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## Origins Debate: Part II - Removing Peripheral Questions

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# The Origins Debate

## Part 2

### Removing Peripheral Questions

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For both Christians and non-Christians the debate concerning origins is important. Part 1 of this series gave a brief history of this debate starting with Darwin in the nineteenth century. The main positions on origins taken today have existed throughout the history of the debate.

In these articles those main positions are designated as follows: *atheistic Darwinism* is the belief that natural forces brought about evolution by natural selection; *theistic Darwinism* says that God used natural selection to achieve evolution; *ancient creationism*

claims that although living forms succeeded each other, God created on several separate occasions; *recent creationism* is the belief that there has been no succession and that God created all living forms recently.

In the first part of this article I shall discuss the present situation. Then I shall attempt to show which parts of the debate are peripheral and need not continue to be part of the debate.

Answers to the following questions provide a description of the present status of the debate: (1) Did creation occur? Or is the

universe infinitely old? (2) If creation did take place, how old is the universe? (3) Can life arise from non-life? (4) If microevolution occurred, did macroevolution also occur? (5) What is the origin of the human race?

### The Present Status of the Debate

The first question, which asks whether creation occurred, seems incredible. But it is asked seriously and so it should be considered.

To ask whether creation occurred is to ask if there ever was *creatio ex nihilo*. Also, did time have a beginning? No doubt Christians would always answer yes to these questions. Yet some persons answer no.<sup>1</sup> Several decades ago the steady-state creation theory gained a following. This theory said that there is a continual creation of hydrogen atoms. "Creation" in this theory is not, however, *creatio ex nihilo* in the classic sense. According to this theory, time did not have a beginning. However, certain scientific results have convinced almost all workers in the field that the steady-state theory is not correct.<sup>2</sup> The abandonment of the steady-state theory does not deter those who believe that there never was a point at which time began and the universe was created. For example, another no-beginning theory, the oscillating big-bang theory, has gained followers. This theory is an extension of the big bang-theory. The original big-bang theory states that the universe is presently expanding or exploding: the universe began billions of years ago when all mass-energy was at a point. In the oscillating big-bang theory, the present explosion was preceded by an implosion, which was in turn preceded by an infinite number of explosion-implosion cycles.

The second question, concerning the age of the universe, continues to be debated extensively. Atheistic Darwinists, theistic Darwinists, and ancient creationists hold to great age for the universe and the earth, while recent creationists claim both are but a few thousand years old. J.R. Van de Fliert, a

geologist who can probably be classified as a theistic Darwinist, claims that the earth is very old and that attempts to harmonize the Bible with geology do an injustice to the Christian faith.<sup>3</sup> Many ancient creationists do not accept Van de Fliert's argument concerning the Bible and geology; they insist that Genesis and geology do harmonize. Recent creationists also insist on the harmony between Genesis and geology.

In recent years many kinds of physical evidence have been discussed in the debate over the age of the universe. Examples are the isotopic composition of both earth rocks and moon rocks; the absence of certain atomic isotopes in nature;<sup>4</sup> the rate of change of the earth's magnetic field and the orientation of naturally-occurring magnetic materials;<sup>5</sup> the rate of meteoric influx for both the earth and the moon;<sup>6</sup> the rate at which large rock masses cool;<sup>7</sup> and various methods indicating star light reaching the earth now has been traveling for several billion years.<sup>8</sup> For those who accept physical evidence of great age, the argument is much stronger now than it was a few decades ago, since some of the methods are new and some of the older methods (such as isotopic distribution) have been greatly improved.

The third question asks if life could have arisen from non-life by some combination of chemical and physical processes. Atheistic Darwinists and many theistic Darwinists are quite sure that life did indeed evolve from non-living matter.<sup>9</sup> Richard Lemmon, who has written extensively on the chemical evolution of life, vigorously asserts that life did arise in this way.<sup>10</sup> He admits that there are difficulties in understanding how this came about, but he declares that "creation" cannot be invoked to solve any difficulties. Included in the concept of evolution of life from non-life is the idea that the various biological sources of energy, such as fermentation and photosynthesis, have a common origin.<sup>11</sup> But chemical evolutionists have certainly not been unopposed. Some of the opponents limit themselves to a discussion of certain passages of Scripture. But most of the

argument has focused on the scientific evidence. I shall discuss this matter in Part 3.

Whether microevolution can be extended to macroevolution is the subject of the fourth question. A small change in species, such as a change which occurs in breeding, is sometimes referred to as microevolution. Everyone knows that such changes occur. But is it legitimate to claim an indefinite extension of the microevolution process to account for the existence of all kinds of life? In other words, given the fact that microevolution exists, is it fair to conclude that macroevolution also occurred?

