beliefs. This should also mean that Point Loma’s bookstore carries all the above books, too!!

Q “Theistic evolution is a gross idolatry when it portrays God as creator through death, [genetic mistakes], struggle, tooth, claw, grief, and the survival of the brutist. God is implicated because he invented it, if indeed evolution has occurred by these awful means. On the contrary, the miseries of history are a consequence of our great rebellion against God in the garden (Romans 8:20-22 and Isaiah 11:1-9). Death and struggle were never tools of creation and to think so is an offense to Jesus Christ, the Creator, who is love incarnate and who pronounced the creation ‘very good.’

—Gorman Gray, *The Age of the Universe*, p.131

Q “Darwinism also contributed to a rethinking of the value of human life in the late nineteenth century. In order to make human evolution plausible, prominent Darwinists argued that humans were not qualitatively different from animals. Also, the significance of the individual life did not seem all that great considering the mass death brought on by the Darwinian struggle for existence. Multitudes necessarily died before reproducing, and this was the key to evolutionary progress. Death was no longer a foe, as Christianity taught, but a beneficent force. Also, Darwinism stressed biological inequality, since evolution could not occur without significant variation. Humans were no exception, argued many Darwinists, so egalitarianism must be misguided.”

—Richard Weikart, *From Darwin To Hitler: Evolutionary Ethics, Eugenics, and Racism in Germany*, p.230

Q “Dr. Lee Spetner, who taught information theory for a decade at Johns Hopkins University and the Weizman Institute, spent years studying mutations. He has written an important new book, *Not by Chance: Shattering the Modern Theory of Evolution*. In it, he writes: ‘In all the reading I’ve done in the life-sciences literature, I’ve never found a mutation that added information... All point mutations that have been studied on the molecular level turn out to reduce the genetic information and not increase it.’

“Mutations delete information from the genetic code. They never create higher, more complex information. What are they actually observed to cause in human beings? Death. Sterility. Hemophilia. Sickle cell anemia. Cystic fibrosis. Down’s syndrome, and over 4,000 other diseases. The genetic code is designed to run an organism perfectly—mutations delete information from the code, causing birth defects.”

“To advance their view, evolutionists have long pointed to mutations with beneficial effects. The most common example given: mutations sometimes make bacteria resistant to antibiotics (germ-killing drugs). And so, the argument goes, ‘if mutations can make bacteria stronger, they must be able to do the same for other creatures.’ Dr. Spetner points out that this is based on a misunderstanding, for the mutations that cause antibiotic resistance still involve information loss.”

“For example, to destroy a bacterium, the antibiotic streptomycin attaches to a part of the bacterial cell called ribosomes. Mutations sometimes cause a structural deformity in ribosomes. Since the antibiotic cannot connect with the misshapen ribosome, the bacterium is resistant. But even though this mutation turns out to be beneficial, it still constitutes a loss of genetic information, not a gain. No ‘evolution’ has

taken place; the bacteria are not ‘stronger.’ In fact, under normal conditions, with no antibiotic present, they are weaker than their nonmutated cousins.”

—James Perloff, *The Case Against Darwin*, p. 23, 26

Q “Darwin stated that ‘the number of intermediate and transitional links, between all living and extinct species, must have been inconceivably great. But assuredly, if this theory be true, such have lived upon the earth.’ He admitted these creatures’ fossils had not been found in his day, but hoped future excavations would turn them up. They haven’t.”

“If evolutionary theory is true, the geologic record should reveal the innumerable transitional forms Darwin spoke of. We shouldn’t find just a handful of questionable fossils, but billions of intermediates validating his theory. Instead, the fossil record shows animals complete—not in developmental stages—the very first time they are seen. This is just what we would expect if animals were created, instead of evolved.

—James Perloff, *The Case Against Darwin*, p.44, 5

Q “The late Dr. Colin Patterson, senior paleontologist of the British Museum of Natural History, wrote a book, *Evolution*. In reply to a questioner who asked why he had not included any pictures of transitional forms, he wrote: ‘I fully agree with your comments about the lack of direct illustration of evolutionary transitions in my book. If I knew of any, fossil or living, I would certainly have included them.... I will lay it on the line—there is not one such fossil for which one could make a watertight argument.’

