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Architecture and Engineering in Created Creatures

page 10

Genesis Doesn't Fit with Deep Time

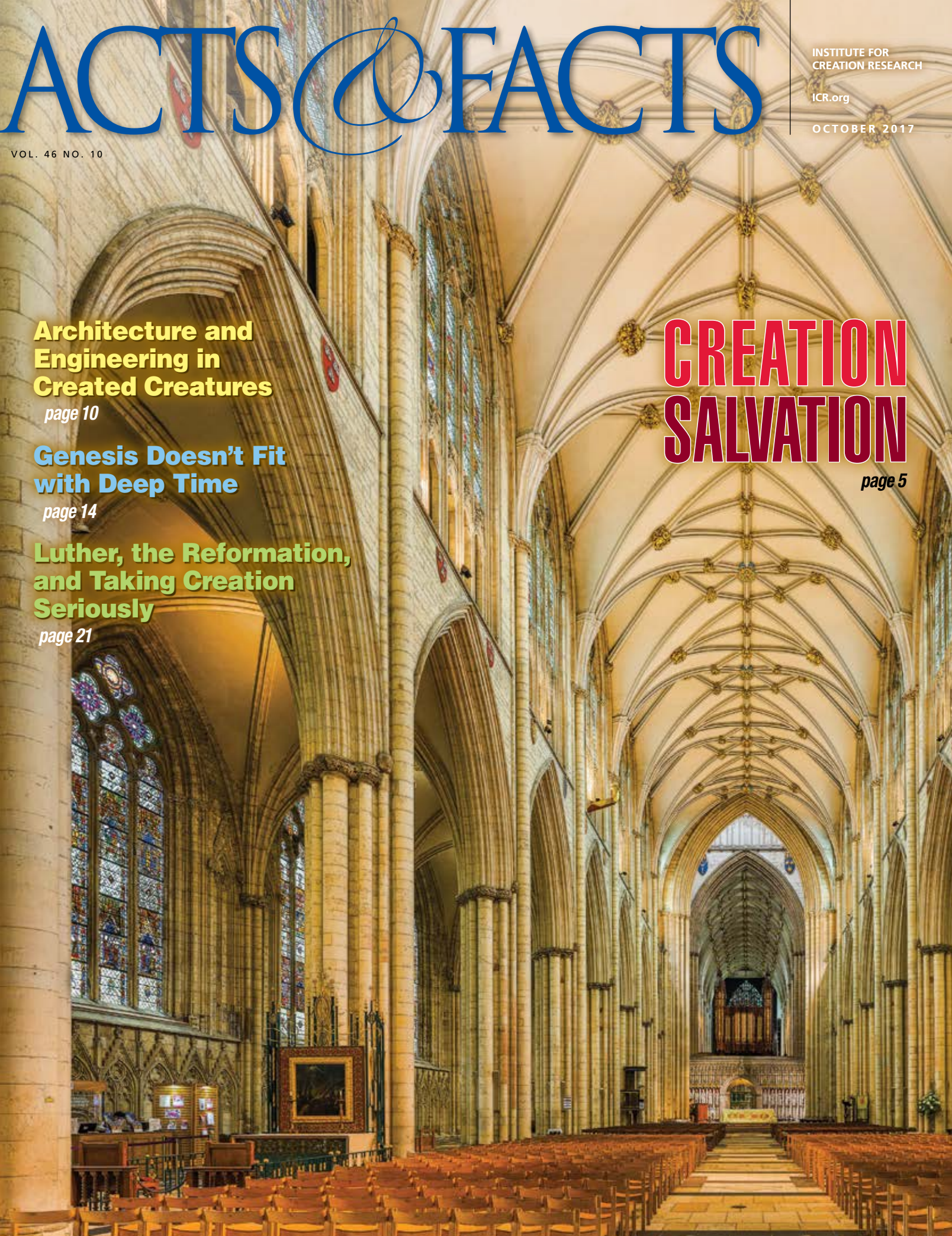
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Luther, the Reformation, and Taking Creation Seriously

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CREATION SALVATION

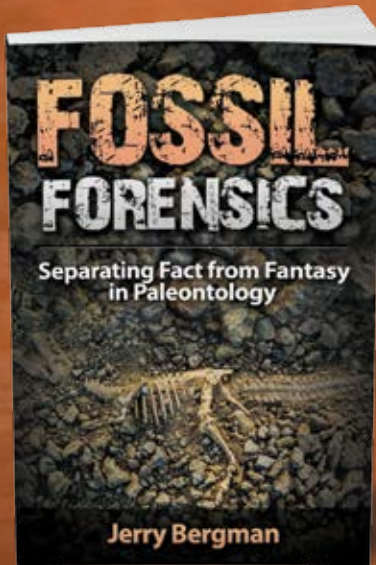
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Two New Books from Dr. Jerry Bergman!

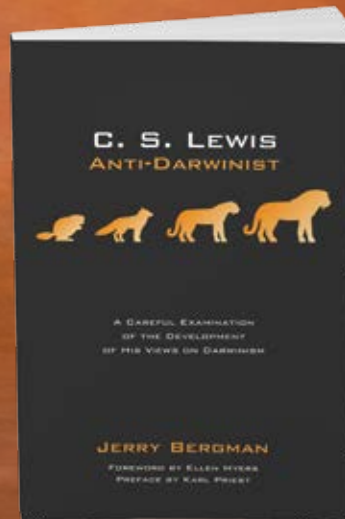
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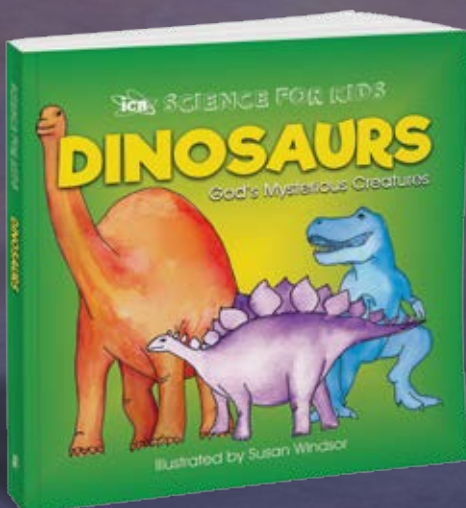
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Details by the Master Architect

When you step into a medieval cathedral, you can't help but wonder at the beauty of the lofty architecture. The intricate details, the incredible design, and the exquisite engineering can leave you breathless. And we all know the perfectly aligned arches and delicate ceiling details that have endured for centuries didn't just happen. Each fitted piece was designed by a master architect and engineer and put in place by a skilled builder, much like all of creation.



In his Engineered Adaptability series article this month, Dr. Randy Guliuzza points out how engineers “may choose from design strategies to deal with the challenge of uncertainty. They may incorporate very complicated systems, or they may try to prevent failure” (“Engineering Causality Is the Answer to Darwinian Externalism,” pages 17-19). Competent engineers consider all possibilities as they design their structures—they leave nothing to chance. I can only imagine the factors engineers had to consider when constructing something as elaborate as a cathedral, but how much more when our heavenly Engineer constructed our universe!

Our Master Architect, Engineer, and Builder carefully designed and orchestrated every detail of the cosmos and put all of creation in motion. ICR's latest DVD series showcases His heavenly handiwork—*The Universe: A Journey Through God's Grand Design*. It's now available for pre-order. I hope you'll watch it with a new sense of awe for the work of our Creator.

In this month's Impact article, Frank Sherwin observes that “medieval architects followed design patterns in much the same way as the Divine Architect who exquisitely designed the bones and skeletons of humans and animals” (“Architecture and Engineering in Created Creatures,” pages 10-12). He describes many ways creature designs display intentional engineering.

The ICR Discovery Center for Science and Earth History is under construction now, and at the time of this writing the builders had begun carefully putting everything in place for the foundation (see the update on page 16). A lot of work went into that foundation, and for very good reason! We need it to stand firm through all kinds of weather and to resist the ever-shifting Texas soil. In a similar way, our Designer provided us with a solid foundation in the first book of the Bible, giving us what we need to stay grounded during the roughest of storms. Dr. Henry M. Morris III says in this month's feature article, “Genesis 1–11 provides the foundation for the rest of Scripture. Without those insights to the beginnings of history, we would be unable to accurately understand” much of what we see in the world (“Creation Salvation,” pages 5-7). Our Designer provided a firm foundation for us.

