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**Demanding a Verdict:
Science and the Apologetics of Biblical Literalism****Introduction**

Since the 1960s, the apologetics of American fundamentalist Christianity has become inextricably intertwined with the language of science. One example of this trend has been the best-selling book *Evidence that Demands a Verdict: Life-Changing Truth for a Skeptical World*, first published in 1972 by evangelist Josh McDowell. The book offers arguments in favour of the literal truth of the Bible, touching on topics such as the historical accuracy of the New Testament, the existence of Jesus, the legitimacy of miracles, the age of the universe, the problem of consciousness, and the logistics of all of the humankind descending from Adam and Eve. At one point, McDowell discusses the Apparent Death theory, also known as the swoon hypothesis: a non-miraculous explanation for the resurrection of Jesus Christ. According to the theory, “Jesus did not die on the cross, but only *appeared* to die,”¹ which explains in rational terms his emergence from the tomb three days later. Rebutting this theory, McDowell quotes an

¹ Josh McDowell, Sean McDowell, *Evidence that Demands a Verdict: Life-Changing Truth for a Skeptical World* (Nashville, Tennessee: Thomas Nelson, 2017), p. 612.

article in “the peer-reviewed *Journal of the American Medical Association*,”² which states:

Jesus’ death may have been hastened simply by his state of exhaustion and by the severity of the scourging, with its resultant blood loss and preshock state. [...] The actual cause of Jesus’ death, like that of other crucified victims, may have been multifactorial and related primarily to hypovolemic shock, exhaustion asphyxia, and perhaps acute heart failure. A fatal cardiac arrhythmia may have accounted for the apparent catastrophic terminal event. Thus, it remains unsettled whether Jesus died of cardiac rupture or of cardiorespiratory failure.³

This type of passage, complete with cardiological terminology, the “MDs” next to the names of its authors, and its confident assumption of the historical existence of Jesus, may today be seen as representative within its genre of popular Christian apologetics. Parachurch organisations such as the fundamentalist Answers in Genesis and the evangelical Institute for Creation Research, as well as independent evangelists and apologists like McDowell, have developed a robust body of pro-faith arguments made not only from the Bible, but from a spectrum of writing techniques meant to represent science. This article touches on the background of fundamentalist apologetics in America, describes some examples of modern science-based apologetics, and closes with a discussion on the proselytistic functions of so-called “scientific legitimization” in today’s apologetics. Throughout, it will be seen that while apologetics has adopted some superficial aesthetic features of scientific discourse, it rejects the very trait that has made the scientific method so reliable, successful, and valuable to humanity: the ability to doubt, to question, and, through the process of questioning, to facilitate the evolution of one’s own knowledge and beliefs. In the apologetics of biblical literalism described in this paper, the language of science has been lifted for the purpose of supporting fundamentalist dogma.

To those outside of the fundamentalist and evangelical Christian circles, mainstream science may not seem like a natural aesthetic compliment to apologetics. The mission of science, after all, is to question

² William D. Edwards, et al., “On the Physical Death of Jesus Christ,” *Journal of the American Medical Association*, Vol. 255, No. 11 (1986), p. 1463, accessed 25 April, 2020, <https://jamanetwork.com/journals/jama/article-abstract/403315>.

³ McDowell, McDowell, *Evidence that Demands a Verdict*, pp. 614–615.

assumptions; the mission of apologetics, a persuasive practice, would seem to be exactly the opposite. Dr. Onwu Inya, an expert on the rhetoric of contemporary apologetics, has characterised the activity of apologetics as “an argumentative discourse whose social or communicative purpose is to argue for the reliability and validity of the Christian worldview and to get its readers to agree”⁴—to influence the opinions of readers rather than identify avenues for new exploration. Still, scientific language has become a tool in the modern apologist’s toolbox, with a major role in engaging and educating fundamentalist and evangelical Christians, and, in fact, protecting the views of these circles from the encroaching world of mainstream science.

