

Can Theistic Evolutionism Explain the Origin of Morality? A Young-Earth Creationist Response

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Abstract

In recent years there has been a growing body of literature in which theistic evolutionists advance arguments in support of their belief that evolution, properly understood, best describes God's work of creation. As they see it, there are mainly two obstacles in the way of an evolutionary account of morality: reductionism in science and a literal-historical reading of Genesis 1–3. The aim of this paper is to draw attention to some of their theological and philosophical arguments and the problems they create for both themselves and young-earth creationists. My starting points are the biblical picture of natural kinds, the image of God, and Jesus' understanding of Genesis 1–3. I then evaluate some of the weaknesses in the main arguments theistic evolutionists advance in support of their evolutionary account of morality. The conclusion is that theistic evolutionism is not only inconsistent with Scripture but also philosophically incoherent.

Keywords: agency, brain, conscience, consciousness, emergent, ethics, evolution, human nature, morality, naturalism, physicalism, reductionism, theistic evolution

Introduction

If we accept that morality and ethics are about good and evil, right and wrong, and the truth and falsehood of moral beliefs (Holmes 1984), then it is only consistent with being a biblical Christian to exhibit thought and modes of moral reasoning that are consonant with God's nature and revelation in Scripture. However, many people today who refer to themselves as Christians exhibit thought and modes of moral reasoning that are consonant with secular science. Or, to put it differently, their goal is to provide an understanding of the origins of life, man, and morality that could be acceptable to the naturalistically oriented mind. These Christians are generally known as theistic evolutionists.

Whereas some theistic evolutionists prefer to describe themselves as “evolutionary creationists” or “Christian evolutionists” (Lamoureux 2010),¹ others prefer to call their position “BioLogos” (Collins 2007, pp.201–203; Giberson and Collins 2011). In recent

years theistic evolutionists produced a growing body of literature in which they advance arguments in support of their belief that “evolution, properly understood, best describes God's work of creation” (Giberson and Collins 2011, p.251; cf. Brannan 2007, 2011; Jarvis 2007; Lamoureux 2008, 2009, 2010; Miller 1982, 1993; G. Murphy 2006; Pope 2007; Van Till 1998, 1999, pp.161–218; Wacome 1997).² Let us look at their statement from the perspective of what it implies and what theistic evolutionists consider as main obstacles to a proper understanding of evolution.

The first implication is that theistic evolutionists, in contrast to their atheistic counterparts, possess a proper understanding of evolution. Some identified “inappropriate forms of reductionism” in science (Pope 2007, p.56) as an obstacle to a proper understanding of evolution, including an evolutionary account of morality. The second implication is that every reader of Genesis who understands Genesis 1–3 as inerrant and

¹ Some theistic evolutionists, such as Dr. Denis Lamoureux, are quick to distinguish their “Christian evolutionism” from those of pantheists, otherwise known as process theists or simply naturalistic theists, because they hold that the “world is god's body and god is the world's mind/soul” (Lamoureux 2010, p.30). Dr. David Sloane's objection to pantheistic process theism is that it “is inconsistent with key affirmations of the sovereignty and transcendence of God” (Sloane 2003, p.3). But that should not distract us from the fact that all variants of theistic evolutionism share at least three beliefs: (1) life originated from non-life and humans from ape-like creatures over millions of years; (2) the process is a fully natural part of the normal causal process of the world, never a supernatural interruption thereof (cf. Griffin 2000, pp.5–6 with Lamoureux 2010, pp.31–32, fn.*); (3) the rejection of a literal-historical reading of Genesis 1–3.

² Others expressed their convictions in more or less the same terms. Biologist Keith Miller said that he sees “no reason to reject an evolutionary origin of mankind. In fact, the testimony of both Scripture and nature is that we share a oneness with the rest of creation” (Miller 1993, p.4). Philosopher Donald Wacome said that “the evolutionary account of human origins confronts the concept of special creation. The Scriptures say many things that at face value conflict with late 20th-century scientific opinion, but they are not generally seen as problematic” (Wacome 1997, p.1). Creationists such as Terry Mortenson (2009a, 2009b) and Ken Ham (2001) have shown that the arguments of Christian evolutionists in favor of a non-literal understanding of the biblical record of Creation amount to nothing less than a rejection of biblical authority (Ham and Mortenson 2009) and a questioning of the nature and character of God (cf. Grigg 1996).

literal history is greatly misguided. This is, without exception, considered to be the greatest obstacle in the way of a proper understanding of evolution. Physicist Howard van Till was representative of theistic evolutionists when he said, “If it were not for that reading of the scriptural text, there would not be the widespread belief in special creationism that we see today” (van Till 1999, p. 211; cf. Berry 2007; Hood 2009; Jarvis 2007; Lamoureux 2010; Miller 1982; Sloane 2003). So with these two obstacles out of the way there would be no theological or philosophical justification for a wholesale rejection of evolution. Put another way, theistic evolutionists seem to say that theological and philosophical justification for a rejection of the evolutionary story of evolution derives from an inappropriate understanding of science and the Bible. Whether they are able to overcome the problems which their arguments create for themselves and young-earth creationists³ remains to be seen. The third implication of their statement that evolution, properly understood, best describes God’s work of creation is that the Creator waited patiently for thousands of years before He revealed to followers of Darwin how He actually created the world. To this implication theistic evolutionists offer no obstacle, and neither do they find anything odd about it.

What I will do in the rest of this paper is to show that theistic evolutionists create theological and philosophical problems that make it impossible for us to accept an evolutionary explanation of the origins of morality. I will take as my starting points the biblical picture of natural kinds, the image of God, and how Jesus understood Genesis 1–3, which I consider to be the greatest obstacle to any non-literal understanding of those chapters. I will then evaluate some of the weaknesses in the main arguments theistic evolutionists advance in support of their evolutionary account of morality.

Section I: Natural kinds and the Image of God

Natural kinds

Genesis 1 records that God created vegetation, plants, fruit trees, sea creatures, birds, cattle, creeping things, and beasts of the earth to reproduce according to their kind (Genesis 1:11, 21–25). Elsewhere Scripture refers to, for example, “the falcon after its kind,” “every raven after its kind,” “the ostrich, the short-eared owl, the sea gull, and the hawk after its kind,” “the heron after its kind,” “the locust, cricket,

and grasshopper after its kind,” and the mole, mouse, lizard, gecko, crocodile and chameleon “after its kind” (Leviticus 11:14, 15, 16, 19, 22, 29, 30; see also Genesis 6:19–20). These texts allow us to make at least six reasonable inferences.