When encountering ornate and well-crafted structures, we don't ask how many millions of years they took to arise. We marvel and ask *Who built this?* And so it is with the craftsmanship in our solar system, our earthly home, and our incredible bodies. ICR uses science to help people answer this question, marveling at the creative genius of a wise Architect. “For of Him and through Him and to Him are all things, to whom be glory forever” (Romans 11:36).

Jayme Durant
EXECUTIVE EDITOR

CREATION SALVATION

THEREFORE, IF ANYONE IS IN
CHRIST, HE IS A NEW CREATION;
OLD THINGS HAVE PASSED
AWAY; BEHOLD, ALL THINGS
HAVE BECOME NEW.

(2 CORINTHIANS 5:17)

Twice Born

Nicodemus asked the key question “How can a man be born when he is old? Can he enter a second time into his mother’s womb and be born?” (John 3:4). The “natural man” cannot understand the work that God does because His processes are “spiritually discerned” (1 Corinthians 2:14). Prior to being born again (John 3:3), the unsaved human is “dead in trespasses and sins” (Ephesians 2:1).

This deadness is absolute. We are unable even to search for God on our own. The prophet Isaiah identified this condition when he stated, “They do not know nor understand; for He has shut their eyes, so that they cannot see, and their hearts, so that they cannot understand” (Isaiah 44:18). Jesus Himself insisted that “no one can come to Me unless the Father who sent Me draws him” (John 6:44).

Even the faith that is necessary to be-

lieve is the gift from the grace of God that is “not of works, lest anyone should boast” (Ephesians 2:8-9).

Gospel Power

“I am not ashamed of the gospel of Christ, for it is the power of God to salvation for everyone who believes” (Romans 1:16). The good news of God’s love gift of His Son, Jesus Christ, is the all-sufficient power that is “His workmanship, created in Christ Jesus for good works, which God prepared beforehand that we should walk in them” (Ephesians 2:10).

That power had to have the ability to satisfy the holiness of God and make sufficient payment not only “for our sins” but “also for the whole world” (1 John 2:2). In the simplest terms possible, the One who could be the substitute for the sins of the whole world could only be the One who had sufficient power to create the whole world.

The essence of the salvation that takes place when we believe is that we who are “dead in trespasses and sins” (Ephesians 2:1) are transformed—“created according to God, in true righteousness and holiness” (Ephesians 4:24). Do not lose the enormity of this event. God “made Him who knew no sin to be sin for us, that we might become the righteousness of God in Him” (2 Corinthians 5:21).

This deadness is absolute. We are unable even to search for God on our own.

Justice Power

I have quoted many biblical passages thus far. I want to be sure that this message is clearly not mine but the message of Scripture. The message of the substitutionary death of Jesus Christ on the cross is more familiar. Isaiah sets the stage as he compares us to sheep who have “turned, every one, to his own way” and needed the Lord to lay “on Him [the Messiah] the iniquity of us all” (Isaiah 53:6). Please note the “alls” in that verse. *All* of us have gone astray, and *all* iniquity needed to be paid for.

Since the Creator of the universe and everything in it (Colossians 1:16) is absolutely holy (Deuteronomy 32:4; 1 Peter 1:15-16), it must follow that any solution to the justification of sinful man must “demonstrate at the present time His righteousness, that He might be just and the justifier of the one who has faith in Jesus” (Romans 3:26).

Many *Acts & Facts* readers will know this wonderful passage in Romans 8:28-30:

And we know that all things work together for good to those who love God, to those who are the called according to His purpose. For whom He foreknew, He also predestined to be conformed

to the image of His Son, that He might be the firstborn among many brethren. Moreover whom He predestined, these He also called; whom He called, these He also justified; and whom He justified, these He also glorified.

All of hell’s demons were assembled to destroy the work of Christ on the cross. And while He hung on the cross, the inspired psalmist recorded the Lord’s own heart cry:

Trouble is near; For there is none to help. Many bulls have surrounded Me; strong bulls of Bashan have encircled Me. They gape at Me with their mouths, like a raging and roaring lion. I am poured out like water, and all My bones are out of joint; My heart is like wax; it has melted within Me. My strength is dried up like a potsherd, and My tongue clings to My jaws; You have brought Me to the dust of death. For dogs have surrounded Me; the congregation of the wicked has enclosed Me. They pierced My hands and My feet; I can count all My bones. (Psalm 22:11-17)

The awful pathos of Christ’s wrenching cry “My God, My God, why have You forsaken Me?” (Mark 15:34) gives us a pitiful and painful glimpse into the infinite price paid for the sins of the whole world.

Resurrection Power

Yet even before He was put into the tomb, He shouted, “It is finished!” And bowing His head, He gave up His spirit” (John 19:30). The payment had been made. Jesus Christ was leaving His earthly body to preach “to the spirits in prison” that He was victorious over all that death and hell could do to stop Him (1 Peter 3:19). He would lead “captivity captive” (Ephesians 4:8) and ascend “to My Father and your Father, and to My God and your God” (John 20:17).

Death could not hold the Creator of life! “No one takes it from Me,” Jesus said, “but I lay it down of Myself. I have power

to lay it down, and I have power to take it again” (John 10:18). Although neither you nor I could ever see the power that was exercised when the Lord Jesus rose from the dead, laid aside His grave clothes, and set the facial napkin off to the side by itself (John 20:6-7), “He has given assurance of this to all by raising Him from the dead” (Acts 17:31).

The same supernatural creation power is evidenced in the 10 plagues of Egypt and the great miracles of the manna and the provisions for the nation of Israel. Joshua saw it demonstrated when the sun stood still for a whole day and night during the battle with the Amorites. Elijah watched as creation fire consumed the altar in front of the priests of Baal. Hananiah, Mishael, and Azariah walked with the Creator in the fiery furnace of Nebuchadnezzar, and Daniel felt it when the lions refused to kill him in the den.

Jesus Himself used His creation power when He turned the water into wine, gave a new arm and new eyes to deformed men, and raised four-day-dead Lazarus from the grave. The Bible is full of the evidence of God’s omnipotence and omniscience, first demonstrated during the creation week.

And God continues to create every time a spiritually dead sinner is created in true righteousness and holiness when they are twice-born!

Genesis 1–11 provides the foundation for the rest of Scripture. Without those insights to the beginnings of history, we would be unable to accurately understand much of the “what” and most of the “why” of our world.



Inheritance Power

Blessed be the God and Father of our Lord Jesus Christ, who according to His abundant mercy has begotten us again to a living hope through the resurrection of Jesus Christ from the dead, to an inheritance incorruptible and undefiled and that does not fade away, reserved in heaven for you, who are kept by the power of God through faith for salvation ready to be revealed in the last time. (1 Peter 1:3-5)

Paul talks about the “hope of the gospel” to the church in Colosse (Colossians 1:23), and the Lord Jesus promised that He was going away to prepare “a place for you.” And if He was going away to prepare a place for us, He would “come again and receive you to Myself; that where I am, there you may be also” (John 14:3).

The good news would not be too wonderful if all we received at our new creation was a happier heart and a better attitude! No, Paul insisted that if all we had was hope in this life, we would be of “all men the most pitiable” (1 Corinthians 15:19). Jesus promised, “This is the will of Him who sent Me, that everyone who sees the Son and believes in Him may have everlasting life; and I will raise him up at the last day” (John 6:40).

We shall all be changed—in a moment, in the twinkling of an eye, at the last trumpet. For the trumpet will sound, and the dead will be raised incorruptible, and we shall be changed. For this corruptible must put on incorruption, and this mortal must put on immortality. So when this corruptible has put on incorruption, and this mortal has put on immortality, then shall be brought to pass the saying that is written: “Death is swallowed up in victory.” (1 Corinthians 15:51-54)

Neglect the <i>Creation</i>	Neglect the <i>Cross</i>	Neglect the <i>Consummation</i>
There is no <i>Power</i>	There is no <i>Justice</i>	There is no <i>Hope</i>
Omnipotent Omniscient	Sinless substitution Holiness satisfied	Eternal life in absolute righteousness

That is resurrection power and inheritance power wrapped up in one package!

The Full Creation Salvation

Perhaps this little chart will help you remember the full scope of God’s creation salvation. As the Lord opens up opportunities for you to share the gospel with others, remember to give *all* of the good news. This will also help you understand why those of us at the Institute for Creation Research are so strongly committed to presenting the majesty of the truth of the creation week.