The question whether all living forms have evolved from the simplest life has, of course, been discussed and argued from the very beginning of the origins debate in the nineteenth century. This situation continues. But the debate is not in all respects like the

without a demonstration of how evolution occurred, there would be no proof that any organism is the ancestor of another. I believe, however, that the second argument would not win many converts if the fossil record did not have gaps. Without gaps, the circumstantial case would be strong, even though strictly speaking no evolutionary mechanism would have been demonstrated. People generally do not insist on knowing a mechanism in order to be convinced.<sup>13</sup>

A fossil record argument—either for or against Darwinism—is easy to understand. No doubt this fact partially accounts for the prevalence of books and articles on Darwinism at all levels of explanation, from textbooks written for elementary schools to discussions in research journals and scientific treatises. The situation is different for some of the other origins questions, such as

**The practical consequences of evolutionism in psychology, sociology, and education—as expressed, for example, in popular attitudes on individualism, competition, self-expression, family relationships, and pedagogical procedures—are undesirable and sufficient cause to reject evolutionism.**

corresponding debate of several decades ago. The main reason for the difference is the increased amount of experimental evidence available for the discussion. There are now many more fossils for one to fit into either a Darwinistic or a non-Darwinistic history of plants and animals. Even so, the argument is fundamentally the same: can microevolution, as seen in the appearance of new breeds of chickens, dogs, and so forth, be extended to account for macroevolution?<sup>12</sup>

There are two parts to the debate concerning macroevolution. Those who do not accept macroevolution describe the two parts in this way: (1) The fossil record has very large unfilled gaps, even though many new fossils have been found in recent years. (2) Even if investigators do fill the gaps, the evidence for evolution (and therefore for Darwinism) would be only circumstantial;

whether there was a beginning or whether chemical evolution of life occurred. These questions involve complicated ideas not easily discussed outside the scientific community.

A large number of people are willing to discuss the fifth question, concerning the origin of the human race. Difficult questions concerning the origin of the human race seem not to inhibit anyone who is at all interested in the origins question. Atheistic and theistic Darwinists hold that the simplest life was the source of all other life, including human life. Recent and ancient creationists claim that there were separate creations, one of which was the creation of the first human beings.

Darwinists have several reasons for claiming that human life evolved. First, some Darwinists insist on the evolutionary origin of

human beings because they accept *evolutionism*, the philosophy which applies evolutionary principles to all aspects of human life; without human evolution, evolutionism would be impossible. Second, Darwinists tend to overlook how animals differ in order to claim that one evolved from the other. For the same reason they tend to overlook how human beings differ from animals. Third, Darwinists along with other scientists have a strong desire to unify knowledge. Darwinism attempts to unify the world of plants and animals and to unify even further by including human life.

Recent and ancient creationists have just as much at stake in the debate over the origin of the human race. First, the Bible refers frequently—in both the Old and the New Testament—to the origin of the human family; one cannot say the same concerning the origin of other living things. Consequently, recent and ancient creationists consider the veracity and the authority of the Bible to be at stake when the origin of the human race is discussed. Second, recent and ancient creationists abhor all attempts to harmonize the idea that human beings are created in the image of God with the idea that human beings have animal ancestors. Third, recent and ancient creationists vigorously oppose evolutionism. The practical consequences of evolutionism in psychology, sociology, and education—as expressed, for example, in popular attitudes on individualism, competition, self-expression, family relationships, and pedagogical procedures—are undesirable and sufficient cause to reject evolutionism.

Theistic Darwinists usually maintain that Adam was a figurative, not a real, person.<sup>14</sup> Ever since Darwin, opponents of an evolutionary origin of humanity have asked the “missing link” question: If human ancestors were animals, where are the intermediate forms? The Leakey East African discoveries of recent years are supposed to have provided some missing links, giving the earliest “people” an age of a few million years and differences, as Darwinists expected, from

modern human beings. But whether a given fossil is human is always a question. Usually investigators have looked for evidences of human activity near the place the fossil was found. In the absence of such evidence, the question is often left unanswered. What has confused the matter considerably is a change in the scientific understanding of which activities and characteristics belong only to human beings. The following activities and characteristics were once thought to be uniquely human: ability to learn, plan ahead, conceptualize, use tools, make tools, have language, count, have artistic sense, and have ethical sense. But James Houston maintains that some, perhaps all, of these activities and characteristics have been found in animals.<sup>15</sup> However, evidence of religious (liturgical) activity near a fossil site is still considered an excellent indication that the fossils are human remains.