First, the created kinds were created in mature form and completely functional. Second, each of the created kinds can be called a “natural kind”,⁴ for each was endowed by the Creator with the ability to naturally reproduce seed or offspring after its kind. Third, to have been ready to reproduce their own kind and to absorb nutrients from the ground or obtain food in some way implies that they had to be equipped with certain capacities befitting their particular natures. The point can also be stated differently. Each of the natural kinds had been equipped with a nature which determines the kinds of activities appropriate to and natural for that entity to have (for example, a dog to bark, and a fish to swim). From this follows that the capacities, properties, tendencies or dispositions of every particular kind of thing are grounded in the nature of that thing, and that the nature determines the function of abilities and parts and not vice versa. James 3:7 provides insight into this point. Unfortunately, “species” is wrongly translated from the Greek word *phusis*, as it ought to be kind (Vine 1984, p. 621; cf. Louw and Nida 1988, p. 588; Zerwick 1988, p. 697). The word *phusis* derives from *phuō*, meaning “to bring forth or produce.” As such it signifies “the nature (that is, the natural powers and constitution) of a person or thing” (Vine 1984, p. 775). Fourth, the created natural kinds must have been endowed with inherent limits and boundaries beyond which kind variation could not go. Why would that follow? It is natural to think that it is impossible for a fruit tree to reproduce an animal, and impossible for an animal to reproduce a human being, although natural to think that members of, for example, the dog, sheep, or horse kind to interbreed and reproduce varieties of itself.⁵ Fifth, if every created natural kind had a nature peculiar to itself, then it is the inherent or implanted nature that answers the question: What is it that makes something the kind of thing that it is? And sixth, the nature accounts for the continuity and identity of the entity through change over time. In this regard it becomes important not to confuse change with alteration; the coming and going of properties is a kind of change called alteration. For example, a leaf (a thing) can change from green to red or brown (not

³ Young-earth creationists believe that God created heaven and earth, including vegetation, plants, and living beings in six literal days of 24-hours each, as opposed to old earth (also known as day-age or progressive) creationists who believe that the days of creation can be interpreted in terms of millions or billions of years.

⁴ “Created kinds” as natural kinds are succinctly captured by the concept of baramin, a concept derived from the Hebrew words *bara* (“create”) and *min* (“kind”) (Frair 1999, p. 5).

⁵ That natural kinds (baramin) reproduce only their own kind “is clearly seen (or rather not seen) in our world today, as there are no reports of dats (dog+cat) or hows (horse+cow)” (Purdum and Hodge 2008, p. 1). Even if two animals or fruits can produce a hybrid, the members will still be of the same kind (for example, mules—from horse and donkey, and pluots—from a plum and apricot).

the color green to the color red or brown) and still be the same leaf.

This brief analysis of created natural kinds allows us to formulate a very important principle: a first member in any series of subsequent members can only pass on what it has in its nature to pass on to subsequent members. This principle makes it reasonable to think that if a human being is a person and also a conscious moral agent, that a human person will bear similarities to God as the supreme Person and maximally moral Agent.

The image of God

The first chapter of the Bible reveals that the Almighty God, after having created the various natural kinds with the ability to reproduce according to their kind, went ahead and created the first human beings. The Bible is very specific, although not exhaustive, about the details of the manner in which God created the first human beings (Genesis 2:7, 20–23). It reveals that both Adam and Eve were the result of a series of intentional and direct acts of God; He created both Adam and Eve in His image or likeness (Genesis 1:26–27; cf. 9:6), and afterwards declared all of His creative work “very good” (Genesis 1:31). The Bible is also very specific about the natural reproductive abilities of Adam (and Eve—“the mother of all living”—Genesis 3:20): Adam “begot *a son* in his own likeness, after his image...” (Genesis 5:3). This text confirms our principle of first members established above.

It will be useful to look at just one text in the New Testament and see what it reveals about the image of God in man. In James 3:9 it is written:

With it [that is, the tongue—verse 8] we bless our God and Father; and with it we curse men, who have been made in the similitude of God.

I highlight three points relevant to our purposes. Firstly, the text is a direct reference to the Genesis record of creation, thus a literal-historical understanding of Genesis 1 and 2. Secondly, by implication and entailment, man’s origin and the image of God is of sufficient importance and value that it warrants both our respect (a moral attitude) and appropriate action to avoid insulting it (conduct). And thirdly, the text confirms the relation between man and the One whom they image (cf. Colossians 3:10). It becomes accordingly important that we establish what is meant by image or likeness of God.

Theologian Robert Saucy stated that,

The most dominant view throughout most of the history of the church has been the view that sees the image as consisting of characteristics within

human nature...[image] has been commonly associated with the inner psychological and spiritual qualities of man which are analogous to God’s and distinguish man...from animals. These center in the characteristics of freedom and the capacities for reason and morality (Saucy 1993, p. 23).

According to the *Wycliffe Bible Dictionary*, “Man, like God, is a person; both he and God have the characteristics of personality: intellect, will, emotion, self-consciousness, and a moral nature” (Pfeiffer, Vos and Rea 1975, p. 102). One aspect of the constitution of human beings is their conscience. The same dictionary describes “conscience” as an innate and universal characteristic, a “sense of moral awareness or *oughtness*,” in all men (Pfeiffer, Vos and Rea 1975, p. 376). The word “conscience” derives from the Greek term *suneidēsis* which means “knowledge shared with one’s self” (Ladd 1974, p. 477). That this is so can be seen in Scripture’s reference to, for example, the prompting of the conscience of King David (1 Samuel 24:5; cf. Psalm 32), and the apostle Paul’s reference to his own conscience (Acts 23:1) and those of non-Christians (Romans 2:14–16).

In reference to Romans 2:14–16, Saucy has this to say: (1) the function of the conscience is to “act as a witness and judge of human actions, either accusing or defending those who do them,” and (2) although its “activity is primarily retrospective judging of past actions,” it “also evaluates future actions urging compliance with the moral standard” (Saucy 1993, p. 37). The “moral standard” is commonly referred to as the “moral law” of God within man (Romans 2:15), but includes moral concepts we derive from our cultural traditions (cf. 1 Corinthians 8:7, 12). These texts imply that the human moral sense is an innate property of human nature; it is something that has its origin in God, and is also not something entirely destroyed by the Fall of Adam and Eve.⁶

Let me conclude with one final observation. The facts of the biblical record of creation put theistic evolutionists under huge pressure to explain to us how human nature and the moral sense, as part of that nature, can “emerge” from ape-like ancestors (so-called hominids) over millions of years, when they entirely lacked these properties. In contrast to theistic evolutionists, biblical creationists are under no such pressure. We have seen that God not only created kinds of things and equipped them with abilities appropriate to and natural for them to exercise, but also that the Creator made the first humans in His image. This means that creationists already have a first instance of a maximally moral Person; in God they have a First Member and paradigm case of what a conscious, moral agent is, and accept therefore

⁶ For a creationist defense of Adam as having been created as a free moral agent and who could distinguish between right and wrong before the Fall, see Joubert (2011a).

that their inner psychological, spiritual, and moral properties, capacities and qualities are analogous to that of their Creator. In other words, they accept that human persons are ontologically, epistemologically and morally analogous to God.

With this in mind, we can now consider the greatest stumbling block in the way of a non-literal understanding of Genesis 1–3. The stumbling block is nothing less than our Lord’s understanding of those chapters.

Jesus and Genesis 1–3

What Jesus Christ, our Lord, thought about the history of the earth and man ought to be of no little concern to Christians, and accepting what He taught, including what He taught from Genesis, is beyond question a mark of discipleship. The apostle John recorded this fact in no uncertain terms: “Then Jesus said to those Jews who believed Him, ‘If you abide in My word [that is, teachings], you are My disciples indeed...’” (John 8:31). In John 5 Jesus told His listeners, and now His readers: “For if you believed Moses, you would believe Me; for he wrote about Me. But if you do not believe his writings, how will you believe My words?” (John 5:46–47). What Jesus said in reference to the writings of Moses there can be no doubt: He did not contradict Moses. Let us briefly consider a number of things Jesus said in reference to what is written in Genesis 1–3.

1. On the beginning of the earth and the creation of human beings: “... ‘Have you not read that He who made *them* at the beginning “made them male and female,” and said, “For this reason a man shall leave his father and mother and be joined to his wife, and the two shall become one flesh”? So then, they are no longer two but one flesh. Therefore what God has joined together, let not man separate” (Matthew 19:4–6); “But from the beginning of creation, God ‘made them male and female’” (Mark 10:6); “For *in* those days there will be tribulation, such as has not been since the beginning of the creation which God created until this time, nor ever shall be.” (Mark 13:19).