That foundational message in Genesis is the basis upon which the rest of Scripture rests. If the words in Genesis 1 are not to be taken at face value, then the rest of Scripture is subject to the whims of human foibles. If the reality of the worldwide judgment of the Flood recorded in Genesis 6–8 is not accurate, then there is absolutely no basis for understanding the text of biblical history.

If God lied to us in the words of Genesis, then how can we trust Him to keep any other promise?

- The fiat creation recorded in Genesis is the best description of the power of God to save you.

- The sentence God passed on Adam and Eve is the best description of the effect of sin on you.
- The provision of clothing by God for Adam and Eve is the best description of the authority of God to forgive you.
- The global Flood recorded in Genesis is the best description of the power of God to judge you.
- The covenant of God to Noah is the best description of the sustaining power of God.

Genesis 1–11 provides the foundation for the rest of Scripture. Without those insights to the beginnings of history, we would be unable to accurately understand much of the “what” and most of the “why” of our world. The efforts of man to exclude God from history have produced the chaos of evolutionary philosophy and the horrific cultural results that plague our world today. The only solution to this and to those who are lost is the creation salvation that comes from God. ✞

Dr. Morris is Chief Executive Officer of the Institute for Creation Research. He holds four earned degrees, including a D.Min. from Luther Rice Seminary and an MBA from Pepperdine University.



If God lied to us in the words of Genesis, then how can we trust Him to keep any other promise?



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How Did *Homo naledi* Get in That Cave?

Homo *naledi* is the most recent claim of a human evolutionary ancestor.¹ Exactly what the bones represent remains unclear, but they are certainly not human.² An additional mystery is how the bones ended up in the hard-to-reach chamber where they were found. My recent paper sheds light on this topic and offers a new emplacement method that fits the creation model for the post-Flood world.³

The original 1,550 *H. naledi* bone fragments were discovered in South Africa in 2013 in a remote cave called Dinaledi Chamber.¹ Recently published age estimates indicate they are from the Pleistocene or Ice Age.⁴ An additional 131 fragments of *H. naledi* bones were found in a nearby cave site called the Lesedi Chamber in the same system.⁵ This cave is about 200 feet from the Dinaledi Chamber, and they share a common entrance chamber.

Lead researcher Lee Berger and his team proposed that the bones were deliberately placed there by living *H. naledi* in a burial ritual.^{6,7} As *National Geographic* reported, “Disposal of the dead brings closure for the living and confers respect on the departed, or abets their transition to the next life. Such sentiments are a hallmark of humanity.”⁸ It was further suggested that the disposal took place over an

extended period of time.⁹

The second discovery of *H. naledi* specimens in the nearby chamber adds to the mystery.⁵ Two separate discoveries make it less likely that the *H. naledi* remains in the Dinaledi Chamber were deliberately cached. Why place bodies in the Dinaledi Chamber, with its tortuous and narrow passages that can take an hour to traverse,¹⁰ if other *H. naledi* were being disposed of nearly simultaneously and in the same system in a chamber much easier to reach?

At least two of the geologic units found in the cave could have been deposited as one event—units 2 and 3b, as described by Paul Dirks.^{3,4} If these units were deposited simultaneously, as the physical geology indicates, then all the *H. naledi* bones could have been emplaced in a single flooding episode (or possibly closely spaced episodes) of the cave system that caused the spill of suspended clays and *H. naledi* remains to drain into both the Dinaledi and Lesedi Chambers (Figure 1).

The emplacement of *H. naledi* in the Dinaledi and Lesedi Chambers may be nothing more than a consequence of extreme Ice Age climate fluctuations when Africa was experiencing more rainfall from the effects of the recent global Flood. Flash-flooding may have transported either previously de-



Too small to be human. The braincase of the *H. naledi* skull measures only 560 cubic centimeters in volume—not even half that of the modern human skull depicted behind it.

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ceased bodies or *H. naledi* taking refuge in the cave entrance and floated the partial remains to the chambers of the cave system. As the flood subsided, the bones simply lowered into place in the observed random orientations in which they were found. ☞

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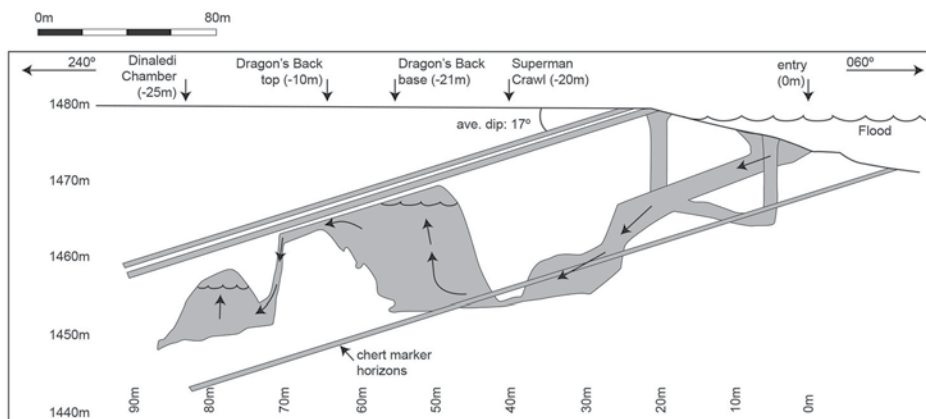


Figure 1. A flood model of the portion of the Rising Star cave system where the remains of *H. naledi* were first discovered. Water from the Dragon’s Back Chamber spills over into the Dinaledi Chamber, transporting the floating remains of *H. naledi* and depositing them in the debris cone and along the floor of the Dinaledi Chamber. Modified from Dirks et al.⁷

Diagram courtesy of Susan Windsor.

Dr. Clarey is Research Associate at the Institute for Creation Research and earned his Ph.D. in geology from Western Michigan University.



Architecture and Engineering in Created Creatures

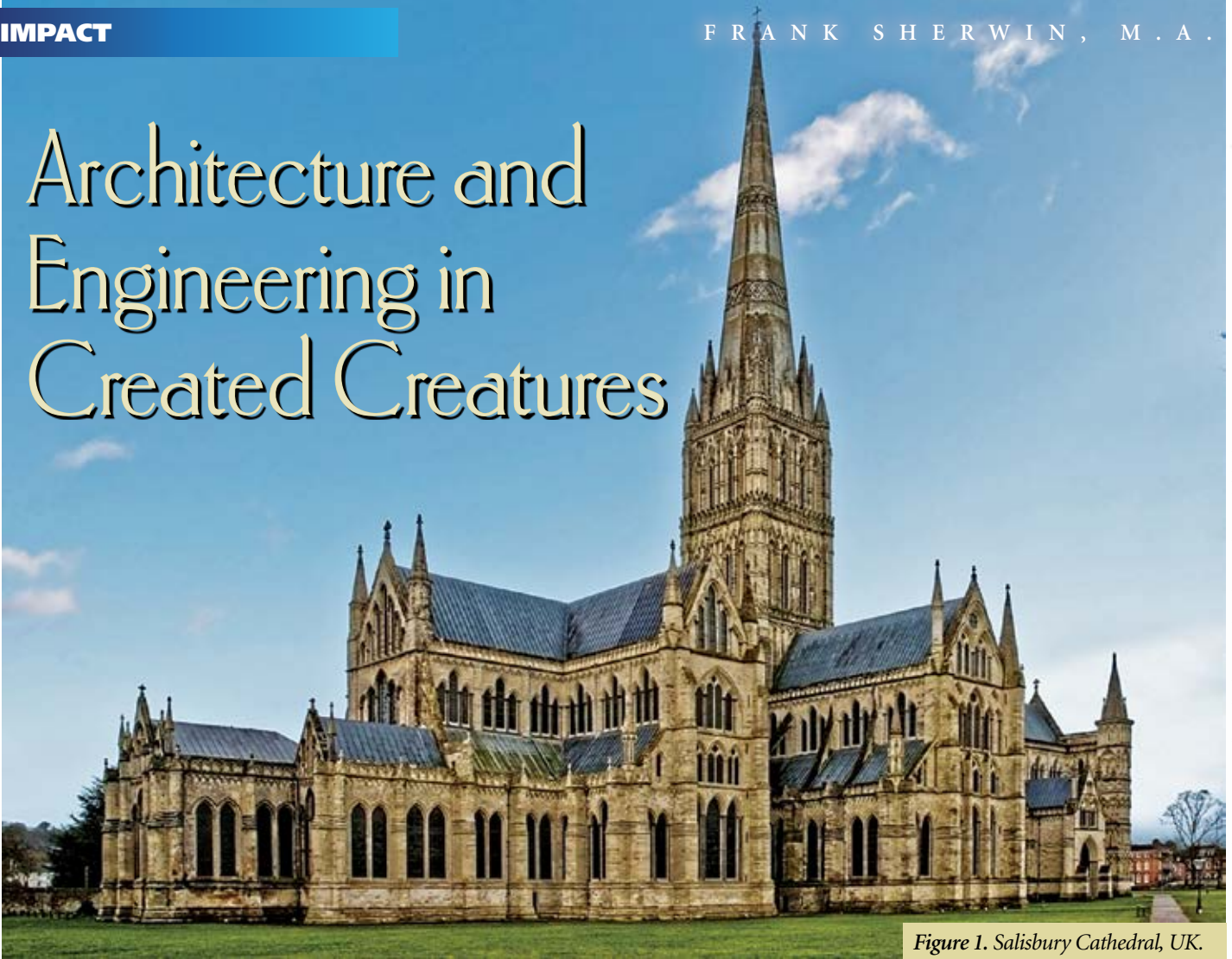


Figure 1. Salisbury Cathedral, UK.