Evangelism has been developing in opposition to science since the second half of the 1800s, when fundamentalist Christianity arose in the United States as a response to modernism and the emerging theory of evolution.⁵ The Niagara Bible Conference of 1870 issued a statement summing up Christian doctrine in five points, the first of which was “the inerrancy or infallibility of the Bible,”⁶ still an underpinning of literalist ideology today. Fundamentalism in the United States was given another boost in publicity in 1925 by the Scopes trial, which debated the legality of teaching evolution in the state-run schools. A Gallup poll conducted in May 2011 found that 30% of Americans believe that the Bible, as the word of God, should be taken literally.⁷ For many in the United States, the concept of the “literal word of God” is today aligned with young-earth creationism, according to which the earth and the universe are approximately 6,000–10,000 years old.⁸ Also called “creation science,” this belief system uses arguments based on, or apparently based on, science, in order to strengthen faith in the events recounted by the Bible.

According to apologetics scholar Vernon Bates, fundamentalist apologetics often uses one of two strategies in order to support its tenets of

⁴ Onwu Inya, “Generic Structure Potential of Christian Apologetics,” *Linguistik Online*, Vol. 55, No. 5 (2012), p. 83.

⁵ Vernon L. Bates, “Christian Apologetics as Legitimation,” *Humboldt Journal of Social Relations*, Vol. 8, No. 2 (Spring/Summer 1981), p. 88, accessed 15 April, 2020, <https://www.jstor.org/stable/23261597>.

⁶ *Ibid.*

⁷ Jeffrey M. Jones, “In U.S., 3 in 10 Say They Take the Bible Literally,” *Gallup*, 8 July, 2011, accessed 27 April, 2020, <https://news.gallup.com/poll/148427/say-bible-literally.aspx>.

⁸ Edward Caudill, *Intelligently Designed: How Creationists Built the Campaign Against Evolution* (Urbana, Springfield, and Chicago: University of Illinois Press, 2013), p. 9.

faith: biblical legitimation or scientific legitimation. Biblical legitimation is “a stance wherein one asserts that the Bible is true and evolution is false because the Bible is the true Word of God,”⁹ and no further information is necessary than that provided by the Bible in order to form a judgment about any given issue. Scientific legitimation, on the other hand, uses the aesthetic trappings of the language of science to support the events of the Bible in an effort to make the Bible “scientifically legitimate by arguing that there is scientific evidence to support the Word of God and the science of the Bible.”¹⁰ As is shown later in this article, *Answers in Genesis*, the Institute for Creation Research, and *Evidence that Demands a Verdict* all use scientific legitimation for one of three purposes: to support literal interpretations of the Bible, as in Josh McDowell’s rebuttal of the Apparent Death theory; to refute theories by mainstream scientists that compete with the Bible’s version of natural history; and to provide alternate theories of observable phenomena, such as the existence of dinosaur bones. Notable in all three cases is the way that the use of scientific language distorts the purpose of doubt. In real scientific discourse, doubt is the key to discovery, driving progress ever forwards as scientists investigate weak areas in existing theories and develop new ones. Doubt is the strength of science. In the pseudo-scientific discourse of apologetics, though, the use of “science-y” language is deployed as part of a multi-faceted rhetorical strategy to persuade the reader that doubt is a weakness which must be overcome by the certainty of faith—using the authoritative voice of science to encourage readers not to evolve in their thinking, but to accept the most unscientific conclusions.

Ken Ham, *Answers in Genesis*, and the Creation Science Museum

Ken Ham has been a central figure in fundamentalist apologetics since the early 1970s, and a pioneer of the appropriation of scientific discourse. A science teacher-turned-apologist born in Australia in 1951, Ham moved to the United States in 1987.¹¹ In 1994, he founded a parachurch organisation

⁹ Bates, “Christian Apologetics as Legitimation,” p. 89.

¹⁰ *Ibid.*, p. 90.

¹¹ Margaret M. Grubiak, *Monumental Jesus: Landscapes of Faith and Doubt in Modern America* (Charlottesville: University of Virginia Press, 2020), p. 113.

called Answers in Genesis (AiG), which established its current headquarters and the Creation Museum in Kentucky in 2007. Today, AiG is a well-known organisation whose museum has received over 2.5 million visitors.¹² Its mission is “recasting the very nature of ‘science’ as a way to defend its belief in biblical inerrancy,”¹³ and its activities include everything from blogging, with Ken Ham himself as the most frequent contributor,¹⁴ to conducting paleontological digs on its 134-acre property in Dinosaur, Colorado.¹⁵ A primary function of AiG is to rebut any findings of mainstream science that compete with the natural history set forth by the Bible.