Another development which could make it more difficult to decide the age and origin of the human race is Arthur Custance’s suggestion concerning primitive cultures.<sup>16</sup> Custance offers evidence that the so-called primitive cultures were actually degenerated cultures. They were, he says, races of human beings which descended from Adam and were the result of the dispersion which occurred after the tower of Babel was built. If Custance is correct, much of the evidence used to prove that the human race has evolved is irrelevant. Some anthropologists dispute Custance’s claims, but his evidence cannot be easily dismissed.

### The Spirit of the Debate

The above description of the present status of the origins debate shows that the Christian community is badly fragmented on this question. Three types of behavior are associated with this fragmentation.

First, Christians sometimes make serious accusations against other Christians. Thus, one recent creationist said that Christians do not actually believe the Bible if they believe that the days of Genesis 1 were long periods,

that the flood was only local, or that God guided evolution. It was charged that one can no more be a Christian evolutionist than one can be a Christian adulterer or a Christian thief.<sup>17</sup> Often one writer questions the honesty of another. Sometimes one charges that another author distorts or makes silly claims. Thus, asks Frederick Edwords, does teaching both creation and evolution mean that both physics and pyramid power should be taught?<sup>18</sup> However, some of those involved in the debate attempt to raise the level of the debate by examining the issues fairly; they refuse to characterize their opponents as deceivers.<sup>19</sup>

Occasionally the charges made by Christians against other Christians are less serious. Thus, recent (ancient) creationists can clearly see that ancient (recent) creationists are over-zealous in their claims.<sup>20</sup> At the same time, some theistic Darwinists complain that certain atheistic Darwinists are far too zealous in denouncing recent and ancient creationist ideas.<sup>21</sup>

The second reaction to disagreement among Christians on the origins question is to declare that there should be no debate. This claim is made in one of two ways: (1) Some Christians severely limit what may be learned from the Bible. Often they hold that the Bible gives us what we need for our salvation; but for other matters, such as supposed differences between the Bible and scientific conclusions, we must keep searching. Sometimes Christians are as vigorous as non-Christians in claiming that there is a distinct separation between science and religion.<sup>22</sup> (2) Other Christians severely limit what may be learned from scientific investigation. One author, in accepting a form of instrumentalism, wants Christians

...to retain the epistemological supremacy of Scripture—thus leaving us with a solid basis with regards to the essentials of the Christian faith—while still making use of the practical results of secular science.<sup>23</sup>

A third response to the disagreement among Christians concerning origins is to avoid conflict or, if possible, to resolve it. Thus, some Christians say that God is greater than the debate, and therefore Christians should adopt a synthesis position.<sup>24</sup> Certain writers present a balanced approach as they encourage readers to think.<sup>25</sup> Others emphasize those views which all Christians—recent and ancient creationists as well as theistic Darwinists—have in common. H.H. Hartzler listed twenty-four statements on which all Christians could agree.<sup>26</sup>

In addition to these three responses to the disagreement within the Christian community, some feel frustrated, feeling that one cannot be consistent and subscribe to any of the schools of thought. D.G. Jones was repelled by the extremists, but felt forced to choose between conflicting ideas. He stated that the Christian position includes creation, but science does not admit of creation.<sup>27</sup> He is by no means alone in this response.

### The Need for a Better Climate for Discussion

The level of the debate needs to be raised. After all, in the nineteenth century Christian intellectuals were able to function well in the scholarly community in spite of their differences on the origins question. Some accepted Darwinism, some accepted ancient creationism, and still others accepted recent creationism. Yet they respected each other. They could debate the issues without acrimony.<sup>28</sup> No doubt this amicable climate arose partially because the discussants could not yet see how the debate would develop. Thus, some early conservatives thought that Darwinism showed them how God carried out his purpose; they did not realize that Darwinism-without-design, that is, atheistic Darwinism, would eventually become very important.<sup>28</sup>

I am among those who reject Darwinism. I want to plead with those who accept Darwinism to respect the Christian faith of their opponents. But because I do reject Darwinism, I have some right to speak to others

who also reject it, that is, recent and ancient creationists. They should also respect the Christian faith of the Darwinists who also claim to be Christian. Consider a few examples. Jerry Albert states

Theistic evolution is consistent with my science and my Christian faith, and I believe it is also consistent with the best exegesis...of Genesis 1 and 2.<sup>29</sup>