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“Nature is a pretty impressive engineer,” states evolutionist Daniel Lieberman in an issue of *Nature* magazine.

He notes:

The physical world poses many basic challenges, such as gravity, viscosity and pressure gradients, to all living creatures, which in turn have evolved an astonishing array of solutions. Many of these, such as paddles, valves and hydrostats, are so widespread that we rarely notice them. Others perform so well that we marvel at their superiority to human-made devices.¹

Creationists maintain it was God who addressed these basic challenges with astonishing solutions—not chance evolutionary processes working for millions of years. Indeed, even if we were to give more time than what the evolutionists would like, we would still never see “nature” producing animals

and their multiple systems with such superior function and detail.

Biomechanics is the field of biology that studies the action of internal and external forces on the living body, especially the skeletal system.² Also called bioengineering, this fascinating area analyzes biological design and the physical forces associated with humans and animals. If ever there was evidence for creation on a macroscopic scale (Romans 1:20), it would be the vast array of creatures all over the world marvelously designed to move in and fill their environments based on these amazing design features.

We see that when architects and engineers design buildings or other structures, they either knowingly or unknowingly follow the Creator’s design features found in human anatomy and the animal world. Most of us are aware of the beautiful medieval cathedrals of Europe. Built to the glory of God, they are also a testament to plan,

purpose, and detailed design that leaves nothing to chance. The success of such efforts is seen in their victory over gravity through the centuries.

The architectural planning and detail of a typical cathedral are stunning. A majority of large churches and cathedrals in Europe are designed with a wide nave, the central aisle of a basilica church. (The *Acts & Facts* cover this month depicts the nave of York Minster, UK.) They also tend to have a lower aisle separated by an arcade (a succession of arches) on either side. The most prominent external feature of the building is the spire, built for vertical emphasis. The tallest spire in England (404 feet) is found on Salisbury Cathedral, mostly built during the years 1220 to 1258 in the Early English Gothic style (Figure 1).

Medieval architects followed design patterns in much the same way as the Divine Architect who exquisitely designed



Figure 2. Gloucester Cathedral, Gloucestershire, UK. Defying gravity for centuries, each arched rib in the vaulted ceiling was precisely designed and set in place for efficient support.



Figure 3. A cross section of a bird bone—designed to be strong without being heavy. Mostly hollow, the bone is strengthened by triangulated struts evenly spaced throughout the inside.

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Figure 4. A model of a Warren truss bridge. A series of triangulations provides an efficient and strong structure. Engineers use this approach in bridge-building throughout the world.

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the bones and skeletons of humans and animals. We see that bone construction is designed for the needs of the person or animal in question. Bone is strongest when burdened in compression but weakest in shear and tension. Any architect would look at the walls and ceiling of, for example, Gloucester Cathedral (circa 1355, Figure 2) in England and think of pneumatic bird bones if they'd had the opportunity to view that internal avian structure. Bird bones are not solid like one would find in dinosaurs such as the 30-plus-ton sauropods. Compressive and tensile stress put on the bird's skeleton during flight is largely handled by the solid surface of the bone and less in the central portion. Not surprisingly, the interior of the bone is designed with a web of supportive struts (Figure 3) that look much like the Warren truss used in engineering (Figure 4).

The basic structural elements of a Gothic cathedral lie in the interior and exterior piers (the sidewalls seen from the outside) with critical flying buttresses between (Figure 5). Medieval architects designed flying buttresses to resist bending of the main interior piers due to lateral pressure caused by snow or wind. The buttresses support the structure by carrying lateral



Figure 5. Flying buttresses employed in cathedral construction are remarkably efficient and serve a specific load-bearing function.

thrust from the upper areas of the building all the way to the ground.

We see from a person's skeletal design that the heads of the two femurs carry the weight of the upper body (Figure 6). During a striding gait, the head and neck of one femur carries all the weight of the upper body. This explains why the elderly who suffer from osteoporosis often break one of their hips—fracturing the neck of the femur—and then fall down, rarely the other way around. The shaft of the femur, which is the longest bone in the body, experiences an asymmetric load that increases the propensity to bend. But there is a long tendon on the lateral side of the thigh called the *iliotibial tract*, and it is so strong it serves as a site of insertion for the tensor fasciae latae muscle. Such design helps to counteract the bending forces on the femur. The tensile stress (such as that addressed in cathedral construction) that develops on the lateral side of the femur is counteracted.

Loading is a problem also dealt with in the design of both man-made structures and people. God designed people and most animals with bilateral symmetry—an arrangement such that one plane divides the person in two halves that are approximate mirror images. Symmetric loading of sup-

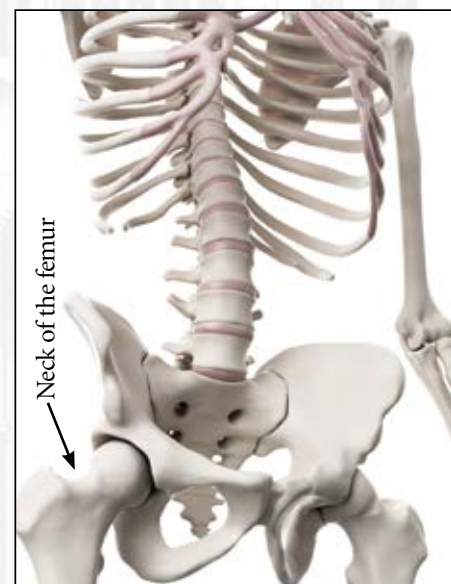


Figure 6. A rendering of a female pelvis, femur, and spinal column. Note the narrow neck of the femur.

portive columns, such as the human spinal column, results in a centered compressive force whether in an interior pier of a cathedral or an upright human.

Since the weight of the upper body is above the hips, there is a potential of instability in upright posture. God designed features of our skeletal anatomy that contribute to stability. Our spinal column is designed with vertebrae stacked above the hips much like the main mast of a cutter or schooner. The complex system of ropes called rigging that support a ship's mast and sails are much like the muscles and ligaments specifically aligned to the lower vertebrae and ribs that support the spinal column. One is struck by the similarity of a cutter's rigging (looking from the stern to the bow) and the ligaments and muscles supporting the vertebrae. In addition, God has designed human pelvic anatomy to have a broad base of support of the upper body by the shortening and flaring of the pelvis.

Four-legged animals (tetrapods) must have a specialized spinal column that helps suspend the weight of the body. Again, the field of engineering allows us to appreciate just what is happening as weight is distributed between the front and back legs. A typical suspension bridge is composed of tension members and compression members. Bridge builders design these structures so that the rigid members resist compression and the more flexible members resist tension. Sections or spans of the bridge are designed to rest on piers (supports for the ends of adjacent spans). Combining the piers and spans allows the weight of the bridge to span the distance between the piers. Not surprisingly, the area midway between the two piers (the nodal) is the weight distribution trade-off. A tetrapod vertebral column has approximately the same function. The nodal point depends on the weight distribution of the front and back legs. Neural spines of the vertebrae reverse their orientation at the nodal of the spinal column. The centra and

spines of a vertebra are like the compression members, while the muscles and ligaments are like the tension members. The ligaments and muscles of the creature are designed to principally resist tensile forces, while the bones resist compression.