“The renowned evolutionist (and Marxist) Stephen Jay Gould wrote: ‘The absence of fossil evidence for intermediary stages between major transitions in organic design, indeed our inability, even in our imagination, to construct functional intermediates in many cases, has been a persistent and nagging problem for gradualistic accounts of evolution.’

“And: ‘I regard the failure to find a clear “vector of progress” in life’s history as the most puzzling fact of the fossil record.’”

—Jonathan Sarfati, *Refuting Evolution*, p.48, 9

Q [The National Academy of Sciences’] Teaching about Evolution avoids discussing the vast gulf between non-living matter and the first living cell, single-celled and multicelled creatures, and invertebrates and vertebrates. The gaps between these groups should be enough to show that molecules-to-man evolution is without foundation.

“There are many other examples of different organisms appearing abruptly and fully formed in the fossil record. For example, the first bats, pterosaurs, and birds were fully fledged flyers. Bats have always been bats.

“Turtles are a well designed and specialized group of reptiles, with a distinctive shell protecting the body’s vital organs. However, evolutionists admit ‘Intermediates between turtles and cotylosaurs, the primitive reptiles from which [evolutionists believe] turtles probably sprang, are entirely lacking.’”

—Jonathan Sarfati, *Refuting Evolution*, p. 49

Q “Are we designed to change, or is there a genetic inertia? No one knows, but Hitching writes, ‘On the face of it, the prime function of the genetic system would seem to be to resist change.’ Stasis and extinction are the patterns seen in fossils. Freaks of nature are shunned, such as a zebra born without stripes. Animals will often kill different-looking or different-acting offspring even if they might grow up to be stronger or faster (but how would they know?).

“Once in every ten million cell divisions, a cell makes a copying mistake. The chance of the mistake passing into the next generation is one in two. The odds are six to one that it will disappear by the tenth generation and fifty to one that it will be gone by the hundredth generation.

“According to F.B. Livingston, it would take approximately 20,000 generations, or 400,000 years, for an advantageous gene to spread among the hominid populations of the Pleistocene Era. If we are descendants of the famous Lucy, the australopithecine skull found in Ethiopia in 1974 and thought to be three million years old, then there would have been time for only seven advantageous genes to have changed. That’s barely enough of a change to tell a difference let alone make a monkey into a person.

“Some scientists think that one beneficial mutation happens per 20,000 mutations. Or reverse this: 19,999 out of 20,000 mutations are useless, dangerous, or quickly diluted out. To calculate the statistical chance of man’s DNA codes having so come about—correctly and by mere chance—multiply 6,000,000,000 by a number just short of infinity. Nesse and Williams estimate the likelihood of any gene being altered as one in a million per generation—and most often these changes are either lethal or lead to freaks. How could so many efficient and effective changes have taken place so quickly?”

—Geoffrey Simmons, *What Darwin Didn’t Know*, p. 305, 6

Q “Flies found in amber that is estimated to be 225 million years old are the same as today’s flies. The giraffe, with its incredibly long neck, has not changed in two million years, and it has no shorter-neck predecessors among the fossils. Rodents also appeared suddenly in the fossil record. Fish arrived without preceding fish-like fossils. Insects showed up without any precedents. Thousands of new species discovered at the Burgess Shale in Canada and at a counterpart in China, exploded on the scene during the Cambrian period (sometimes called the biological big bang) 540 million years ago. No predecessor fossils have ever been found for 99 percent of some quite large and weird-looking animals. The opabinia had five eyes; there were worms with thorny noses to snag prey; and we’ve even found evidence of crawling creatures with eyes on the ends of stalks. There are no new phyla since the Cambrian period.

“Most species, according to the fossil record, evolved very little, if at all, before becoming extinct; the life expectancy of a species of animal might have extended a hundred thousand generations or a few million years, yet each generation continued to look much like, if not identical to, the previous generations. Take the beetle. It has not changed in two million years. Or the bowfin fish, which has not changed in 100 million years. The lungfish has not changed in 350 million years.