Richard Wright, a biologist, rejoiced that Bernard Ramm's book, *The Christian View of Science and Scripture*, opened the door for a Christian reconciliation with evolution (or, according to the definitions used in these articles, Darwinism).<sup>30</sup> (See Part 1 for a discussion of *The Christian View*.) Wright regretted that Ramm did not himself go through that door. Richard Bube, a Christian scientist who has written extensively on

## What Should Happen Next?

I have made several points in Part 1 and this article so far; they include the following: (1) The origins debate is now several generations old. (2) Many people, some scholarly and some not, have become involved. (3) Several schools of thought have existed for almost the entire period. (4) The debate has ranged over almost everything the human mind can comprehend: the nature, purpose, and age of the entire universe; whether living things are merely extensions of non-living matter; whether human beings are only quantitatively—but not qualitatively—different from other living things; and the psychology and sociology of human life, including all human institutions.

In other words, in the origins debate people have actually been debating many of the traditional philosophical questions, questions which have exercised thinkers for millenia. No wonder the debate is not progressing. Because of this problem, I shall do

## Accepting the idea of an old earth does not mean that one accepts Darwinism.

theological matters, allows for the possibility that theistic Darwinism is a correct position.<sup>31</sup> Bible-believing Christians were found on both sides of the Arkansas school case.

I disagree vigorously with those who either accept Darwinism or merely allow for it. But there is no evidence that the authors just cited are not Christian; nor is there evidence that they do not take the Bible seriously. They believe every word of the first chapters of Genesis. I think their interpretation of those chapters is wrong; but I cannot claim that they do not believe the Bible.

two things in the remainder of this article and in the last article of this series.

First, I shall remove certain parts of the discussion from the debate because they are peripheral and interfere with resolving the main problem.

Second, I shall apply a Christian understanding of the relation between God, the creator, and his creation to the question of origins. Using this approach, Christians can become much more united on origins questions than they are. I do not despair of bringing some recent creationists, ancient creationists, and theistic Darwinists into the

same camp.

I devote the remainder of this article to showing how certain of the origins questions are peripheral; the next article (1) presents what I think Christians should accept as the relation between God and creation and (2) shows that this approach can unite Christians on the origins question.

### The Age of the Universe, A Peripheral Matter

Recent creationists claim the universe was created about 10,000 years ago. They maintain that a young age is either confirmed by or consistent with a wide variety of physical phenomena. Some say that the Flood made the Grand Canyon;<sup>32</sup> that Velikovsky-like interplanetary catastrophes explain much geology;<sup>33</sup> that dinosaur and human footprints are found together in stone; and that time has been dilated, with the result that the universe seems to be much older than it actually is.<sup>34</sup> Recent creationists cite many more kinds of evidence.

Often Darwinists equate belief in creation with belief in a recent creation. Thus, in a debate over Darwinism a representative of the American Humanist Association assumed that believing the earth to have been created is the same as accepting a young earth.<sup>35</sup> Darwinists rarely discuss ancient creationism.

But accepting the idea of an old earth does not mean that one accepts Darwinism. Daniel Wonderly, a Christian geologist, emphasizes this point.<sup>36</sup> The two ideas, old earth and Darwinism, need to be uncoupled. If recent and ancient creationists made this point more clearly and more frequently, then the Christian scientific community—and perhaps even the non-Christian scientific community—would have a different attitude. As matters stand, however, Richard Bube could claim that the position of Davis Young, a geologist, is unique because Young was committed to an old earth but not to evolution.<sup>37</sup>

In my opinion, the arguments of recent creationists against an old earth are not con-

vincing. I refer to the refutation of their arguments concerning such matters as radioactivity,<sup>38</sup> Velikovsky-like catastrophes,<sup>39</sup> uniformitarianism,<sup>40</sup> the supposedly human footprints found with dinosaur footprints,<sup>41</sup> the earth's meteoric influx,<sup>42</sup> the geological consequences of the flood,<sup>43</sup> the supposed time dilation phenomenon,<sup>44</sup> the supposed drift in the magnetic field of the earth, and the supposed change in the speed of light.<sup>45</sup>

The positive evidence in favor of an old earth seems to be convincing. Many different dating methods support this view. Among them are several radioactive methods, especially the potassium-argon method.<sup>46</sup> The presence in nature of certain atomic isotopes and the absence of certain other isotopes indicate a very great age for the earth. Here is the reasoning used for that method: if the earth is very old, one would not expect to find in mines or other places in the earth any atomic isotopes which decay by radioactivity within a few thousand years to other isotopes; such an isotope would have disappeared long ago, unless it was made recently by decay of another atomic isotope. Many short-lived isotopes have been produced in laboratories, but they are not found in the earth. Given the number of such known isotopes which are not, however, in the earth, the probability that the earth is only 10,000 years old is essentially zero.