If ever there was evidence for creation on a macroscopic scale (Romans 1:20), it would be the vast array of creatures all over the world marvelously designed to move in and fill their environments based on these amazing design features.

Evolutionist Michael Benton discusses the functional morphology of the pliosaur *Rhomaleosaurus*:

In pliosaur, the jaw was designed to clamp shut with huge force, and to prevent the prey struggling free. The shape of the pliosaur jaw, with an elevated coronoid eminence near one end has been compared to an asymmetrical swing bridge that is loaded by its own weight when it is open.³

Solutions to mechanical stress in animals are also seen in the design of the arch, a structure that is curved or bowed as seen, for example, in an arched suspension bridge. Arches work in engineering as long as they maintain their shape and don't flatten out. The weight of the bridge is maintained as long as the arch above it is upheld. Looking at God's mammals, we see the sternum, ligaments, and abdominal muscles are designed to maintain the arched nature of the vertebral column much like the roadbed between the piers of an arched suspension bridge.

Trunk vertebrae of tetrapods resemble an archer's bow. Such bow design is also seen in the neck of sauropods, where the brachiosaur's cervical ribs can be compared to leaf springs.⁴

Conclusion

No one would suggest such magnificent constructions as schooners, bridges, or cathedrals are the result of random natural processes. How much more so the human

body? When viewing and addressing God's design of people and His animal creatures, the term *engineered morphology* comes to mind—looking at human and animal anatomy from a biomechanical viewpoint. But there is also *ecological morphology*, viewing an animal in its natural environment as it purposefully migrates, not randomly mutates. Animals are designed to move in and fill an environment—which is ecology, not evolution. God engineered animals with the innate ability to adapt,

which sometimes even leads to speciation. Finally, *creation morphology* brings together this information for us to observe, measure, and research God's creatures using the perspectives of function, form, ecology, and design. The more we learn, the greater our awe in the Master Designer who made it all. ☞

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Facial Recognition Study Misses the Bottom Line

Human brains come specially wired to recognize faces. Where did that innate wiring come from? Two psychologists finagled a fantasy answer that shows how crazy evolution-based reasoning can get. Their conclusion, oddly enough, involves chimpanzee rear ends.

We perceive faces quite differently from how we see other objects. We process the individual features of most items to recognize what they are and what they mean, but we recognize a face all at once. That way we can quickly gather subtle communication clues from facial expressions during conversations and other interactions.

Researchers demonstrated the “face inversion effect” in the 1960s. This describes how people recognize upright faces much better than upside-down faces. In the recent study, the two researchers compared how chimpanzees viewed upright and upside-down faces—as well as each other’s behinds.

They found that the inversion effect applies to the way chimps see their peer’s posteriors. Chimps seem to recognize one another from the appearance of their bottoms better than from the appearance of their faces. Chimpanzee and other primate bottoms reveal unique information. For example, males look different from females, and females display when their bodies are primed for pregnancy. Chimpanzee rear-end recognition goes right along with their rear-end displays.

No objections so far. But the interpretive twists these two scientists applied then turned bizarre. Publishing in *PLOS ONE*, they argued:

The findings of our study suggest that over human evolution the face took over important properties shared with the primate behind and largely replaced its socio-sexual signaling function, making our species attuned to faces.¹



Sure, chimps recognize one another by their behinds, and humans recognize other humans by their faces. But neither observation—nor any other evidence, for that matter—so much as hints that “identity recognition ‘moved up’ from the bottom to the face in our uprightly walking species.”¹ In an attempt to justify this rear-end reversal, the authors even suggested that human faces look like chimpanzee bottoms. Both have symmetry and lack hair in places, but the same already holds true for the chimp faces.

The story snags on other issues, too. What if male chimps somehow transitioned from bottom recognition to facial recognition *before* females lost their bottom displays? Then the males would no longer recognize the right time to reproduce. End of species. The researchers’ assertion that “recognition ‘moved up’” would require chance-based evolution to perfectly synchronize the required transition timing and to divvy up vital gender-specific traits.

The study authors wrote, “The correct interpretation of the conveyed information

by faces and behinds, including identity, fitness and fertility, is crucial for reproductive success.”¹ Doesn’t this statement inadvertently argue against their own story? Without reproductive success, the whole species would die off. And evolutionary alterations to the “crucial” total package of brains and behinds would totally disrupt chimpanzees’ “reproductive success,” thus extinguishing further evolution.

While evolutionary speculation wrongly turns bottoms downside up, chimpanzees continue to thrive—living their divinely designed wild lives like they have from the beginning. Meanwhile, folks like you and me talk (thankfully) face to face much the same as our forefather Adam talked with his Creator in the Garden. ☞

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Genesis Doesn't Fit with Deep Time

A recent Pew Research Center poll showed the number of Americans who professed to be Christian declined by 7.8% between 2007 and 2014, while the number professing other faiths or identifying as unaffiliated increased by 7.9%.¹ Only 50% of the younger millennials (born 1990–1996) believe in God with absolute certainty, and only 52% believe that Scripture is the Word of God.^{1,2} These are alarming figures that reflect our postmodernist culture and our views of who God is and what He has done. A telling indicator would be a millennial's answer to the question “Did God really create the world in six days?”

The Christian community holds varying views on the first chapter of Genesis. Some simply believe the biblical six-day creation narrative as it stands, while increasing numbers of people attempt to fit creation into the hypotheses of modern secular science or other views consistent with a deep-time paradigm of a universe billions of years old.

Although there is no general agreement among the old-earthers as to how the ages of the earth were manifest, there are three major views that attempt to fit the biblical narrative into deep time:

1. The gap theory proposed by G. H. Pember in 1876.³
2. The day-age views—of which theistic evolution and punctuated equilibrium are subsets—that seek to interpret the six days of Genesis 1 as ages rather than 24-hour days.^{4,5}
3. The “apparent age” hypothesis that claims God created the world to look old.⁶

The gap theory maintains there is a significant time gap between Genesis 1:1 and 1:2. However, this interpretation must



The entirety of Your word is truth, and every one of Your righteous judgments endures forever.

— PSALM 119:160 —

be forced upon the original text since the original Hebrew clearly links 1:1 and 1:2 in time. It is also interesting that this hypothesis maintains that death came before man's creation, but the Bible clearly teaches death came as a direct result of man's sin.⁷

The day-age interpretation has its own set of problems. First is the clear presentation in the Bible that each of the six days of creation was a 24-hour day.⁸ Second, this interpretation has the same death before sin problem that the gap theory does. Third, this interpretation seriously contradicts current observations of nature. For example, according to Scripture, God brought forth grass, herbs, and fruit trees on the third day before He created the sun to provide light for photosynthesis on the fourth day and insects to pollinate the fruit trees on the sixth day. It's rather difficult to see how this creation order would fit into a tenable day-age paradigm.

Finally, if God actually created the world to have an apparent deep-time age, then He would be contradicting Himself in Numbers 23:19 and deliberately deceiving His creation.⁹

What are the real scientific facts? The observations and reproducible experimental data support the biblical narrative better than any of the current scientific hypotheses such as deep time that appear to contradict both the Bible and the data.

One cannot reasonably believe in deep time and also believe the Bible is an accurate record of God's Word to man. The deep-time paradigm and a rational view of Holy Scripture cannot be reconciled. Many of our youth realize this. Why don't those who preach the compatibility of Scripture with

evolution and deep time? Perhaps those who place their view of science over the Bible need to stop and think this through and be like the father who cried out to Jesus, “I believe; help my unbelief!”¹⁰ ✉

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Reroofing the exhibit hall in the Texas heat



The southeast parking lot surface nearing completion



Michael Hansen braves ladder ascent



Forms in place for upcoming exterior and slab/foundation



Excavator and pier-drilling equipment on site. The excavator installed two-inch domestic water service.



Interior wall framing under way



Michael Hansen is Executive Assistant to ICR CEO Dr. Henry Morris III.

ICR's man on the scene, Michael Hansen, risked life and limb climbing to the roof to capture some of these construction shots showing the building progress of the ICR Discovery Center for Science and Earth History. The entire job site is a flurry of activity. Recent work includes pouring the parking lots, reroofing the exhibit hall, installing pipes for water service and irrigation, finishing the pier drilling, grade beam construction, and framing the interior walls.

Construction Progress

You can watch our progress in an online time-lapse video. Beck, the architectural firm handling the project, placed an OxBlue camera on a 60-foot pole to document the construction. The existing building that will serve as the main exhibit hall is currently undergoing major internal

renovations, while the outline of the grand pavilion that will house the lobby and planetarium is taking shape. Please pray with us as work continues. Lord willing, we plan to open the ICR Discovery Center in the fall of 2018.