“Herbert Nilsson of Lund University, Sweden, stated, ‘It is not even possible to make a caricature of evolution [Darwin’s gradualism] out of paleobiological facts. The fossil material is now so complete that the lack of transitional series cannot be explained by the scarcity of material. The deficiencies are real, they will never be filled.’ Or consider the words of paleontologist Steven Stanley: ‘The known fossil record is not, and never has been in accord with gradualism.’ Or those of paleontologist David Raup: ‘Different species usually appear and disappear from the fossil record without showing the transitions that Darwin postulated.’ Or those of biologist and curator of the American Museum of Natural History, Ernst Mayr: ‘With curious frequency it is even stated today that Darwin’s method was largely one of speculation and deduction.’ Or those of Francis Hitching in *The Neck of the Giraffe*, who states that most scientists now discount the idea of the lungfish having evolved into an amphibian, based on its head structure and lack of true legs.”

—Geoffrey Simmons, *What Darwin Didn’t Know*, p. 304, 5

Q “The coelacanth had been described by the pioneer paleontologist Gideon Mantell in the early nineteenth century and had been illustrated by Darwin’s champion, Thomas Huxley, in 1866.

“Specimens of the fish had been preserved in fine detail in ancient rocks and its anatomy had been well studied and catalogued. And it was its anatomical features—plus a little intelligent guess-work—that prompted such unanimity among its authors. The fish and its relatives had flourished during the Devonian period some 350 million years ago, before declining to a dignified end. But before expiring, it had managed to flap onto the estuarine mudflats with the aid of its embryonic limbs, and give birth to a hopeful new generation of creatures who were able to exploit the land—truly a Columbus among marine organisms and a worthy progenitor of the human race.

“The announcement of the discovery of the ‘missing link’ was one of Fleet Street’s earliest scientific scoops. And although the readers of the popular dailies couldn’t tell a coelacanth from a breakfast kipper, the public imagination was fired by the discovery. The British Museum of Natural History mounted a display and parties of schoolchildren, in pursuit of merit marks from approving schoolteachers, pressed their noses against the glass cabinets of South Kensington.

“Those responsible for filling the glass cabinets, and the minds behind the noses pressed against them, probably permitted themselves a moment of self-congratulation. If so, it was short-lived. For at precisely that moment, the most astonishing and irrational coincidence occurred.

“Fishermen trawling the waters off East London on the coast of Africa in 1938 found a strange-looking

fish in their nets. The decomposing—and by now highly aromatic—remains of the fish were examined by the curator of the East London Museum, Margaret Courtenay-Latimer, and by Professor J. C. B. Smith of Rhodes University, South Africa, who identified it as a living specimen of the coelacanth.

“The strange catch was a ‘living fossil’ and its discovery must have been poetically inspired by the goddess of coincidence to remind mortals of their fallibility.

“It soon became clear from examining the strange catch that the coelacanth was a poor choice for the ‘missing link’ between marine and terrestrial life. Its four fins are much like those of any other fish and are no more suitable for supporting its weight on land, or of giving rise to amphibious limbs, than those of a fairground goldfish. There is also the awkward fact that the coelacanth lives at such great depths in the ocean (up to 200 meters) that it explodes due to decompression when brought up to the surface—a slightly ticklish handicap for a colonizer of the land. In 1986 Hans Fricke of the Max Planck Institute for Animal Behavior used underwater video cameras to observe the coelacanth in its natural habitat. Unsurprisingly, the coelacanth does not stroll on the seabed with its fins as supposed, but swims through the water just like any other fish.

“Back in the bone departments, the innocent coelacanth was stripped of its title and dignities in a purely private ceremony. The official line today is that the coelacanth was merely an evolutionary dead end and some other creature—possibly Eusthenopteron—holds the coveted ‘missing link’ title. Eusthenopteron, too, is supposed to be extinct—let us keep our fingers crossed and hope that this time it stays dead.”