Wonderly has listed seventeen methods for determining age which do not depend upon radioactivity; all give a great age for the earth.<sup>46</sup>

We should, however, be realistic about the positions people take on the age of the earth: recent creationists do not and will not accept evidence for a great age, while ancient creationists are certain that the age is great. If they cannot work together until they agree on age, they may never work together. But the age question should not divide them on the question of the evolution of one life form from another. Age and evolution are not relevant. Atheistic Darwinists cling to the



idea that once it is shown that the earth is old, Darwinism is proved. But they are wrong; the age of the earth and Darwinism are separate matters. Recent and ancient creationists should not let atheistic Darwinists set the agenda for the debate on origins. Atheistic Darwinists are guilty of badly flawed logic when they claim or, at least imply that if a living organism is old, it has evolved from another form. Christians must refuse to fall into the trap of linking age to evolution.

### The Second Law of Thermodynamics

Many opponents of Darwinism advance arguments based on the second law of thermodynamics. Their arguments use the second law to refute Darwinism in two ways. Do not confuse these two uses of the second law. I shall now evaluate these two uses of the second law.

One of the second-law arguments against Darwinism calls attention to a consequence of the validity of the second law, namely, the tendency, with the passage of time, of systems to become less ordered. Those who use this argument point out that according to Darwinism, more complex or more ordered organisms appear at later times in history. If the second law is true, they say, then more ordered organisms would not appear. There is a serious flaw in this argument which has been pointed out many times. This is the problem: the second law predicts that a system isolated from its surroundings will become less ordered. Most natural systems are not isolated.<sup>47</sup>

Consider a small lake in the fall of the year. As time passes, the temperature drops and the lake freezes. Ice is more ordered than liquid water; the lake "system" becomes more ordered as time passes. But the lake is not isolated from its surroundings: heat energy present in the lake in the fall leaves the lake in the winter and moves to the cold air above the lake. The lake does not violate the second law of thermodynamics. If, however, a lake or any other liquid water

system were isolated from its environment and it froze in spite of its isolation, the second law would be violated.

Under what circumstances might we observe the disordering effect predicted by the second law? If we introduce a piece of ice into a very large, previously evacuated container, some or all of the ice vaporizes as time passes. Such a change takes place even if the container is isolated. The vapor is more disordered than the ice; disorder spontaneously appears, as the second law predicts.

Living systems are not isolated from their environment. In order to live, they must have food and other sources of energy. Therefore, the appearance of more complexity in a given organism as it grows is not in itself evidence of violation of the second law. Nor is the appearance of greater complexity in a community of organisms (the complexity predicted by Darwin) contrary to the second law.

But what happens if the food and other energy sources are included in the system containing the organism or the community of organisms? Energy flow in such systems has been investigated. Some persons claim that the results of such investigations show that Darwinism is possible; others disagree.<sup>48</sup> Until there can be general agreement on what these results mean, the second law of thermodynamics should not be used to prove the impossibility of the ordering process postulated by Darwinism. Furthermore, whenever either recent or ancient creationists neglect the condition that the system be isolated, they bring down scorn on their cause. Those opposed to them claim that neglecting this condition proves that creationists misunderstand science.

The other anti-Darwinism argument using the second law of thermodynamics does not suffer from the flaw of the first argument. Using both the first and the second laws of thermodynamics, one can predict certain chemical reactions supposed to have taken place to produce life from non-life. Here calculations show that the probability of the

occurrence of the necessary sequence of reactions is vanishingly small.<sup>49</sup> I shall discuss the significance of this conclusion in the next article.

## Macroevolution

Perhaps those who oppose Darwinism ought to be unusually careful in their discussion of the appearance of new species. Let me explain.

By "appearance of new species" I do not refer to microevolution. Rather, I refer to great changes, such as the appearance of vertebrates where before only invertebrates existed. Large jumps are sometimes called evidences of macroevolution. Since the history of living things has been worked out largely by means of examining fossils, these jumps are the gaps in the fossil record. The only mechanism for such evolution generally accepted by evolutionists is natural selection, proposed by Darwin; therefore, those who accept macroevolution are Darwinists. As mentioned earlier, a few evolutionists do renounce natural selection.

For the present, the discussion is limited to plants and animals; the appearance of human beings and also the very first appearance of life are not included.