It is self-evident that Jesus, by connecting the “beginning of creation” with “male and female” confirmed a young earth, for God created heaven and earth in six days (cf. Exodus 20:8–11), and Adam and Eve on the sixth day of creation; He showed that He took Genesis 1 (vv. 26–27) and Genesis 2 (vv. 21–24) as equally literal; He showed that He regarded the record of Genesis 1 and 2 as literal history, and showed a linear understanding of time: from the beginning of creation until the present world (cf. 2 Peter 3:1–7, 10, 12).

2. On Abel and the foundation of the world: “Therefore the wisdom of God also said, ‘I will send them prophets and apostles, and *some* of them they will kill and persecute,’ that the blood of all the prophets which was shed from the foundation of the world...from the blood of Abel to the blood of Zechariah...” (Luke 11:49–51).

Luke shows that Jesus connected the “foundation of the world” with the existence of Abel, which implies that Abel’s parents, Adam and Eve, must have been literal people (cf. Genesis 4).

3. On Satan: “You are of *your* father the devil, and the desires of your father you want to do. He was a murderer from the beginning, and does not stand in the truth, because there is no truth in him. When he speaks a lie, he speaks from his own *resources*, for he is a liar and the father of it” (John 8:44). The apostle John also wrote that “...the devil has sinned from the beginning. For this purpose the Son of God was manifested, that He might destroy the works of the devil” (1 John 3:8).

The reference to Satan undoubtedly refers to the fall of Satan and his role in the deception of Eve and the killing of Abel by his brother Cain.⁷ This means that Jesus took these events as something that really happened. Thus, to believe in a creation, including of Adam and Eve, over millions or billions of years, as theistic evolutionists maintain, calls into question the authority of Jesus. Put another way, a non-literal interpretation of Genesis 1–3 would have to disregard Jesus’ literal-historical understanding of those chapters. It is accordingly appropriate to consider the reasoning of some theistic evolutionists on this important issue and, by so doing, to make sense of their interaction with and approach to Scripture.

Section II: Theistic evolutionism

Genesis 1–3

Drs. Karl Giberson and Francis Collins (2011), physicist and executive vice president of The BioLogos Foundation, and geneticist and founder of BioLogos respectively, told their readers that “God is an artist bringing beauty from ugliness and order from disorder...the world is good (Genesis 1:31). The pinnacle of that goodness is humankind, made in God’s image and charged by God to be caretakers of the creation” (Giberson and Collins 2011, p. 102). Readers who take these statements on face value would be disappointed. In fact, they are quite misleading. Firstly, Genesis 1:31 does not teach that God created the world “good,” as stated by the authors, but rather as “very good.” The authors also seem to miss or ignore what “very good” in the context in which it was uttered by the Almighty implies and entails: the Creation could not have been

⁷ For more comprehensive discussion of the issues relating to items 1–3, see Kelly (1997), Kulikovski (2009), Mortenson (2008, 2009b), and Mortenson and Ury (2008).

in a very good condition or state if there was “ugliness” and “disorder” prior to the utterance of the Almighty in Genesis 1:31.⁸ Their statement is therefore in contradiction with Scripture and incoherent.

Secondly, both sentences create the impression that the authors believe in the literal truth of Genesis 1–3 when they do not:

[W]e do a great disservice to the concept and power of inspiration when we reduce it to mere factual accuracy, as though God’s role were nothing more than a divine fact checker, preventing the biblical authors from making mistakes (Giberson and Collins 2011, p. 102).

Readers may wonder, why are the authors quoting Scripture (that is, Genesis 1:31) if they seem to think it is not factually accurate? Elsewhere they put it this way: that

Adam was created from dust and God’s breath; Eve was created from Adam’s rib; the animals, fish and birds were created by divine commands: ‘let there be...’ None of these ‘explanations’ can possibly be actual descriptions (Giberson and Collins 2011, p. 208).

Why can they not be actual descriptions? The answer is simple, not because they are not factual, but because the evolutionary story of origins cannot be reconciled with it, plain and simple.

For professor of theological and social ethics Stephen Pope, Adam and Eve “stand symbolically for the entire human race” (Pope 2007, p. 154);

Biological death is not imposed by God on a previously immoral human nature as a punishment for the sin of Adam and Eve (Pope 2007, p. 155).

Pope seems to miss the most obvious point: there simply was no human nature before the appearance of the first human beings on earth. Dr. Denis Lamoureux (2010) believes that Adam never existed, and Dr. Daniel Brannan (2007) suggested that we think of Adam as a child, who was unable to distinguish between right and wrong, therefore not responsible for the death, pain, and suffering that entered the world. The least we can say is that the declarations and interaction of theistic evolutions with Scripture is a highly arbitrary and confusing affair.

Does their way of interacting with Scripture bother theistic evolutionists? It does not seem so. Dr. Denis Lamoureux (2010) who holds three doctorates—in

dentistry, a Ph.D. in evangelical theology, and a Ph.D. in evolutionary biology—even quotes Scripture in support of the fact that he is blatantly ignoring the facts of the Bible. This is how he has done that:

The greatest problem with evolutionary creation is that it rejects the traditional literal interpretation of the opening chapters of Scripture... Even more troubling for evolutionary creation is the fact that the New Testament writers, including Jesus Himself, refer to Gen 1–11 as literal history (Matt 19:4–6; Rom 5:12–14; Heb 4:4–7; 2 Pet 2:4–5). Therefore, the burning question is: “How do evolutionary creationists interpret the early chapters of Holy Scripture?” (Lamoureux 2010, p. 34).

Lamoureux acknowledged the exalted nature of Scripture by referring to it as “Holy;” he acknowledged that Genesis 1–11 was accepted by New Testament writers, including our Lord, as literal history, but then went ahead and interpreted Genesis 1–3 as misguided “ancient science”—in one breath. Pope did something similar; he said that

Trust in God leads to trust in, and acceptance of, God’s revelation in the Scriptures and Christian tradition, the center of which is the self-disclosure of God’s purpose to bring human beings into fellowship with God and even to ‘become sharers in the divine nature’ (Pope 2007, p. 88).

The problem is that Pope wrote these words at the same time that he rejects the literal Fall, while he regards the Garden of Eden as myth, while he does not accept that Adam and Eve were literal persons, and while he holds that death existed prior to the entry of human beings into the world (Pope 2007, pp. 154–156)?⁹

Theistic evolutionists seem to adopt a shopping-list hermeneutical approach to Scripture. On the one hand they establish a biblical standard of acceptability for their assertions, which is nothing less than the truth of Scripture; they then seem to place themselves under that standard of acceptability, and end up by contradicting their standard of acceptability. This is not only inconsistent with being a Christian, but also utterly self-refuting. On the other hand, their approach allows them to offer solutions to what they perceive to be problematic with a literal-historical reading of Genesis 1–11, and by so doing, ignoring the evidence that does not support their solutions.¹⁰

⁸ See also Lubenow (1998).

⁹ For a discussion of the biblical concept of death, see Stambough (2008, pp. 373–397); for a defense of a biblical account of evil, see Mortenson (1999a), and for reasons why the evolutionist idea of a pre-Adamic race cannot be reconciled with Scripture, see Lubenow (1998). About those who hold to the “scientific” millions of years of creation, “death, pain, and suffering in Genesis 1,” James Stambaugh wrote: “They try to hold to some of the orthodox moorings of Christian theology, yet they include many doctrines that contradict what they say they believe” (Stambaugh 2008, p. 385).