Much of AiG’s life takes place online. Ham and others post a few times a week, and the topics of the posts are frequently science-related. Recently posted titles from AiG’s publication, *Answers Research Journal*, include “To the Ark, and Back Again? Using the Marsupial Fossil Record to Investigate the Post-Flood Boundary”¹⁶ and “Young-Earth Y Chromosome Clocks Confirm Known Post-Columbian Amerindian Population History and Suggest Pre-Columbian Population.”¹⁷ In early April, 2020, Ham made a blog post entitled, “Human Fingers Evolved from Fish?,”¹⁸ which counters the idea that a recently-discovered fossil of a fish could have been a “transitional” species between fish and other vertebrates (and, distantly, humans.) In his rebuttal, Ham quotes Dr Gabriela Haynes, who explains:

The article states that none of the tetrapod-like fish fossils (this classification is based on evolutionary assumptions) has revealed complete skeletal anatomy of the pectoral fins but the *Epistostege watsoni*. The problem is that even this specimen is a result of many interpretations. For example, the radiale was interpreted from the irregular mass in the images from the

¹² Ibid.

¹³ Ibid., p. 116.

¹⁴ Ken Ham, *Answers in Genesis*, accessed 27 April, 2020, <https://answersingenesis.org/blogs/ken-ham/>.

¹⁵ Charles Bethea, “Mark Meadows and the Undisclosed Dinosaur Property,” *The New Yorker*, 1 October, 2019, accessed 27 April, 2020, <https://www.newyorker.com/news/news-desk/mark-meadows-and-the-undisclosed-dinosaur-property>.

¹⁶ Chad Arment, “To the Ark, and Back Again? Using the Marsupial Fossil Record to Investigate the Post-Flood Boundary,” *Answers in Genesis*, 8 April, 2020, accessed 27 April, 2020, <https://answersingenesis.org/fossils/fossil-record/to-ark-back-again-using-marsupial-fossil-record/>.

¹⁷ Nathaniel T. Jeanson, “Young-Earth Y Chromosome Clocks Confirm Known Post-Columbian Amerindian Population History and Suggest Pre-Columbian Population,” *Answers in Genesis*, 22 April, 2020, accessed 27 April, 2020, <https://answersingenesis.org/theory-of-evolution/molecular-clock/young-earth-y-chromosome-clocks/>.

¹⁸ Ken Ham, “Human Fingers Evolved from Fish?,” *Answers in Genesis*, 2 April, 2020, accessed 15 April, 2020, <https://answersingenesis.org/human-evolution/human-fingers-evolved-from-fish/>.

computed tomography. There are also interpretations related to the carpals and digits (phalanges).

The data from this fossil doesn't seem very clear; that is why the view from the pectoral fin was restored, reconstructed, and the original shapes were estimated. Those processes involve many assumptions, so more data and less interpretation would be necessary to confirm this finding. And even if it is confirmed, the idea that a characteristic is present and shared in several different groups is related to ancestry, and it is based on the evolutionary worldview. However, the pattern seen in these diverse organisms is not related to evolution, which draws its conclusions based on various assumptions and indirect evidence, but it is related to having the same Creator and Designer.¹⁹

This passage starts by giving an impression of the authority of science and finishes with a reference to the authority of the Bible. First, Haynes points out gaps in the data. Second, she asserts that more information and “less interpretation” would be necessary to confirm the finding. Third, she reminds the audience that evolution is only a worldview, based on “assumptions and indirect evidence.” Finally, she supplies the ultimate answer: the fish in the fossil, and humans, both had the same “Creator and Designer.”

Ken Ham drives the third point home:

Is this really a “missing link” in the evolutionary story?