Usually recent and ancient creationists reject Darwinism for two reasons: (1) Genesis 1 mentions several separate creations. (2) There are large gaps in the fossil record. It seems, however, that Darwinist vs. creationist debates usually center on the fossil record argument.<sup>50</sup> Sometimes an author develops an argument against evolution from the gaps in the fossil record and only later asks readers to consider the question in terms of creation by God.<sup>51</sup> At other times gaps in the fossil record are linked to Genesis 1.<sup>52</sup> Thus, Pun suggests that God created the prototypes of each "kind" in six geological eras.<sup>53</sup>

A few evolutionists are not Darwinists. Thus, F.B. Salisbury accepted evolution but presented a strong argument against gene mutation by natural selection.<sup>54</sup> Also, N.

Macbeth, opposed to creationists' explanation of origins, claims that Darwin's ideas on natural selection and survival of the fittest must be abandoned.<sup>55</sup>

If the Bible teaches that God created separately, then evolution across the gaps did not occur. Then there is no need to worry about the fossil evidence. But suppose there is a legitimate question about what the Bible teaches? What do the fossils tell us?

It seems to me that the evidence for evolution across the gaps is extremely weak. I do not, however, want to rest the case for our undoubted Christian faith on the absence of transitional fossils. Observe what can happen when one uses the absence of transitional fossils to "prove" some part of the Christian faith. Perhaps examining a problem unrelated to living things will illustrate the point.

This is the problem: how was the moon formed? Whitcomb and De Young discussed several different scientific theories which attempt to account for its origin.<sup>56</sup> Each of these theories begins with the idea that the matter of the moon was once in another form; perhaps it was dust; perhaps it was part of the earth; and so forth. Therefore, each theory is an evolutionary theory. Whitcomb and De Young find a fatal flaw in each theory. They state that these flaws constitute proof that the moon did not evolve; it was created as it is. But suppose that another scientific theory, one which does not seem to possess a fatal flaw, is brought forward? (In fact, it has been claimed that Whitcomb and De Young are not correct in claiming fatal flaws for all existing theories for the origin of the moon.) Is it fair to make Christian belief in creation vulnerable to new scientific theories?

So it is with gaps in the fossil record. The person who adopts as article of faith the idea that there are great gaps is continually on the defensive. After all, it is really no contest if one scientist looks in the gaps to find fossils, while another scientist looks in the gaps to find non-fossils. A baseball team might have a very good defense, but if it never comes to

bat it will score no runs and, unless its defense is perfect, will lose every game. The inherent difficulty of the defensive on the fossil record matter extends to flaws which have been found in the postulated evolutionary mechanisms: if natural selection combined with gene mutation is proved to be a poor evolutionary mechanism, one should not assume that someone will not present a mechanism which at least seems to be better.

The tendency of some Christians to dwell too much on gaps in the fossil record has been noticed many times and is not a good Christian witness. An example of such a poor witness is the emphasis some Christians have given to perfect "ideal types"—i.e., created "kinds" in a perfect world, starting points for microevolution. This position has left these Christians open to the charge of adopting Plato's concept of ideal types, an unbiblical idea.<sup>57</sup>

Thus, Christians can fall into the positivist trap. Positivists maintain that at one time human beings knew so little about the world about them that they ascribed events they could not explain—earthquakes, thunder, and so forth—to the action of gods. But now, in the scientific age, say positivists, human beings know what causes earthquakes and thunder, and so the need for a god is removed. God is therefore—in the eyes of positivists—God only of the gaps in our knowledge. It is all too obvious that some persons make God the God of the gaps in the fossil record. They are dangerously near positivism.

The only argument against evolution across gaps which is absolutely dependable must be derived from the Bible. This is not to say that scientific evidence will not play a role in such an argument; after all, the Lord can and does speak through his creation. It is possible, as we shall see, that our scientific knowledge combined with our understanding of who God is and how he cares for his creation, that we can learn of his miraculous acts. I shall explain this approach to the problem in the next article.

## Summary

The origins question is very large, covering all of creation and its history. We can make debate of this question less complicated by removing elements which actually do not belong. We should eliminate the problem of age from the origins discussion because great age does not prove evolution occurred. We should also drop one use of the second law of thermodynamics because it is an incorrect use. And we should handle macroevolution with great care.

## ENDNOTES

<sup>1</sup>See, for example, William Lane Craig, "Philosophical and Scientific Pointers to *Creatio ex Nihilo*," *Journal of the American Scientific Affiliation*, 32 (1980), 5 (hereafter cited as *JASA*); Gordon Brown, Letter, *JASA*, 32 (1980), 190.

<sup>2</sup>Owen Gingerich, "Is Steady-State Cosmology Really Dead?" *JASA*, 24 (1972), 8.