¹⁰ Interestingly enough, theistic evolutionist Howard van Till raised a similar criticism against old earth creationists: “...old earth special creationism, by its choice to accept the scientifically derived timetable for cosmic history, is in the exceedingly awkward position of attempting to interpret some of the Genesis narrative’s pictorial elements (interpreted as episodes of special creation) as historical particulars but treating the narrative’s seven-day timetable as being figurative. I see no convincing basis for this dual interpretive strategy” (van Till 1999, p. 211). Young-earth creationists cannot agree more.

The same criticism has been raised against them by atheistic evolutionists. Prominent professor of evolutionary biology Jerry Coyne (2009) at the University of Chicago concluded his review of two books by theistic evolutionists as follows: “Attempts to reconcile God and evolution keep rolling off the intellectual assembly line. It never stops, because the reconciliation never works.”

I will now focus on some of the more philosophical problems that theistic evolutionists have to resolve before they can conclude that the evolutionary story of creation can explain the origin of morality. I will begin with their starting points (assumptions).

The premises of theistic evolutionism

Collins appeared to have spoken for all theistic evolutionists when he said, “There are many subtle variants of theistic evolution,” and that any “typical version rests upon” six premises (Collins 2007, p.200). Of relevance, for our purposes, are premises 4–6, which Collins stated as follows:

4. Once evolution got under way, no special supernatural intervention was required.
5. Humans are part of the process, sharing a common ancestor with the great apes.
6. But humans are also unique in ways that defy evolutionary explanation and point to our spiritual nature. This includes the existence of the Moral Law (the knowledge of right and wrong) and the search for God that characterizes all human cultures throughout history.

He then added:

If one accepts these six premises, then an entirely plausible, intellectually satisfying, and logically consistent synthesis emerges: God, who is not limited in space and time, created the universe and established natural laws that govern it (Collins 2007, p.200).

Premises 4–6 imply that the evolutionary process is to be understood in purely naturalistic terms. Thus, to think that God, for example, somewhere along the evolutionary process miraculously infused some ape-like creature with a human and moral nature, would be a mistake. It further implies that any account of what happened in the past and present can only be given in terms of the physical laws and processes of nature: from chemicals to organisms, and ape-like creatures to humans. So understood means theistic evolutionists have a huge amount of explanatory work to do. Firstly, we need an account of human nature and what it is that makes us human. Is there something like a human nature, and how did humans evolve a moral sense if they evolved from creatures who engaged in immoral acts, such as killing, and when these creatures had no moral awareness at all? Secondly, if it is the brain that explains our human

nature and moral sense, as theistic evolutionists believe it does, then we need an explanation of how consciousness, as an important property of a moral agent, can “emerge” from unconscious matter or impersonal physical process in or of the brain?

I will look at each of their accounts in that order. But before I do that, it is important to see why some theistic evolutionists take offense to reductionism in science and the sort of problems theistic evolutionists create for biblical Christians.

Scientific reductionism

For people like Pope who think that human evolution and Christian morality are compatible, the problem is not evolution per se. As he sees it,

The single most imposing obstacle to understanding the proper relation between Christian ethics and human evolution lies in the inappropriate forms of reductionism presumed by sociobiology and evolutionary psychology (Pope 2007, p.56).

Pope correctly identifies three kinds of reductionism: methodological, epistemological, and ontological.

In his view methodological reductionism is entirely legitimate, but epistemological and ontological reductionism are not. Although methodological reductionism has its limits, it is a common research strategy for examining phenomena in terms of their constituent parts. It has its limits because it is not always possible comprehensively to explain a whole in terms of its parts, for example, to account entirely for human behavior in terms of genetic make-up. Epistemological reductionism, he says, is the “unprovable presupposition” (Pope 2007, p.61) that there is only one class of explanation for all phenomena, namely, natural science (physics, chemistry and biology being the sub-classes, with physics as the most fundamental in the hierarchy). In other words, epistemological reductionists (the mental posture known as scientism) hold the premise that science is our only path to knowledge. Pope correctly points out that scientism is a philosophical choice and not something provable by the methods of science. Finally, ontological reductionism, also known as materialism or physicalism, is the thesis that the only kinds of things that exist in the world are matter or physical in nature, given the thesis of epistemological reductionism. But ontological reductionism also entails ontological naturalism, the “unproven assumption” that only entities or processes found in nature are real (Pope 2007, p.70). In a nutshell, if epistemological and ontological reductionism and naturalism are true, then talk of immaterial entities such as God, angels, souls, spirits, and minds will make no sense.

Since methodological reductionism is considered as an entirely legitimate way of viewing the work

scientists do, what we need to establish is whether it can be embraced by a Christian in such a way as to continue to maintain Christian faith. Theologian and philosopher Nancey Murphy who teaches Christian philosophy at Fuller Theological Seminary has this to say about science:

[F]or better or for worse, we have inherited a view of science as methodologically atheistic, meaning that science...seeks naturalistic explanations for all natural processes. Christians and atheists alike must pursue scientific questions in our era without invoking a creator... (Murphy 2007, pp. 194, 195).

It looks as if Murphy expects Christians who do science to become intellectual schizophrenics: in their hearts they are allowed to believe that the existence of God explains certain facts (states of affairs) in the world, but in public explain them in naturalistic terms—at least to scientists. While she offered a reason why she thinks this should be so, namely, convention or tradition, she offered no reason why that should remain so. But Murphy's call leads to a further and related problem, which is simply this: she makes it impossible for biblical Christians to think and believe they possess any knowledge of the world at all. And here I have in mind knowledge of the kinds of things that exist, their origin, and their natures. Let me explain.

On the one hand, according to theistic evolutionists, young-earth creationists make a mistake to read Genesis 1–3 in a literal sense. On the other hand, they cannot consult science on questions of the nature of the soul, spirit, and/or the mind to explain their moral sense and awareness, for science cannot tell us anything about the existence of entities that cannot be studied by their methods. I can put the dilemma which theistic evolutionists create for creationists slightly different. On the one hand, Scripture cannot make an appeal to knowledge, unless sanctioned by science. If it does, then it must wait until validated by or accepted by the methods of the scientific community. This point is clearly implied by Collins when he said: "Science is the only reliable way to understand the natural world..." (Collins 2007, p. 6). But on the other hand, immaterial entities such as God, the soul, spirit, and mind cannot be invoked to explain our moral sense, because "methodological atheism" (to use Murphy's words) has already "discovered" that God, the soul, spirit, mind, self, I, or me do not exist (see, for example, atheist psychologist Steven Pinker 2002, pp. 31, 42). Here is how Murphy expressed her agreement with methodological atheism:

[N]euroscience is now completing the Darwinian revolution, bringing the mind into the purview of

biology. My claim, in short, is this: all of the human capacities once attributed to the immaterial mind or soul are now yielding to the insights of neurobiology... (N. Murphy 2006, p. 88).

Elsewhere Murphy (1998) concluded that there is a "massive amount of evidence" which suggests that we no longer "need to postulate the existence of a soul or mind in order to explain life and consciousness" (Brown, Murphy, and Malony 1998, p. 17).¹¹ The real reason why she and fellow theistic evolutionists found such "evidence" in the neuro-sciences is very simple:

Immaterial souls just do not fit with what we know about the natural world. We human persons evolved by natural selection...[which is] part of the natural order, but immaterial souls are not" (Baker 2007, p. 341).