Well, that's a matter of interpretation. You see, the observational evidence—a cobbled-together specimen of *Elpistostege watsoni*—didn't come with a tag saying it was 380 million years old or that it was in the lineage of tetrapods. That's an interpretation of the evidence, based on the evolution story. The evidence merely shows us there was a lobe-finned fish that, sometime in the past, was buried and fossilized. Whether you start with an evolutionary or biblical starting point will determine how you interpret this fossil.²⁰

In this passage, we see the interplay of scientific legitimation and biblical legitimation, with a crafty twist. While Haynes' quote delivers what AiG's readers may interpret as a “hard science” take on the evidence, using it to cast doubt on non-biblical interpretations, Ham plays on one of

¹⁹ Ibid.

²⁰ Ibid.

science's most integral features: doubt and uncertainty. Scientific studies are necessarily matters of interpretation. They are assemblages of the available evidence, invitations to future scientists to recreate, build upon, and challenge conclusions. Scientists know that what they are building is one possible view of what the evidence means. Apologists like Ham can draw attention to where there the information seems incomplete or "indirect," telling readers that any information that is not complete or direct cannot be trusted, whereas God's information is always complete. This is a form of biblical legitimation because it relies on the Bible as the ultimate authority. But it also exploits the very feature that gives science such enduring credibility: Science is built on doubt.

One of Ham's early successes was an article called "Were You There?," which refutes the idea of the Big Bang.²¹ In it, he sums up what remains today his fundamental rhetorical strategy:

We need to ask ourselves this question: "Where do we put our faith and trust? In the words of scientists who don't know everything, and who were not there? Or in the Word of God—the God who *does* know everything—and who was there?"²²

As this statement demonstrates, Ham's great strength as an apologist is that he can take what his audience believes to be true—the supremacy of biblical authority—and use it alongside scientific legitimation in a way that both takes advantage of science's authoritative tone and uses science's dependence on doubt against it.

Beyond the internet, AiG is also active in the physical world. Its most popular point of contact is its Creation Museum in Kentucky, USA. The Museum, by calling itself a museum, seeks to be seen in the same light as other institutions like the American Museum of Natural History in New York City, or the Smithsonian National Museum of Natural History in Washington, DC—each of which can be called "an authentic and authoritative collector, guardian, and interpreter of Earth's natural history."²³ The Creation Museum has all of the visual features one would expect of such an institution: life-size dioramas of humans and other

²¹ Ken Ham, "Where You There?," *Acts & Facts*, 1 October, 1989, accessed 25 April, 2020, <https://www.icr.org/article/were-you-there>.

²² *Ibid.*

²³ Grubiak, *Monumental Jesus*, p. 116.

creatures, objects on display under glass, and explanations complete with both the common and scientific names of specimens. It also has features that are not expected in an authoritative museum on natural history, such as dioramas showing children “peacefully playing alongside dinosaurs.”²⁴

The centrepiece of the museum’s offerings is a full-scale Ark exhibit known as “Ark Encounter,” which teaches children that the Great Flood was a real event that happened 6,000 years ago, and from whose eight human survivors we are all descended.²⁵ The museum’s website declares that “Creationists love science!” It asks visitors: “Did you know that the Creation Museum employs PhD creation scientists who teach about anatomy, astronomy, biology, geology, and more from a biblical worldview?” On the same page, it says: “When you start with the Bible as your ultimate authority, you’re ready to discover creation science.”²⁶ This is aggressive scientific legitimation, with biblical legitimation at its heart.

The Institute for Creation Research and the Creation and Earth History Museum

The 1990s was a fruitful time for creationism in America. While Ken Ham was opening his Museum in Kentucky, an evangelical organisation called the Institute for Creation Research (the ICR) had just opened its own Creation and Earth History Museum in San Diego.²⁷ The man behind the Institute was Henry M. Morris. Born in Texas in 1918, he was known as “the father of creation science” by the time of his passing in 2006. Morris used both biblical and scientific legitimation of faith throughout his work as an apologist, once saying that “the final and conclusive evidence against evolution is the fact that the Bible denies it.” A hydraulic engineer, he also wrote a volume on the movement of water in the biblical account of Noah’s flood. The book, written in 1961, been called “the first significant attempt in the 20th century to offer a scientific explanation for creationism.”²⁸

²⁴ Ibid.

²⁵ Ibid., p. 115.

²⁶ “About the Museum,” *The Creation Museum*, accessed 22 April 2020, <https://creationmuseum.org/creation-science/>.