<sup>3</sup>J.R. Van de Fliert, "Fundamentalism and the Fundamentals of Geology," *JASA*, 21, (1969), 69. For a response to Van de Fliert, see Henry M. Morris, Letter, *JASA*, 22 (1970), 36.

<sup>4</sup>Alan Hayward, *Creation and Evolution* (London: Triangle, 1985), p. 105.

<sup>5</sup>Hayward, p. 137.

<sup>6</sup>Perry G. Phillips, "Meteoric Influx and the Age of the Earth," *JASA*, 28 (1976), 14.

<sup>7</sup>Davis A. Young, *Creation and the Flood* (Grand Rapids: Baker Book House, 1977), p. 183.

<sup>8</sup>Hayward, p. 97.

<sup>9</sup>See, for example, Sidney W. Fox, Kaoru Harada, Gottfried Krampitz, and George Mueller, "Chemical Origin of Cells," *Chemical and Engineering News*, 48, No. 26 (1970), 80.

<sup>10</sup>Richard M. Lemmon, "Chemical Evolution," *Chemical Reviews*, 70 (1970), 95; Richard M. Lemmon, "Life's Origin and the Supernatural," rev. of *The Mystery of Life's Origin: Reassessing Current Theories*, by Charles B. Thaxton, Walter L. Bradley, and Roger L. Olsen, *Chemical and Engineering News*, 63, No. 26 (1985), 26.

<sup>11</sup>E. Broda, *The Evolution of the Bioenergetic Processes* (New York: Pergamon Press, 1978).

<sup>12</sup>Bolton Davidheiser, a recent creationist, refuses to designate small changes "microevolution" on the grounds that use of the term prejudices the argument in favor of macroevolution; see Bolton Davidheiser, *Evolution and Christian Faith*, (Philadelphia: Presbyterian and Reformed, 1969), p. 16.

<sup>13</sup>For example, most people accept statistical evidence linking tobacco use and cancer; they are not convinced,

to the contrary when someone objects that the mechanism of tobacco action has not been elucidated.

<sup>14</sup>See, for example, Paul H. Seely, "Adam and Anthropology: A Proposed Solution," *JASA*, 22 (1970), 88.

<sup>15</sup>James M. Houston, "The Origin of Man," *JASA*, 34 (1982), 1.

<sup>16</sup>Arthur Custance, *Genesis and Early Man* (Grand Rapids: Zondervan, 1975).

<sup>17</sup>Henry M. Morris, *King of Creation* (San Diego: CLP Publishers, 1980).

<sup>18</sup>Quoted by Jerry D. Albert (*JASA*, 35 (1983), 54) from the journal *Creation/Evolution*.

<sup>19</sup>Paul Fayter, "Scientific Creationism and Its Critics," *JASA*, 37 (1985), 104. Fayter makes this observation in connection with his evaluation of *Abusing Science: The Case Against Creationism*, by Philip Kitcher, who opposes both recent and ancient creationism.

<sup>20</sup>William Tinkle, *Heredity: A Study of Science and the Bible* (Houston: St. Thomas Press, 1967). Tinkle opposes Darwinism but regrets the intensity of some people who are also in opposition.

<sup>21</sup>Paul Fayter, evidently a theistic Darwinist, decries the zeal of some atheistic Darwinists.<sup>19</sup>

<sup>22</sup>L. Beverly Halstead in *Science and Creationism*, ed. Ashley Montague (Oxford University Press, 1984), p. 240.

<sup>23</sup>John Byl, "Instrumentalism: A Third Option," *JASA*, 37 (1985), 11.

<sup>24</sup>David J. Evans, "Evolution: Before and After," *JASA*, 26 (1974), 123.

<sup>25</sup>L. Duane Thurman, *How to Think About Evolution and Other Bible-Science Controversies* (Downers Grove, IL: InterVarsity Press, 1978).

<sup>26</sup>H. Harold Hartzler, Communication, *JASA*, 35 (1983), 107.

<sup>27</sup>D. Gareth Jones, "Evolution: A Personal Dilemma," *JASA*, 29 (1977), 73.

<sup>28</sup>Richard P. Aulie, "The Post-Darwinian Controversies," *JASA*, 34 (1982), 24.

<sup>29</sup>Jerry D. Albert, "A Biochemical View of Life," *JASA*, 29 (1977), 76.

<sup>30</sup>Richard T. Wright, "Responses in Specific Fields: Evolutionary Biology," *JASA*, 31 (1979), 194.