—Richard Milton, *Shattering the Myths of Darwinism*, p. 256, 7

Q “The hard empirical evidence for the power of the Darwinian mechanism is in fact quite limited and includes such things as finch beak variation, changes in flower coloration, and bacteria developing antibiotic resistance. For instance, finch beak size does vary according to environmental pressure; the Darwinian mechanism does operate here and accounts for the changes we observe. But that same Darwinian mechanism is also supposed to account for how finches arose in the first place. This is an extrapolation. Strict Darwinists see it as perfectly plausible. The public remains unconvinced.”

—William A. Dembski, *Uncommon Dissent: Intellectuals Who Find Darwinism Unconvincing*, p. xxxv

Q “The facts in favor of evolution are often held to be incontrovertible; prominent biologists shake their heads at the obduracy of those who would dispute them. Those facts, however, have been rather less forthcoming than evolutionary biologists might have hoped. If life progressed by an accumulation of small changes, as they say it has, the fossil record should reflect its flow, the dead stacked up in barely separated strata. But for well over 150 years, the dead have been remarkably diffident about confirming Darwin’s theory. Their bones lie suspended in the sand of time—theromorphs and therapsids and things that must have gibbered and then squeaked; but there are gaps in the graveyard, places where there should be intermediate forms but where there is nothing whatsoever instead.

“Before the Cambrian era, a brief 600 million years ago, very little is inscribed in the fossil record; but then, signaled by what I imagine as a spectral puff of smoke and deafening ta-da!, an astonishing number of novel biological structures come into creation, and they come into creation at once.

“Thereafter, the major transitional sequences are incomplete. Important inferences begin auspiciously, but then trail off, the ancestral connection between Eusthenopteron and Ichthyostega, for example—the great hinge between the fish and the amphibian—turning on the interpretation of small grooves within Eusthenopteron’s intercalary bones. Most species enter the evolutionary order fully formed and then depart unchanged. Where there should be evolution, there is stasis instead—the term is used by paleontologists Stephen Jay Gould and Niles Eldredge in developing their theory of ‘punctuated equilibria’—with the fire alarms of change going off suddenly during a long night in which nothing happens.

“The fundamental core of Darwinian doctrine, the philosopher Daniel Dennett has buoyantly affirmed, ‘is no longer in dispute among scientists.’ Such is the party line useful on those occasions when biologists must present a single face to their public. But it was to the dead that Darwin pointed for confirmation of his theory; the fact that paleontology does not entirely support his doctrine has been a secret of long standing among paleontologists. ‘The known fossil record,’ Steven Stanley observes, ‘fails to document a single example of the phyletic evolution accomplishing a major morphologic transition and hence offers no evidence that the gradualistic model can be valid.’

“Small wonder, then, that when the spotlight of publicity is dimmed, evolutionary biologists evince a feral streak, Stephen Jay Gould, Niles Eldredge, Richard Dawkins, and John Maynard Smith abusing one another roundly like wrestlers grappling in the dark.”

—David Berlinski, in *Uncommon Dissent*, p. 264, 5

Q “Life, however, is absolutely nothing like this. Wherever one looks there is singularity, quirkiness, oddness, defiant individuality, and just plain weirdness. The male redback spider (*Latrodectus hasselti*), for example, is often consumed during copulation. Such is sexual cannibalism—the result, biologists have long assumed, of ‘predatory females overcoming the defenses of weaker males.’ But it now appears that among *Latrodectus hasselti*, the male is complicit in his own consumption. Having achieved intromission, this schnook performs a characteristic somersault, placing his abdomen directly over his partner’s mouth. Such is sexual suicide—awfulness taken to a higher power.

“It might seem that sexual suicide confers no advantage on the spider, the male passing from ecstasy to extinction in the course of one and the same act. But spiders willing to pay for love are apparently favored by female spiders (no surprise, there); and female spiders with whom they mate, entomologists claim, are less likely to mate again. The male spider perishes; his preposterous line persists.

“This explanation resolves one question only at the cost of inviting another: Why such bizarre behavior? In no other *Latrodectus* species does the male perform that obliging somersault, offering his partner the oblation of his life as well as his love. Are there general principles that specify sexual

suicide among this species, but that forbid sexual suicide elsewhere? If so, what are they?