We can summarize. Murphy and fellow theistic evolutionists make it difficult for us to believe that methodological reductionism can be embraced by a Christian and continue to maintain Christian faith. Theistic evolutionists realized that the existence of certain realities resist being explained by the evolutionary story of origins. Put another way, they realized that certain entities are not naturally at home in their worldview. It is therefore no surprise that theistic evolutionists seem to have found in neuroscience "evidence" for their views, for the brain is something neuroscientists can study. But what is surprising is that they continue to believe they have evidence in support of their views when there is actually none (see Beauregard and O'Leary 2007; Chalmers 2007, pp. 226, 232; Joubert 2011b; Moreland 2008; Tallis 2010). Yet their mission remains single-minded, and that is to convince Christians that the secrets to knowledge of their natures lie in knowledge of the brain.

Human nature and the brain

It is important to know that evolutionists, including theistic evolutionists, do not believe in the notion of permanent, unchanging natures or that the human soul sets humans apart from animals (Green 2005; Jeeves 2005; Pope 2007, pp. 148–149). For one thing, natures are not things biology can explain. For another thing, if natural kinds possess an unchanging nature, then evolution would be impossible. In the words of biologist Professor Ernst Mayr:

The outstanding characteristic of an essence [essential nature] is its unchanging permanence....If species had such an essence, gradual evolution would be impossible (Mayr 1987, p. 156).

Philosopher David Hull shared Mayr's insight:

¹¹ Her "Christian physicalist" account of the mind, "nonreductive physicalism," is also a view many of her colleagues at Fuller Theological Seminary seem to share with her, for example, psychologists Warren Brown and Malcolm Jeeves (1999), theologian/philosopher Philip Clayton (2006), and theologian Joel Green (2008).

The implication of moving species from the metaphysical category that can be appropriately be characterized in terms of “natures” to a category for which such characterizations are inappropriate are extensive and fundamental. If species evolve in anything like the way that Darwin thought they did, then they cannot possibly have the sort of natures that traditional philosophers claimed they did. If species in general lack natures then so does *Homo sapiens* as a biological species. If *Homo sapiens* lack a nature, then no reference to biology can be made to support one’s claims about “human nature.” Perhaps all people are “persons,” share the same “personhood,” etc. but such claims must be explicated and defended *with no reference to biology*. Because so many moral, ethical, and political theories depend on some notion or other of human nature, Darwin’s theory brought into question all these theories (Hull 1989, pp. 74–75).

There is, therefore, just one strategy left for an evolutionist to follow, if he or she wishes to continue to believe in evolution, and that is to deny that natural kinds have essential natures. In other words, by continuing to invent hypotheses and models that would suit the evolutionary story of “evolving species.” But the evolutionary understanding of human nature creates a second problem for the theistic evolutionist.

Giberson and Collins, for example, speculated that “various human characteristics might be built into the evolutionary process” (Giberson and Collins 2001, p. 204), but such speculation is totally without foundation. If humans descended from hominids, as evolutionists believe they did, then we will be unable to say where “humans” began and where they end. Put another way, where one kind of nature begins and another ends in its evolutionary development is wholly arbitrary. The logical implication is simply that there is no such thing as a human nature. It is, therefore, inconsistent for proponents of theistic evolution to even refer to or talk about human nature.

Theistic evolutionist and philosopher Donald Wacome stated, to have been able to function as his [God’s] agents in the created world, representing him as they [Adam and Eve] exercise dominion over the creation...[makes it] reasonable to suppose that human beings performing these functions presupposes their having certain characteristics (Wacome 1997, p. 7).

While he is prepared to concede that no “convincing scientific theories of how we came to have these characteristics are generally currently available” and that “these characteristics comprise the image of God,” it “adds nothing to the argument against the possibility of a naturalistic [evolutionary] explanation...” (Wacome 1977). The problem is that Wacome does not present to us an explanation of

how a physical, mindless, and unconscious process can produce entities with a mind, consciousness, and conscience. But since Wacome believes that no “plausible interpretation of the *imago Dei* [image of God] maintains that it is our physical resemblance to God that is involved here, since he [God] is not a material being” (Wacome 1997), it follows that it can only be an immaterial soul or spirit person (an angel) that bears relevant similarity to the supreme Person. If that is true, then theistic evolutionists cannot explain the existence of soul or spirits that are the bearers of consciousness and moral sensibilities. Moreover, if nature consists entirely of physical processes, then it follows that from the physical by means of the physical only the physical can come.

There is a third problem for theistic evolutionists. Pope reasons as follows:

It is important to distinguish the wilful decision to reject divine love from the broader notion of evil, which includes the disorder and harm that result from the workings of nature on finite beings. The fact that animals become sick and die, that they often kill to eat... all these are natural conditions... These are not “good and evil” in any religious or moral sense, but simply biological benefits and costs to various organisms. From a Christian perspective, the Creator has made a world in which nature runs its course (Pope 2007, p. 14).

What we see is that Pope concedes that sickness, killing and death are natural for animals; their behavior are described in value-neutral terms, but not the disorder that follows from human sin. So at what point in human evolution has a previously value-neutral action (for example, one ape killing another ape over feeding or mating rights) become a “moral” one? Theistic evolutionists advance at least two arguments to answer this question. The first is that it is the brain, more specifically, the size of the brain and certain capacities that emerged from the brain (cognitive, emotional, social, consciousness, self-consciousness, and choice), which make creatures like us human. The second argument is that humans did not inherit a moral nature from hominids, but instead evolved new brain capacities, and it was only at the point when they exercised those capacities that they become moral creatures (Pope 2007, pp. 132, 132, 143, 147–148, 187). Let us briefly consider each of the arguments.

Is it really true that it is the brain or size of the brain that makes us human? And if it is true, can evolutionists explain this, as opposed to merely asserting it as a fact of evolution? Eminent neuroscientist Professor Joseph LeDoux (1997), who adheres to the view that it is the brain that makes us human, admitted that he and his fellow neuroscientists are unable to explain this fact: “We

have no idea how our brains make us who we are” (Horgan 1999, p. 473). The late Harvard University geology professor Stephen Jay Gould, and leading evolutionist in his day, put it as follows:

But why did such a large brain evolve in a group of small, primitive, tree-dwelling mammals, more similar to rats and shrews than to mammals conventionally judged as more advanced? And with this provocative query I end, for we simply do not know the answer to one of the most important questions we can ask (Gould 1977, p. 191).

In contrast to theistic evolutionist and psychiatrist Dr. Curt Thompson who reasoned that it is the so-called reptilian, paleomammalian and paleocortex that serve as evidence for the “similarities between humans and animals... that we are deeply connected to the rest of creation” (Thompson 2010, p. 41), evolutionist and professor of physics James Trefil at George Mason University described the theory as “simple, elegant, clear, and completely wrong” (Trefil 1997, p. 75).

The second argument of theistic evolutionists, namely, that it was only at the point when humans evolved new brain capacities and exercised those capacities that they developed moral natures, seems to have the details the wrong way around. Our biblical account of natural kinds showed that it is a nature (or essence) that answers the question of what it is that makes something what it is. On this account, if a fish changes into a dog, then the fish ceases to exist and a dog came to be; no thing can lose its nature and continue to exist. Now if, as theistic evolutionists hold, a set of brain capacities gives rise to or causes a human moral nature to emerge, then a human who loses the capacity to reason, remember or speak (for example, when the brain is damaged), must lose parts of his nature. But this means that a dog who does not bark cannot be a dog, and a human person who has parts of his brain removed cannot be human, and that is absurd. So, after all, evolutionists are right; they cannot explain why the brain makes us human or moral, simply because it is not the brain or any bodily organ that makes us what we are (although we do not deny that the brain makes it possible for us to manifest aspects of our personhood and humanness, including our moral sense and awareness. Likewise, eyes do not see; they only make it possible for entities with eyes to see with them).