<sup>31</sup>Richard H. Bube, "Creation: (A) How Should Genesis Be Interpreted?" *JASA*, 32 (1980), 34; Richard H. Bube, "Creation: (B) Understanding Creation and Evolution," *JASA*, 32 (1980), 174.

<sup>32</sup>J.N. Moore and H.S. Slusher (eds.), *Biology: A Search for Order in Complexity* (Grand Rapids: Zondervan Publishing House, 1970).

<sup>33</sup>Loren C. Steinhauer, "The Case for Global Catastrophism," *JASA*, 25 (1973), 129.

<sup>34</sup>D.W. Kupke, Communication, *JASA*, 31 (1979), 60.

<sup>35</sup>Bette Chambers, Communication, *JASA*, 33 (1981), 233.

<sup>36</sup>Daniel E. Wonderly, Letter, *JASA*, 35 (1983), 63.

<sup>37</sup>Richard H. Bube, rev. of *Christianity and the Age of*

*the Earth*, by Davis A. Young, *JASA*, 35 (1983), 113.

<sup>38</sup>Clarence Menninga, rev. of *Why Not Creation and Scientific Studies in Special Creation*, ed. by Walter E. Lammerts, *JASA*, 25 (1973), 121.

<sup>39</sup>Robert C. Newman, "The Astrophysics of *Worlds in Collision*," *JASA*, 25 (1973), 146.

<sup>40</sup>Davis A. Young, "Flood Geology Is Uniformitarian!" *JASA*, 31 (1979), 146.

<sup>41</sup>Richard P. Aulie, "The Doctrine of Special Creation. Part II. Catastrophism," *JASA*, 27 (1975), 75; see also Hayward, p. 149.

<sup>42</sup>Hayward, p. 141; see also Phillips.

<sup>43</sup>Ross O. Barnes, "Thermal Consequences of a Short Time Scale for Sea-Floor Spreading," *JASA*, 32 (1980), 123; see also Young, *Creation* and Young, "Flood Geology."

<sup>44</sup>David J. Krause, "Astronomical Distances, the Speed of Light, and the Age of the Universe," *JASA*, 33 (1981), 235.

<sup>45</sup>Hayward, p. 137 and p. 139.

<sup>46</sup>Daniel E. Wonderly, "Non-Radiometric Data Relevant to the Question of Age," *JASA*, 27 (1975), p. 145; see also Hayward, p. 106.

<sup>47</sup>For a presentation of the two sides of this discussion, see D.T. Gish, "A Consistent and Biblical Scientific View of Origins," in *Creation and Evolution*, ed. D.C. Burke (Leicester, England: Inter-Varsity Press, 1985), p. 139; and D.C. Burke, "Response to D.T. Gish," p. 164 of the same book. See also Hayward, pp. 154-155.

<sup>48</sup>For a discussion of this question, see Jerry D. Albert, "New Insights into Thermodynamics," *JASA*, 30 (1978), 143 (a Communication); and a response by Walter Bradley, "Problems of Chemical Evolution Not Solved by Prigogine," *JASA*, 31 (1979), 127 (a Letter).

<sup>49</sup>Charles B. Thaxton, Walter L. Bradley, and Roger L. Olsen, *The Mystery of Life's Origin: Reassessing Current Theories* (New York: Philosophical Library, 1984).

<sup>50</sup>For a detailed debate on this subject, see John N. Moore and Roger J. Cuffey, "Dialogue on Paleontologic Evidence and Organic Evolution," *JASA*, 24 (1972), 160.

<sup>51</sup>Edmund Jack Ambrose, *The Nature and Origin of the Biological World* (New York: John Wiley and Sons, 1982); see also Thaxton, Bradley, and Olsen.

<sup>52</sup>David L. Willis, "Alternative Views of Evolution," *JASA*, 27 (1975), 2; David L. Willis, "Creation and/or Evolution," *JASA*, 29 (1977), 68.

<sup>53</sup>Pattle P.T. Pun, "A Critical Evaluation of Evolution," *JASA*, 29 (1977), 84.

<sup>54</sup>Frank B. Salisbury, "Natural Selection and the Complexity of the Gene," *Nature*, 224 (1969), 342.

<sup>55</sup>Donald Munro, rev. of *Darwin Retried: An Appeal to Reason*, by Norman Macbeth, *JASA*, 25 (1973), 120.

<sup>56</sup>John C. Whitcomb and Donald B. DeYoung, *The Moon: Its Creation, Form, and Significance* (Winona Lake, IN: BMH Books, 1978).

<sup>57</sup>Richard P. Aulie, "The Doctrine of Special Creation. Part III. The Ideal Type," *JASA*, 27 (1975), 126.