Please visit ICR.org/Construction-Progress/ to see how we're doing.

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Engineering Causality Is the Answer to Darwinian Externalism

R A N D Y J . G U L I U Z Z A , P . E . , M . D .

A popular film version of Charles Dickens' *A Christmas Carol* begins, "Old Marley was as dead as a doornail. This must be distinctly understood if anything of use is to come of this story." This contextual information is vital for understanding what is about to happen in the film.

Last month's Engineered Adaptability article¹ was likewise crucial to set the stage for the remainder of this series. It described how Charles Darwin's environment-centered externalism focuses on nature as the creative agent of change for organisms. The answer to that is the development of a design-based, organism-focused explanation for creatures' adaptability—which is what the coming articles are slated to do.

Vital Background about Evolution's External Causation

The key point of last month's article can be best summed up in the words of the famous Harvard evolutionist Stephen Gould, who stated:

Darwin's theory, in strong and revolutionary contrast, presents a first "externalist" account of evolution.... Darwin overturned all previous traditions by thus granting the external environment a *causal* and *controlling* role in the direction of evolutionary change.²

Darwin pioneered a fundamentally different concept of nature as the agent of design for organisms. He proposed a way in which effects normally achieved through the agency of a designer would now be credited to natural processes.

Externalists see the environment as the subject acting on an organism as an object. They view organisms as modeling clay squeezed by the hands of the environment over time via "selective pressures" that are external to, and imposed on, organisms. Additionally, they

consider that "the environment directly instructs the organism how to vary" during adaptation.³ Believing that nature's selection process operates in a way similar to human volition, externalists see nature as exercising an agency that enables it to see, select, save, and build organisms. Thus, nature is the cause of life's diversity. Those trained in biology view living things through the lens of Darwin's bold counter-perception of organisms as the objects of environmental actions.

Evolutionary theorist Daniel Dennett reveals why externalistic causation is essentially the opposite of intelligent design:

You'll never see a spear making a spear maker. You'll never see a horse shoe making a blacksmith. You'll never see a pot making a potter. It is always the other way around and this is so obvious that it just seems to stand to reason.... [Intelligent design] captures this deeply intuitive idea that you never get design for free... which Darwin completely impugns with his theory of natural selection. And he shows, [expletive] no, not only can you get design from un-designed things, you can even get the evolution of designers from that un-design.⁴

This is a natural conclusion from the notion that nature exercises selective agency to mold living things. Causality is linked to credit—or blame—for *why* something exists or happens. Darwin was very knowledgeable of biological-design theory and recognized this.⁵ But Darwin's approach is not a necessity of scientific methodology and is only the expression of his naturalistic worldview. Even though his externalism projects mystical powers onto nature and invokes such expansive imagination where pots make potters and nature crafts designers, externalists must adhere to it, as Harvard geneticist Richard Lewontin candidly says, "no matter how counter-intuitive, no matter how mystifying to the uninitiated"⁶ because of their rigid commitment to naturalism.



Internal Mechanisms Cause Organisms to Track Changing Conditions

Yet another approach sensibly uses engineering principles to explain biological systems that fit patterns of design—no initiation is required. Organisms wouldn't be viewed as passive modeling clay but seen as having engineered innate adaptability that enables them to be active, problem-solving entities. Discoveries of diverse internal mechanisms foster another new concept: Adaptation is based on a compilation of engineered systems that enable rapid growth and physiological changes to environmental cues and challenges.

A design-based, organism-focused model could posit that as organisms actively travel through space-time, they continuously track environmental conditions, and their inherent capabilities express suitable traits. These features are the outworking of systems with intrinsic sensors and programmed logic that are accurately described with engineering causality—which is characterized as internal to them.

A Description and Illustration of Engineering Causality

Engineering causality is different from philosophical, psychological, theological, or other causation. Engineering causation focuses on whole systems and not individual elements. Since the entire system ceases to function with the loss of *any* vital element, then no single element is declared to be causal. Engineering causes are distinguished by clarity, objectivity, and thoroughness. Only verifiable elements are included—and no vital element is omitted—in causal chains. In this article series, these chains generally link genetics or epigenetic information through specific cellular systems to modified traits and then to the specific environmental conditions to which they are related.

It would seem natural to incorporate this objective approach into biological research that is already reverse-engineering biological systems by methodically disassembling their components. It would also be beneficial to know the basic engineering principles governing *how* systems that automatically self-adjust to dynamic external conditions work—if someone wants to know *what causes* them to work.

When engineers design self-adjusting systems, they know up front the causes of adaptability. But if non-engineers are amenable, they too can apply engineering principles and causation. The best way to understand engineering causality is to think through the design of a simple adaptable object.

Let's say you felt that poor nighttime visibility around your front door was a problem, so you wanted to design a porch light that turned on when someone approaches at night. After obtaining an outlet and bulb and connecting wires to an electrical source, you observe that darkness and human motion by themselves don't turn

on lights. So, those external conditions cannot cause your light to activate. But you, as the designer, can specify these conditions to be stimuli if they are present. Simply specifying these conditions isn't enough, though. You must equip your light with detectors sensitive to those conditions. You then include a logic device that you program to integrate the data coming from your detectors so that *if (+) darkness and (+) motion then* a switch closes to allow electricity to flow to your light bulb. You also note that your porch light is a self-adjusting system, it is a self-contained entity, and it is actually working all the time—even when the light isn't on.

What does your project highlight about engineering causality? The entire capacity for your device to both relate and adapt to external conditions is built *into* the device. The detectors, logic mechanism, and output switching are all internal. The traits you incorporated into your system are what specify that only certain external conditions are stimuli. The information reflected in the order of

system elements, specification of stimuli, etc., is all internal. The proper outworking of internal systems causes purposeful function. In terms of external conditions, darkness and motion are *variables* that are either present or not (among a myriad of conditions) and are

insufficient in themselves to cause your system to function.

In this illustration, how would engineering causation be distinguished from a typical scenario based on external causation? Engineering causal chains do not omit vital elements, so causality would not go directly from darkness/motion to lighting while skipping the key detectors, logic mechanism, and output switch. And since chains include only verifiable elements, no mystical “selection...[by] natural forces, lacking any purposiveness or prevision of future possibilities” is inserted as “a designer substitute.” If your light functions properly, credit, which is linked to causality, is due to a successful internal design and not because it was mysteriously favored by the problem it solved (i.e., darkness).

Internal Causation and Engineered Adaptable Systems

Engineers may choose from several design strategies to deal with the challenge of uncertainty. They may incorporate very complicated systems, or they may try to prevent failure by including overlapping (i.e., redundant) systems. Another strategy designs “adaptability”—that is, systems that allow it to variably respond to variable conditions.

A self-directed, autonomous, and adaptable entity may need external resources for, say, fuel or building materials, which its systems process. But that need should not be confused with causation. Adaptable function is obtained from its internal systems as

A design-based, organism-focused model could posit that as organisms actively travel through space-time, they continuously track environmental conditions, and their inherent capabilities express suitable traits.

verified by the following features.

1. Internal programming, systems, and trait characteristics specify only certain external conditions that an entity can relate to and how it will respond.
2. Trait characteristics determine the success/failure of an entity in solving the problems of an external exposure. Treating external conditions as exposures is the approach adopted in medical research and biomedical engineering.
3. If the entity fails to achieve desired function, the entity is predominantly the focus of designers' modifications—not external conditions.
4. External conditions are not in and of themselves inducers, triggers, or regulators, but internal information can specify a condition to be a stimulus or cue. A specific detector sensitive to a condition is integrated within the entity to trigger or induce responses.
5. Sophisticated adaptability called *artificial intelligence*, which is the capacity to “learn” from historical exchanges with external conditions, must be programmed up front. If an entity will change over time due to both its nature and nurturing experiences, it must come equipped with a nature enabling it to be nurtured.

Darwin inverted previous traditions by granting the external environment a causal role for adaptation that was the opposite of intelligent design. Even today, Darwin's shift in causality is missed since people may not give much thought to how adaptable systems truly function.