It remains for us to look at the second major challenge facing theistic evolutionists, and that is to explain how consciousness, as a property of a moral agent, can emerge from physical and unconscious matter.

Consciousness and the nature of agency

Recall that according to some theistic evolutionists, the existence of immaterial entities such as the soul, spirit, or mind are no longer required to explain the origin of life and consciousness; neither is the soul the kind of entity that fits into the natural world. If this is true, then the only kinds of entities that exist in the world are material or physical in nature. From this follows that a human being is merely a physical entity, a material body with a brain and central nervous system. Let us call this metaphysical view “Christian monism.”¹²

Now, since nature “as a whole is organized in such a way as to produce more and more complexity and higher and higher capacities for responsiveness, intelligence, and consciousness” (Pope 2007, p. 112), what we need to know is, can consciousness “emerge” from physical, mindless and unconscious matter (the brain) or impersonal physical process in or of the brain? Again, if it can, can evolutionists explain this? Before we consider their answer, it is crucial that we understand an important distinction first, and that is between emergentism as an ontological thesis and emergentism as an epistemological thesis. The former thesis entails that new structures, patterns and properties at any level in an ontological hierarchy or system (in this case, the brain) are caused by the interaction between entities or parts at a level or levels below it, irrespective of the number of levels postulated. The epistemological thesis entails that each higher level requires its own description, for instance, physics at the base, followed by chemistry, biology, psychology, and so on. The crucial point about the ontological thesis is, the “fundamental causal processes remain, ultimately, physical” (Clayton 2006, p. 6).

For evolutionists the answer to our question is simply a question about how the brain works to produce mental states even though neurons (brain cells) are unconscious. Philosopher David Chalmers stated it as follows: “...almost everyone allows that experience arises one way or another from brain processes, and it makes sense to identify the sort of process from which it arises” (Chalmers 2007, p. 231). The logic of “arise” means, of course, “emerged from” or “caused by” the brain. If that is true, then this logic leads to the bizarre idea that an experiencer emerges from experiences in or of the physical processes of the brain. However, there are two problems which Chalmers identified for those who wish to explain intelligence and consciousness as emerging from the complexity of the brain, both devastating to the beliefs of theistic evolutionists. The first is that they “have no good explanation of how and why” that could happen.

¹² Monism is the philosophical doctrine that the world consists of only one kind of stuff. Physicalist monists say that if you start with a physical effect, you cannot go back and search for a non-physical cause (Papineau 2001).

The second is, “cognitive science and neuroscience fail to account for conscious experience... [N]othing that they give to us can yield an explanation” (Chalmers 2007, pp. 226, 232).¹³

So it appears that evolutionists use the brain to explain phenomena the nature of the brain is unable to explain. It follows that neither can moral agency be explained in terms of physical, mindless, and unconscious processes of the brain. Why is that so? First, a moral agent is a person with special capacities as part of his constitution—thoughts, beliefs, desires, sensations (feelings), the ability to know, understand, evaluate (judge), and so on. Secondly, an agent must possess consciousness, otherwise he would be unable to present to himself possible courses of action and evaluate whether a given action is appropriate or not, including evaluating whether his beliefs, desires, feelings, or thoughts—associated with the action—are relevant or not. Thirdly, an agent must remain the same through change. And fourthly, an agent must be free in two senses: he must be able to do something freely and must have the ability to do otherwise, or have willed to do otherwise.

Why must the agent remain the same person or self throughout change over time? The biblical answer is because of the judgment that awaits every person that ever lived on earth (cf. 2 Corinthians 5:10). I can put it this way: a person who committed a crime a week ago and is now standing in front of the judge cannot be punished for his crimes if he is now different to the person he was a week ago. But theistic evolutionist and professor of biology Daniel Brannan reasoned differently. He suggested that a human being is always in a process of becoming one, rather than being a stable and constant being (Brannan 2007, p. 198). If that is the case, then praise or blame (human or divine) serve no purpose. Moreover, our biblical account of natural kinds militates against Brannan’s reasoning. A zygote, for example, does not become more of its kind or changing into something different to the kind the zygote already belongs to (that is, being human). The zygote matures as a member of its kind and nature, which guides that maturity. Kittens are immature cats, not potential cats, and the same truth applies to fetuses. They are immature persons and not potential persons.

There seem to be a reason why moral agency, intelligence and consciousness cannot be reconciled with evolution, which creates a further problem for theistic evolutionists. Naturalist John Bishop explained it this way:

[T]he problem of natural agency is an ontological

problem—a problem about whether the existence of actions can be admitted within a natural scientific ontology... [A]gent causal relations do not belong to the ontology of the natural perspective. Naturalism does not essentially employ the concept of a causal relation whose first member is in the category of person or agent (or even, for that matter, in the broader category of continuant or “substance”). All natural causal relations have first members in the category of event or state of affairs (Bishop 1989, p. 40).

We cannot miss Bishop’s reference to “first member” in the category of person, agent or substance, and the difficulty it poses for an evolutionary account of agency. Evolution cannot explain sameness of identity through change, and evolutionists have difficulty with accommodating the existence of immaterial agents, such as spirits, souls, or substances as first causes of action in the natural world. We have already established that biblical Christians have no such difficulty, and in Section I of this paper we have seen why not: in God they have a first instance (First Member) of what a spiritual, conscious, moral agent is, and can therefore explain why and how it is possible for them to be the first causes of their own actions.

One final remark will be in order. If life just spontaneously began from lifeless, mindless chemical processes, and human beings emerged from apes, as theistic evolutionists hold, then two things seem to follow. First, it would be a miracle, but to accept miracles is to accept that God intervened or interfered with the normal natural process of evolution, which would be inconsistent with and in contradiction to premise 4 of theistic evolutionists. Second, if it is true that humans evolved from hominids then there is absolutely no reason not to think that angels had or could as well. This point creates a dilemma for theistic evolutionists. If they would deny this possibility, then the notion that one kind of entity can cause another entity to come into being when it is different from itself in kind, becomes an incoherent notion; if they would concede that it is possible, then they would accept something that is contradictory to the revelation of Scripture (cf. Psalm 8:4–6; Colossians 1:16; Hebrews 1:7, 14). The point is that what we are confronted with in the evolutionary story of origins is something so implausible that it cannot be true. This is why philosopher Paul Churchland reasoned that

The important point about the standard evolutionary story is that the human species and all of its features are the wholly physical outcome of a purely physical process... if this is the correct account of our origins,

¹³ In this Chalmers is not alone. Philosopher Jerry Fodor (1992) was direct and forthright when he confessed: “Nobody has the slightest idea how anything material could be conscious. Nobody even knows what it would be like to have the slightest idea how anything material could be conscious. So much for the philosophy of consciousness” (Boden 1998, p. 1). Professor of philosophy and psychology Margaret Boden agreed (Boden 1998, p. 10).

then there seems neither need, nor room, to fit any nonphysical substances or properties into our theoretical account of ourselves. We are creatures of matter. And we should learn to live with that fact (Churchland 1984, p.21).

We can paraphrase Churchland's words into a single sentence: what comes from the physical, non-human and non-moral by means of the physical, non-human and non-moral can only be physical, non-human and non-moral.