“Once asked, such questions tend to multiply like party guests. If evolutionary theory cannot answer them, what, then, is its use? Why is the pitcher plant carnivorous, but not the thorn bush, and why does the Pacific salmon require fresh water to spawn, but not the Chilean sea bass? Why has the British thrush learned to hammer snails upon rocks, but not the British blackbird, which often starves to death in the midst of plenty? Why did the firefly discover bioluminescence, but not the wasp or the warrior ant; why do the bees do their dance, but not the spider or the flies; and why are women, but not cats, born without the sleek tails that would make them even more alluring than they already are?”

—David Berlinski, in *Uncommon Dissent*, p. 267

Q “Other examples of irreducible complexity abound, including aspects of protein transport, blood clotting, closed circular DNA, electron transport, the bacterial flagellum, telomeres, photosynthesis, transcription regulation, and much more. Examples of irreducible complexity can be found on virtually every page of a biochemistry textbook. But if these things cannot be explained by Darwinian evolution, how has the scientific community regarded these phenomena of the past forty years?”

“A good place to look for an answer to that question is in the *Journal of Molecular Evolution (JME)*, a journal that was begun specifically to deal with the topic of how evolution occurs on the molecular level. *JME* has high scientific standards and is edited by prominent figures in the field. In a recent issue, all eleven articles were concerned simply with the analysis of protein or DNA sequences. None of the papers discussed detailed models for intermediates in the development of complex biomolecular structures.

“In the past ten years *JME* has published 886 papers. Of these, 95 discussed the chemical synthesis of molecules thought to be necessary for the origin of life, 44 proposed mathematical models to improve sequence analysis, 20 concerned the evolutionary implications of current structures, and 719 were analyses of protein or polynucleotide sequences. However, there weren’t any papers discussing detailed models for intermediates in the development of complex biomolecular structures. This is not a peculiarity of *JME*. No papers are to be found that discuss detailed models for intermediates in the development of complex biomolecular structures in the *Proceedings of the National Academy of Science*, *Nature*, *Science*, *Journal of Molecular Biology*, or to my knowledge, any journal whatsoever.

“Sequence comparisons overwhelmingly dominate the literature of molecular evolution. But sequence comparisons simply can’t account for the development of complex biochemical systems any more than Darwin’s comparison of simple and complex eyes told him how vision worked. Thus, in this area, science is mute.”

—Michael J. Behe, in *Darwinism, Design, and Public Education*, p. 298, 9

Q “One would think that knowledgeable scientists would be extremely cautious about referring to vestigial structures in view of the fact that dozens of such structures were once thought to be present,

but time and new scientific knowledge have removed almost every one [coccyx, appendix, wisdom teeth] from the list.”

—Gorden C. Mills, Malcolm Lancaster, Walter L. Bradley, in *Darwinism, Design, and Public Education*, p. 215

Q “The fact is that we do see gradual changes taking place today. Although one well-known example of this, the peppered moth, has been partially discredited, there are lots of examples in the biological literature of organisms changing their characteristics with time in response to environmental changes. Critics, however, point out that these minor changes are meaningless since they are only that minor changes.

“So, have scientists ever observed anything big, like a new structure? There are examples of new structures. For example, fruit flies with an extra pair of wings. However, where the changes are big ones, critics correctly point out that the extra pair of wings is totally nonfunctional and it would take many more changes for them to be made functional.

“Has science ever observed anything really big, like a bona fide new species? Here, too, science can point to some changes that reproductively isolate two groups of organisms. By most definitions of a species, we now have two where previously there had been one. However, even at this, the newly created species do not differ in any major fashion from each other.”