Biological Understanding May Be Clarified with Engineering Causality

In disciplines outside of engineering, identifying causality can be imprecise. Theology students could sit in the Coffee Cove debating the proximate cause, the secondary cause, the true cause, the theological cause, and so forth all day. Medical students routinely deliberate necessary versus sufficient causes for some diseases. My philosophy text describes multiple types of causality. There are entire books about some of them. Even with static items, for some scholars the subjective nature of identifying causality gets convoluted, and it is even harder for adaptable things.

The fact that creatures are adaptable lies at the heart of intelligent design and evolution disputes. Gould astutely observes:

The word adaptation did not enter biology with the advent of evolutionary theory. The *Oxford English Dictionary* traces this term to the early 17th century in a variety of meanings, all designating the design or suitability of an object for a particular function, the fit of one thing to another. The British school of natural theology used “adaptation” as a standard word for illustrating God’s wisdom by the exquisite fit of form to immediate function. Darwin, in borrowing this term, followed an established definition *while radically revising the cause of the phenomenon.*⁷⁸

Darwin inverted previous traditions by granting the external environment a causal role for adaptation that was the opposite of in-

telligent design. Even today, Darwin’s shift in causality is missed since people may not give much thought to how adaptable systems truly function. With only a cursory review, there appear to be two variable parts causing an organism’s response to environmental conditions: the organism’s obscure microscopic systems and readily seen external conditions. So, people can easily get confused.

These entangled concepts and definitions need to be carefully teased apart so we can make sense of the story. Sorting out a jumble of anything isn’t easy. If untangling Darwin’s confusion were simple, people would spot it immediately and be less prone to merely criticize the sufficiency of Darwin’s externalistic concepts rather than questioning their scientific validity. A framework allowing identifica-

tion of methodically objective engineering causality within an organism’s systems could disentangle causes that are confusing externalists.

In addition, mounting research suggests that in accordance with engineering causality, organisms do utilize internal systems that have intrinsic sensors and programmed logic to continuously track environmental conditions and express suitable traits.

Evolutionists generally reject the concept that organisms were designed and resist integrating engineering principles into biology. They may respond that the type of adaptability this series is describing applies only to physiological adaptation and not cross-generationally, which they claim is due to random mutations causing changed traits that are selected by environments. Upcoming articles in this series will present reports calling into question the idea that there is a sharp distinction between physiological and cross-generational adaptation. They will examine the notion that many mutations are truly random and not the output of adaptable systems, as well as the relative role of genetic change in adaptation. Next month’s article will present a case study that illustrates the value of engineering causality in biology. ✎

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Q: Could You Outrun Goliath?

A: At “six cubits and a span,” Goliath stood over nine feet tall, using a conservative 18-inch cubit. Scripture demonstrates his strength by cataloging the weight of his armaments, including a 5,000-shekel (125-pound) coat of mail.¹ No wonder he was the champion of Gath! He was big and strong, but was he fast?

Modern science gives us new ways to examine the history presented in the Bible. Four scientists developed a model that accurately predicts an animal’s top speed based simply on body mass and means of locomotion.² Their model for land-running animals generally matched most of the measured speeds of over 400 different animals, and even matched some sophisticated speed estimates for dinosaurs, including *T. rex*.³

The researchers showed that two factors explain why an ant is slower than a rat, which is slower than a rabbit, which is slower than a cheetah, which is faster than a hippo. At some point, greater size slows the body.

Energy is the first factor. Animals’ muscles spend stored chemical energy when they run. Once that energy is gone, they must pause and wait for muscle cells to replenish fuel stores. The second factor is inertia, which means resistance to changes in motion. A running animal or person must spend enough energy to propel their whole body mass. Animals eventually reach a size at which their bodies’ inertia counteracts the maximum amount of energy their muscles can store. That’s why great cats can outrun elephants.

Did Goliath reach this “slowing size,” or would his bigger, longer legs have propelled him faster than you?

To answer this question, we first need to recognize that humans run more slowly than animals of similar mass.⁴ This means that the new speed model does not directly apply to people. We also must satisfy ourselves with educated guesses as to Goliath’s body weight. Most formulas that estimate “ideal” body weight suggest that a man of Goliath’s height should have weighed about 450 pounds. For comparison, Shaquille O’Neal stands at seven feet one inch. He weighed around 325 pounds when he was a fit NBA player, but the ideal body weight for that height is only about 220 pounds. Goliath may have weighed more than ideal estimates.

I used the new speed model to compare how fast Goliath might have run against more normal human sizes.⁵ A skinny 450-pound Goliath would have run about 6% slower than a six-foot-tall man. A more robust 530-pound Goliath would have run 7% slower.

This exercise carries two messages. First, giant descendants of Noah like Goliath⁶ would have reached body masses where larger means slower. However, they would not have reached body masses

that defied biophysics, leaving them within the realm of biological feasibility and thus biblical reality—not just myth. Giants were probably slower sprinters, and centuries of warfare apparently did them in, but they were once just as real as David’s trust in the Lord when he defeated godless Goliath. ✎

References

1. 1 Samuel 17:4-7.
2. Hirt, M. R. et al. 2017. A general scaling law reveals why the largest animals are not the fastest. *Nature Ecology & Evolution*. 1: 1116-1122.
3. They found that *T. rex* reached a mere 17 mph. See Schiller, F. Why Tyrannosaurus was a slow runner and why the largest are not always the fastest. University of Jena news release. Posted on uni-jena.de July 17, 2017, accessed August 15, 2017.
4. I averaged the speeds of a llama, a deer, a bighorn sheep, a warthog, and a black bear as reported in the supplemental information to reference 2 at about 31 mph. Athletic people of similar weights might run as fast as 20 mph. God designed human bodies as excellent distance runners instead of being sprinters like most animals.
5. The supplementary information to reference 2 included separate formulas for runners, flyers, and swimmers.
6. The Bible links giant family lineage to Noah. Starting with 1 Samuel 17:4, Goliath came from Gath. Working backward almost 400 years, Joshua 11:22 identifies Gath as one of three cities where the Anakim remained after Joshua’s conquests. Numbers 13:33 and Deuteronomy 2:11 identify the Anakim (descendants of Anak) as fearfully tall giants. Joshua 14:15 notes that the city of Hebron was once named Kirjath Arba after Arba, “the greatest man among the Anakim.” Kirjath Arba had an earlier name, Mamre, according to Genesis 35:27. Genesis 14:13 indicates Mamre was named after an Amorite. Finally, Genesis 10:16 identifies the Amorites as descendants of Canaan, who was Noah’s grandson.

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Luther, the Reformation, and Taking Creation Seriously

Five hundred years ago in Wittenberg, Germany, an unusual scholar changed the course of human history using pen and hammer. Dr. Martin Luther protested unbiblical teachings and practices—especially selling indulgences—sparking the Protestant Reformation.¹ Unsurprisingly, a review of Luther’s treatment of Genesis shows how taking Scripture seriously logically leads to taking creation seriously. In fact, Luther appreciated creation enough to record detailed observations of jackdaws and ravens.²

Many remember Dr. Luther mostly for the biblical doctrine of justification by faith, as ICR founder Dr. Henry Morris indicated:

This great principle—“the just shall live by faith”—was the Scripture that so inflamed the soul of Martin Luther that it became the watchword of the Reformation. It occurs first here in the small prophecy of Habakkuk [2:4], but is then quoted three times in the New Testament. The term “just,” of course, means “justified” or “righteous.”³

Accordingly, we should thank God for how He led Dr. Luther to take the Bible seriously in order to recover and clarify the vital truth regarding how God gives righteousness to those who believe in Christ.

It’s also fitting to appreciate how Luther defended the Genesis account of creation, refusing to exchange it for popular yet unbiblical opinions of his generation.