Summary and Conclusion

Theistic evolutionists have a lot of explanatory work to do. It should be a concern to them that, in order to reconcile the evolutionary story of origins with Scripture, they must necessarily deny that natural kinds have fixed or unchanging natures, that they must reject the sudden and direct creation of Adam and Eve in God's image and, most importantly of all, blatantly ignore our Lord's literal-historical understanding of Genesis 1–3. The problem is that theistic evolutionists interact with Scripture the way most people purchase their groceries: with a shopping-list. Giberson and Collins (2011), for example, informed their readers that they “are evangelical Christians, committed to the historic truths of Christianity and the central role of the Bible in communicating those truths” (Giberson and Collins 2011, p.7). However, the evidence presented in this paper reveals quite the opposite. Lamoureux (2010) believes the Spirit of truth (John 14:17, 15:26, 16:13), who inspired the writers of Scripture (2 Timothy 3:16), accommodated Himself to the misguided “scientific understanding” of the ancient world and, by so doing, allowing it to be recorded in Scripture. If that is the case, then the Spirit of truth has become a deceiver; the Holy Spirit allowed our Lord and Christians to put their trust and faith in nonsense or absurdity and waited patiently for more than 1,850 years before He revealed to followers of Darwin how God actually created the earth, including human beings. The evidence presented in this paper suggests that what theistic evolutionists identified as obstacles to a proper understanding of evolution create for themselves and young-earth creationists more problems than what they can solve.

In sum, a theistic evolutionist account of our moral sense is not only inconsistent with Scripture, but also philosophically incoherent: (1) a first member in any series of subsequent members can only pass on what it has in its nature to pass on to subsequent members; (2) what comes from the physical, non-human and non-moral by means of the physical, non-human and non-moral can only be physical, non-human and non-moral. I conclude that theistic evolutionism cannot explain the origin of morality.

References

- Baker, L. R. 2007. Persons and the metaphysics of resurrection. *Religious Studies* 43, no. 3:333–348.
- Beauregard, M. and D. O'Leary. 2007. *The spiritual brain: A neuroscientist's case for the existence of the soul*. New York, New York: HarperOne.
- Berry, R. J. 2007. Creation and evolution. Not creation or evolution. *Faraday Paper* No. 12, pp.1–4. Retrieved from www.faraday-institute.org on March 11, 2011.
- Bishop, J. 1989. *Natural agency: An essay on the causal theory of action*. Cambridge, United Kingdom: Cambridge University Press.
- Boden, M. 1998. Consciousness and human identity: An interdisciplinary perspective. In *Consciousness and human identity*, ed. J. Cornwell, pp. 1–20. Oxford, United Kingdom: Oxford University Press.
- Brannan, D. K. 2007. Darwinism and original sin: Frederick R. Tennant's integration of Darwinian worldviews into Christian thought in the nineteenth century. *Journal for Interdisciplinary Research on Religion and Science* 1: 187–217.
- Brannan, D. K. 2011. Darwinism and original sin: Frederick R. Tennant's analysis of the Church Fathers' understanding of original sin and an exegesis of St. Paul. *Journal for Interdisciplinary Research on Religion and Science* 8: 139–171.
- Brown, W. S., and M. A. Jeeves. 1999. Portraits of human nature: Reconciling neuroscience and Christian anthropology. *Science and Christian Belief* 11, no. 2:139–150.
- Brown, W. S., N. Murphy, and H. N. Malony, eds. 1998. *Whatever happened to the soul? Scientific and theological portraits of human nature*. Minneapolis, Minnesota: Fortress Press.
- Chalmers, D. 2007. The hard problem of consciousness. In *The Blackwell companion to consciousness*, ed. M. Velmans and S. Schneider, pp. 225–235. Malden, Massachusetts: Blackwell Publishing.
- Churchland, P. M. 1984. *Matter and consciousness*. Cambridge, Massachusetts: MIT Press.
- Clayton, P. 2006. Conceptual foundations of emergence theory. In *The re-emergence of emergence: The emergentist hypothesis from science to religion*, ed. P. Clayton and P. Davies, pp. 1–34. Oxford, United Kingdom: Oxford University Press.
- Collins, F. S. 2007. *The language of God: A scientist presents evidence for belief*. London, United Kingdom: Pocket Books.
- Coyne, J. 2009. Seeing and believing. *The New Republic*. Retrieved from www.tnr.com/article/books/seeing-and-believing on June 11, 2011.
- Fodor, J. A. 1992. The big idea: Can there be a science of mind? *The Times Literary Supplement*, pp. 5–7.
- Frair, W. 1999. Creationist classification—an update. *Creation Matters* 4, no. 1:1–8. Retrieved from www.creationresearch.org/matters.html on March 8, 2011.
- Giberson, K. W. and F. S. Collins. 2011. *The language of science and faith*. Downers Grove, Illinois: InterVarsity Press.
- Gould, S. J. 1977. *Ever since Darwin: Reflections in natural history*. New York, New York: W. W. Norton.
- Green, J. B. 2005. Body and soul, mind and brain: Pressing questions. *Catalyst* 31, no. 2. Retrieved from www.catalystresources.org/issues/312green.html on March 18, 2011.