—Darrel R. Falk, *Coming to Peace With Science* p. 130, 1

Q See, Judith Hooper’s *An Evolutionary Tale of Moths and Men: The Untold Story of Science and the Peppered Moth*, W.W. Norton and Company, 2002. She dissects the peppered moth argument to where “Jerry Cogne ‘probably won’t’ teach the textbook story to his students until the ‘agent of selection’ is identified. Douglas Futuyma agrees that ‘it should not be taught in the simplified forms it has been.’ Richard Harrison, an evolutionary biologist at Cornell, is emphatic: ‘We should no longer use the example in textbooks.’” (p.303, 4)

Q “Yet recent studies in developmental biology make clear that mutations expressed early in development typically have deleterious (or at best neutral) effects, including mutations in the crucially important ‘master regulator,’ or hox, genes. For example, when early-acting body-plan molecules, or morphogens, such as bicoid (which helps set up the anterior-posterior head-to-tail axis in the fly *Drosophila*) are perturbed, development shuts down. The resulting embryos die. Moreover, there is a good reason for this. If an engineer modifies the length of the piston rods in an internal combustion engine without modifying the crankshaft accordingly, the engine won’t start. Similarly, processes of development are so tightly integrated spatially and temporally that changes early in development will require a host of other coordinated changes in separate but functionally interrelated developmental processes downstream. For this reason, as Stuart Kauffman explains, ‘A mutation disrupting formation of a spinal column and cord is more likely to be lethal than one affecting the number of fingers.’

“This tight functional integration helps explain why mutations early in development inevitably result in embryonic death and why even mutations that are expressed somewhat later leave organisms crippled. For example, a regulative mutation in the *bithorax* gene (expressed midway in the development of a fly) does produce an extra pair of wings on a normally two-winged creature. Nevertheless, this ‘innovation’ produces a cripple that cannot fly because it lacks, among other things, a musculature to support the use of its new wings. Since the developmental mutation was not accompanied by the many other coordinated developmental changes that would have been necessary to ensure the production of muscles at the appropriate place on the fly’s body, the original mutation did not lead to a positive morphological change but to a strikingly deleterious one.

“This problem has led to what geneticist John F. McDonald has called ‘a great Darwinian paradox.’ He notes that genes that vary within natural populations seem to affect only minor aspects of form and function—while genes that govern major changes, the very stuff of macroevolution, apparently do not vary or vary only to the detriment of the organism. As he puts it, ‘those [genetic] loci that are obviously variable within natural populations do not seem to lie at the basis of many major adaptive changes, while those loci that seemingly do constitute the foundation of many if not most major adaptive changes are not variable.’ In other words, the kind of mutations that macroevolution needs (namely, beneficial regulatory or Baupläne mutations expressed during early development) don’t occur; the kind it doesn’t need (namely, viable genetic mutations in DNA expressed late in development) do occur, if infrequently.

“Darwin wrote that ‘nothing can be effected’ by natural selection ‘unless favorable variations occur.’ Yet discoveries about the genetic regulation of development suggest that the kind of variations required by neo-Darwinism—favorable mutations that generate new body plans—do not occur.”

—Stephen C. Meyer, Marcus Ross, Paul Nelson, and Paul Chien, “The Cambrian Explosion” in *Darwinism, Design, and Public Education*, p. 375, 6

Q “In the last decade or so a host of scientific essays and books have questioned the efficacy of selection and mutation as a mechanism for generating morphological novelty, as even a brief literature survey will establish.”

—Stephen C. Meyer, “Proceeding of the Biological Society of Washington,” August 4, 2004

Q Dr. Stephen C. Meyer’s 29-page article which answers Dr. Darrel Falk’s most telling arguments for his Neo Darwinian position (genetic mistakes carry the load for molecular change to move us from chimps to Adam) may be read or downloaded at the Discovery Institute website (www.discovery.org). It is also available at the Smithsonian Institution in Washington, D.C.

Q “The Cambrian explosion represents a remarkable jump in the specified complexity or ‘complex specified information (CSI) of the biological world... One way to estimate the amount of new CSI that appeared with its Cambrian animals is to count the number of new cell types that emerged with them. Students of modern animals suggest that the sponges that appeared in the late Precambrian, for

example, would have required five cell types, whereas the more complex animals that appeared in the Cambrian (e.g., arthropods) would have required fifty or more cell types. Functionally more complex animals require more cell types to perform their more diverse functions. New cell types require many new and specialized proteins. New proteins, in turn, require new genetic information... Yet to build the proteins necessary to sustain a complex arthropod such as a trilobite would require orders of magnitude more coding instructions.”

—Stephen C. Meyer, Proceedings of the Biological Society of Washington, August 4, 2004