From Moses however we know that 6000 years ago the world did not exist. But of this no philosopher can in any way be persuaded....But all these [philosophers’] disputations, though subtle and clever, are not to the point in question....Equally useless is it to consider Moses in the beginning of his [Genesis] history as speaking mystically or allegorically....Moses spoke literally and plainly and neither allegorically nor figuratively; that is, he means that the world with all [original] creatures was created in six days as he himself expresses it....Let us come at once to Mo-



ses as a far better teacher, whom we may more safely follow than we may philosophers, who dispute without the Word about things they do not understand.⁴

Ironically, those who opposed a six-day creation account during Luther’s lifetime decided that God should have created everything at once, in an instant, because He could. But God chose otherwise, and Luther affirmed that God told us (through Moses) *how* He chose to do it—in six normal days.⁵

The Lord Jesus Himself, almost 1,500 years before Luther’s ministry, warned the religious leaders of His day to take seriously the books of Moses, including Genesis:

How can you believe, who receive honor from one another, and do not seek the honor that comes from the only God? Do not think that I shall accuse you to the Father; there is one that accuses you—Moses, in whom you trust. 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?⁶

It is no surprise that a serious reliance upon the God-given Scriptures for authoritative and relevant truth leads one to take seriously the Genesis account of the creation week. Here we stand. ✎

References

1. “On the 31st October 1517, at noon on the day preceding the festival [of All Saints], Luther, who had already made up his mind, walks boldly towards the [Wittenberg] church, to which a superstitious crowd of pilgrims was repairing, and posts upon the door ninety-five theses or propositions against the doctrine of indulgences. Neither the Elector, nor Staupitz, nor Spalatin, nor any even of his most intimate friends, had been made acquainted with [his] intentions.” Quoting J. H. Merle D’Aubigne. 2001. *The History of the Reformation of the Sixteenth Century*, vol. 1. Harrisonburg, VA: Sprinkle Publications, 269.
2. Sears, B. 2010. *The Life of Luther*. Green Forest, AR: New Leaf Publishing/Attic Books, 449-451.
3. Morris, H. M. The Just Shall Live by Faith. *Days of Praise*, September 14, 1996, citing Habakkuk 2:4, Romans 1:17, Hebrews 10:38, and Galatians 3:11.
4. Luther, M. *Luther on the Creation: A Critical and Devotional Commentary on Genesis*. H. Cole, trans., J. N. Lenker, ed., 40-43. Posted on martinluthersermons.com.
5. *Ibid.*, 83 and 125.
6. John 5:44-47.

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Scavenging vs. Sowing

Our readers probably experience the same problem I do. Each day's mail—both at the office and at home—contains a fair number of earnest appeals for donations. No doubt many of these are worthy of support, but I find the sheer volume tiresome, and I admit I often don't read them.

The same is true for telephone solicitations. Even with my number registered with the national "do not call" list, telemarketers always seem to call at dinnertime. I now routinely screen my calls and even turn the ringer off on occasion, particularly during political campaigns! I suspect most of you can relate.

In the past I tried to evaluate all such appeals carefully, and I have given to many of them. But my small gifts always seemed to quickly multiply into further appeals—not only from the organizations I gave to but also from many others I had never heard of. This is known as "scavenging," the practice of purchasing mailing lists from other groups in order to send frequent appeals to more people. The idea is that the larger the scavenging area, the more you take in. I suspect there is some wisdom in this approach, but it might turn off many who may be truly concerned about the needs in question.

Whatever the cause, these appeal letters are often written by professional fundraising organizations that receive a substantial percentage of the scavenging results as part of their compensation. Their appeals

typically contain touching stories and emotional pleas peppered with highlighted text, frequent underlining, and plenty of exclamation points (!!!). This approach must work for many organizations, and perhaps when the mission is for a worthy cause the end does justify the means. But we have never felt ICR should operate this way.

ICR obviously needs significant financial support to function, and most of this must come from concerned believers on our mailing list. However, we've always focused more on "sowing" in the lives of believers than on "scavenging" for potential donors. Our approach has certain distinctions that we believe are soundly biblical.

ICR does not buy, borrow, or rent mailing lists from other organizations, nor do we allow others to buy, borrow, or rent ours—even though this would be highly profitable. Everyone on our subscription list, as far as we know, has personally requested to be on it and is directly interested in ICR's ministry. And judging from the wonderful testimonies we receive after each issue of *Acts & Facts* and *Days of Praise*, many people have been helped or blessed by these free publications.

ICR never uses telephone solicitors. And we usually send only one or two appeal letters each year (rather than the average of six or more!), and even then we only con-

tact those whom we have not heard from in a while. Most notably, our policy is not to go into debt. Consequently, we never have to make urgent "shipwreck" appeals.

Lastly, ICR sends gifts—usually a recent book or DVD—to our special partners and to every donor at Christmas that we hope will bless their personal ministry. We include a short letter expressing our gratefulness for our supporters. Its final paragraph contains a sentence or two about our financial needs and asks our supporters to consider ICR in their giving plans as the Lord leads.

And that's it.

In spite of this low-key approach, God has blessed these policies and ICR's ministry for nearly five decades. We see no need to scavenge anyone's mailing list for support and would much rather sow in the hearts and minds of fellow believers to encourage their faith in Christ. As long as we faithfully seek to honor God and His Word, we are confident He will supply our needs through His people to accomplish the work He wants us to do. ✍

Mr. Morris is Director of Donor Relations at the Institute for Creation Research.



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ICR is a recognized 501(c)(3) nonprofit ministry, and all gifts are tax-deductible to the fullest extent allowed by law.

Our two granddaughters, ages 12 and 9, spend two weeks with us each summer. This summer we used your DVD series *Unlocking the Mysteries of Genesis* as a devotional before bedtime. Not really planned, we used watching a DVD as incentive to get them ready for bed. We



were unsure if it would appeal to them or be age appropriate, but they watched attentively, and it was a hit with them! The granddaughters would get excited about watching a DVD each evening—it was just the right length of time. They would take turns choosing an episode from the listing in the viewer guide. Thank you for this very well-done series which is scientific and biblical! We also like your *Acts & Facts* magazine!

— N. E.

When I first told my friends in church I was following ICR and gaining a lot from it in my walk with Christ, they ridiculed me, saying that creationists will pull any trick they can to get their science to match the Bible. This totally floored me, that Bible-believing Christians would doubt

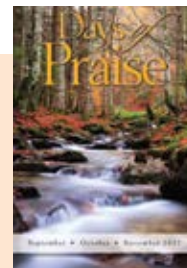


the validity of creationism and ICR—granted, none of them have read *Acts & Facts* or your other publications, which I'm sure would change their minds. I also wanted to congratulate ICR for your articles "Ethical Science" and "Sinking the Floating Forest Hypothesis" in the July and August issues of *Acts & Facts*, respectively. These both tell me that ICR is serious about doing good, honest science, even if it means going against other creationist scientists. I will be showing these to my skeptic friends as evidence of your much-valued integrity. Thank you for being honest. God is with you!

— B. C.

I'm so thankful for the *Days of Praise* email devotion. It lifts me up each day, especially when time runs out for deeper study. Please let whoever needs to hear this that this is much appreciated, and their efforts are not void nor in vain. Have a blessed day in the good Lord!

— M. T. H.



I want to thank ICR and Dr. [Jeffrey] Tomkins for the excellent articles on genetics and DNA, especially the in-depth science. The creation account of man made in the image of God negates junk DNA. In 2004, I presented the biblical view to a prominent cancer researcher who was a Christian, but she stuck with the evolutionary paradigm. Now I can strongly support the Bible, and I consistently use the information in your articles to teach the truth of creation.

— C. R. S., Ph.D.

Dr. [Randy] Guliuzza gave an excellent presentation at a Twin Cities Creation Science Association event in June [2017]. It contained some of the most exciting information I have heard. Continuous Environmental Tracking could be the straw that finally breaks evolution's back. Every false paradigm eventually crumbles, but people need to be informed.

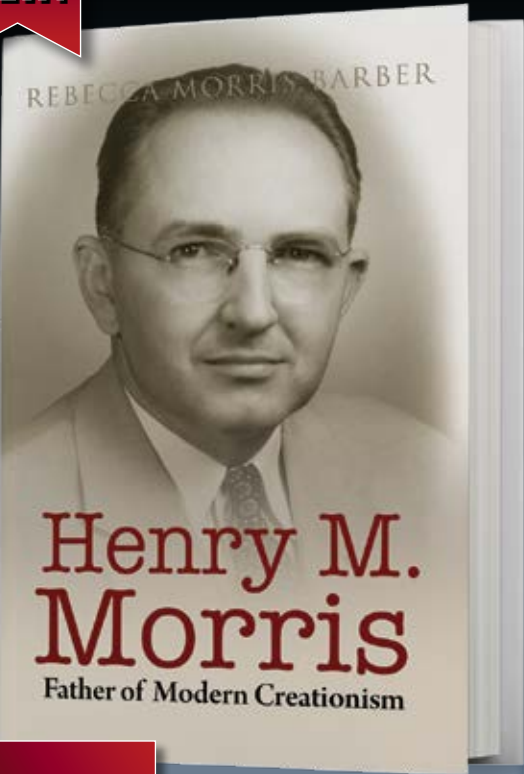
— B. L.



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