- Green, J.B. 2008. *Body, soul, and human life. The nature of humanity in the Bible*. Grand Rapids, Michigan: Baker Academic.
- Griffin, D.R. 2000. Process theology and Christian good news: A response to classical free will theism. In *Searching for an adequate God. A dialogue between process and free will theists*, ed. J.B. Cobb, and C.H. Pinnock, pp.1–38. Grand Rapids, Michigan: Wm. B. Eerdmans Publishing.
- Grigg, R. 1996. How long were the days of Genesis 1? What did God intend us to understand from the words He used? *Creation* 19, no.1:23–25. Retrieved from creation.com/how-long-were-the-days-of-genesis-1 on March 8, 2011.
- Ham, K. 2001. The big picture. Being wrong about the six days of creation does not automatically mean someone is not a Christian. But if you think that makes it unimportant, stand back and look at the big picture.... *Creation* 23, no.2:16–18. Retrieved from www.answersingenesis.org/creation/v23/i2/bigpicture.asp on February 9, 2011.
- Ham, K., and T. Mortenson. 2009. Are (biblical) creationists “cornered?” A response to Dr. J.P. Moreland. Retrieved from www.answersingenesis.org/articles/2009/09/11/biblical-creationists-cornered on September 9, 2011.
- Holmes, A.F. 1984. *Ethics. Approaching moral decisions*. Downers Grove, Illinois: InterVarsity Press.
- Hood, A. 2009. An evolutionary account of goodness. *Theology* 112, no. 866, pp. 100–110. Retrieved from tjx.sagepub.com/content/112/866/100 on June 30, 2011.
- Horgan, J. 1999. The undiscovered mind: How the human brain defies replication, medication, and explication. *Psychological Science* 10, no. 6:470–474.
- Hull, D.L. 1989. *The metaphysics of evolution*. Albany, New York: State University of New York Press.
- Jarvis, M. 2007. *God by evolution*. Wellington, RSA: Fact and Faith Publications. Retrieved from www.factandfaith.co.za/GodbyEvolutionsummayNov2010.pdf on February 22, 2011.
- Jeeves, M. 2005. Neuroscience, evolutionary psychology, and the image of God. *Perspectives on Science and Christian Faith* 57, no. 3:170–186.
- Joubert, C. 2011a. Adam, free choice, and the cause of sin: A creationist response to a christian evolutionist *Answers Research Journal* 4:185–194. Retrieved from www.answersingenesis.org/contents/379/arj/v4/Genesis_Adam_freedom.pdf.
- Joubert, C. 2011b. What makes us human, and why it is not the brain: A creationist defense of the soul. *Answers Research Journal* 4:217–232. Retrieved from www.answersingenesis.org/contents/379/arj/v4/human_brain_soul.pdf.
- Kelly, D.F. 1997. *Creation and change. Genesis 1.1–2.4 in the light of changing scientific paradigms*. Ross-shire, Scotland: Mentor.
- Kulikowski, A.S. 2009. *Creation, fall, restoration. A biblical theology of creation*. Ross-shire, Scotland: Mentor.
- Ladd, G.E. 1974. *A theology of the New Testament*. Grand Rapids, Michigan: William B. Eerdmans.
- Lamoureux, D.O. 2008. *Evolutionary creation: A Christian approach to evolution*. Eugene, Oregon: Wipf & Stock.
- Lamoureux, D.O. 2009. *I love Jesus and I accept evolution*. Eugene, Oregon: Wipf & Stock.
- Lamoureux, D.O. 2010. Evolutionary creation: Moving beyond the evolution versus creation debate. *Christian Higher Education* 9 no. 1:28–48. Retrieved from dx.doi.org/10.1080/15363750903018231 on August 1, 2011.
- LeDoux, J. 1997. Parallel memories: Putting emotions back into the brain: A talk with J. LeDoux. *Edge* 6. Retrieved from edge.org/conversation/parallel-memories-putting-emotions-back-into-the-brain.
- Louw, J.P., and E.A. Nida. 1988. *Greek-English lexicon of the New Testament based on semantic domains*. New York, New York: United Bible Societies.
- Lubenow, M.L. 1998. Pre-Adamites, sin, death and the human fossils. *CEN Tech. J.* 12, no.2:222–232.
- Mayr, E. 1987. The ontological status of species: Scientific progress and philosophical terminology. *Biology and Philosophy* 2:145–166. Retrieved from mechanism.ucsd.edu/teaching/philbio/readings/mayr on March 8, 2011.
- Miller, K.R. 1982. Special creation and the fossil record: The central fallacy. *The American Biology Teacher* 44, no.2: 85–89.
- Miller, K.R. 1993. Theological implications of an evolving creation. *Perspectives on Science and Christian Faith* 45:150–160. Retrieved from www.asa3.org/ASA/PSCF/1993/PSCF9-93Miller.html on March 22, 2011.
- Moreland, J.P. 2008. *Consciousness and the existence of God: A theistic argument*. New York, New York: Routledge.
- Mortenson, T. 2009a. Creation theodicy in light of Genesis and modern science: A young-earth creationist response to William Dembski. *Answers Research Journal* 2: 151–167. Retrieved from www.answersingenesis.org/contents/379/arj/v2/Dembski_Theodicy_Refuted.pdf.
- Mortenson, T. 2009b. Systematic theology texts and the age of the earth: A response to the views of Erickson, Grudem, and Lewis and Demarest. *Answers Research Journal* 2:175–200. Retrieved from www.answersingenesis.org/contents/379/arj/v2/Systematic_theology_Erickson_Grudem_Lewis.pdf.
- Mortenson, T., and T.H. Ury. eds. 2008. *Coming to grips with Genesis: Biblical authority and the age of the earth*. Green Forest, Arkansas: Master Books.
- Murphy, G.L. 2006. Roads to paradise and perdition: Christ, evolution, and original sin. *Perspectives on Science and Christian Faith* 58, no. 2:109–118.
- Murphy, N. 1998. Human nature: Historical, scientific, and religious issues. In *Whatever happened to the soul? Scientific and theological portraits of human nature*, ed. W.S. Brown, N. Murphy, and H.N. Malony, pp.1–30. Minneapolis, Minnesota: Fortress Press.
- Murphy, N. 2006. Scientific perspectives on Christian anthropology. *CTI Reflections* 8:82–100. Retrieved from www.lastseminary.com on June 20, 2010.
- Murphy, N. 2007. Phillip Johnson on trial: A critique of his critique of Darwin. In *Intelligent design: Science or religion? Critical perspectives*, ed. R.M. Baird and S.E. Rosenbaum. New York, New York: Prometheus Books.
- Papineau, D. 2001. The rise of physicalism. In *Physicalism and its discontents*, ed. C. Gillett and B.M. Loewer, pp.3–36. Cambridge, United Kingdom: Cambridge University Press. Retrieved from www.kcl.ac.uk/ip/davidpapineau/Staff/Papineau/OnlinePapers/Risephys.html on August 5, 2011.
- Pfeiffer, C.F, H.F. Vos, and J. Rea, eds. 1975. *Wycliffe Bible Dictionary*. Peabody, Massachusetts: Hendrickson Publishers.
- Pinker, S. 2002. *The blank slate. The modern denial of human nature*. London, United Kingdom: BCA.

- Pope, S.J. 2007. *Human evolution and christian ethics*. Cambridge, United Kingdom: Cambridge University Press.
- Purdom, G., and B. Hodge. 2008. Zonkeys, ligers, and wolphins, Oh my! *Answers in Depth* 3:71–73. Retrieved from www.answersingenesis.org/articles/aid/v3/n1/zonkeys-ligers-wholphins on March 5, 2011.
- Saucy, R. 1993. Theology of human nature. In *Christian perspectives on being human. A multidisciplinary approach to integration*, ed. J.P. Moreland and D.M. Ciochi, pp. 17–54. Grand Rapids, Michigan: Baker Books.
- Sloane, A. 2003. Theological boundaries on theistic evolution. In *God, science and divine action—God's interaction with His creation: Collected papers of COSAC2003*, ed. A. Wood and P. Barry. Retrieved from www.lastseminary.com/theistic-evolution/Theological%20Boundaries%20on%20Theistic%20Evolution.pdf on October 9, 2011.
- Stambaugh, J. 2008. Whence cometh death? A biblical theology of physical death and natural evil. In *Coming to grips with Genesis: Biblical authority and the age of the earth*. ed. T. Mortenson, and T.H. Ury, pp. 373–397. Green Forest, Arkansas: Master Books.
- Tallis, R. 2010. What neuroscience cannot tell us about ourselves. *The New Atlantis* 29:3–25. Retrieved from www.thenewatlantis.com/publications/what-neuroscience-cannot-tell-us-about-ourselves on July 16, 2011.
- Thompson, C. 2010. *Anatomy of the soul. Surprising connections between neuroscience and spiritual practices that can transform your life and relationships*. Carrollton, Texas: Saltriver/Tyndale House.
- Trefil, J. 1997. *Are we unique? A scientist explores the unparalleled intelligence of the human mind*. New York, New York: John Wiley & Sons.
- Vine, W.E. 1984. *The expanded Vine's expository dictionary of New Testament words*, ed. J.R. Kohlenberger III. Minneapolis, Minnesota: Bethany House Publishers.
- Van Till, H.J. 1998. The creation: Intelligently designed or optimally equipped? *Theology Today* 55:344–364. Retrieved from ttj.sagepub.com/content/55/3/344.full.pdf+html on June 30, 2011.
- Van Till, H.J. 1999. The fully gifted creation. In *Three views on creation and evolution*, ed. J.P. Moreland and J.M. Reynolds, pp. 161–218. Grand Rapids, Michigan: Zondervan.
- Wacome, D. 1997. Evolution, foreknowledge and creation. *Christian Scholars Review* 26, no. 3:1–11. Retrieved from home.nwciowa.edu/wacome/csr1.htm on May 25, 2011.
- Zerwick, M. 1988. *A grammatical analysis of the Greek New Testament*. Transl. M. Grosvenor. Rome, Italy: Biblical Institute Press.