²⁷ Ronald L. Numbers, *The Creationists: The Evolution of Scientific Creationism* (Berkeley and Los Angeles, California: University of California Press, 1992), pp. 283–284.

²⁸ Matt Schudel, “Obituary: Henry M. Morris, Father of ‘Creation Science,’” *The Washington Post*, 5 March, 2006, accessed 25 April, 2020, <https://archive.seattletimes.com/archive/?date=20060305&slug=morrisobit05>.

The history of the ICR is the history of the struggle of creation science for academic recognition. Between 1981 and 2010, the ICR sought, with uneven results, the right to offer graduate-level degree programs in “various creation-oriented sciences,” particularly “biology, geology, astro/geophysics, and science education.” Though these efforts initially met with approval from the state of California, the ICR failed its reapproval bid in 1988.²⁹ The types of programs offered by the ICR, as well as their legal status, continued to vary through the ‘90s and early 2000s, when, in 2007, the ICR relocated to Dallas, Texas. Efforts to establish higher education programs in Texas were unequivocally denied in 2008, when the ICR sought and was denied the right to provide a Master’s degree program in science education.³⁰ In 2010, the ICR closed its graduate school and opened a School of Biblical Apologetics, which is exempt from licensing by the higher education authorities of Texas due to its status as a religious institution.³¹

Like AiG, the ICR runs on a shifting combination of biblical and scientific legitimization, and, also like AiG, both techniques are expressed through the organisation’s museum and publications. The Creation and Earth History Museum (the CEHM) was founded by the ICR in 1992 in San Diego with a mission to “equip believers with evidence of the Bible’s accuracy and authority through scientific research, educational programs, and media presentations, all conducted through a thoroughly biblical framework.” Along with exhibits similar to those found in AiG’s Kentucky Museum, the CEHM also offers Christian educational programs such as a Creation Fellowship Class and a Kids Creation Club. The website features an “Articles” section with a range of PDFs available for download, with titles including “Bones—God’s Living Girders,” “Did Early Earth Have a Reducing Atmosphere?” and “Ice Age and The Genesis Flood.”³² But, whereas the blog posts of Ken Ham and AiG’s *Answers Research Journal* often use scientific language and engagement with science in order to discredit specific studies, with the primary goal of sowing doubt in readers’ minds as to the quality of mainstream scientific evidence and conclusions,

²⁹ Numbers, *The Creationists*, pp. 287–289.

³⁰ “ICR Fails to Obtain Certification in Texas,” *The National Center for Science Education*, 25 April, 2008, accessed 25 April, 2020, <https://ncse.ngo/icr-fails-obtain-certification-texas>.

³¹ “ICR Concedes Defeat over Its Graduate School,” *The National Center for Science Education*, 1 September, 2010, accessed 25 April, 2020, <https://ncse.ngo/icr-concedes-defeat-over-its-graduate-school>.

³² “Articles,” *The Creation and Earth History Museum*, accessed 25 April, 2020, <http://creationsd.org/resources/articles/>.

the articles posted by the CEHM provide alternative versions of natural history based on biblical timelines and events, seeking to leverage the “hard science” approach suggested in the name of “The Institute for Creation Research.”

The look and feel of “hard science” on the CEHM’s website, as well as in their articles, is pursued in format, content and design. Articles are formatted with some resemblance to mainstream science publications, complete with the works cited sections, journal title, and “PhD” next to authors’ names. The writing is peppered with numbers, acronyms, and keywords that signal science. One article from 2005, “Evidence for a Young World,” compiles fourteen arguments for a young Earth drawn from geology, astronomy, physics, and chemistry: For instance, “Too much carbon 14 in deep geologic strata”; “The earth’s magnetic field is decaying too fast”; “Fossil radioactivity shortens geologic ‘ages’ to a few years.”³³ The last item reads as follows:

Radiohalos are rings of color formed around microscopic bits of radioactive minerals in rock crystals. They are fossil evidence of radioactive decay. “Squashed” Polonium-210 radiohalos indicate that Jurassic, Triassic, and Eocene formations in the Colorado Plateau were deposited **within months** of one another, not hundreds of millions of years apart as required by the conventional time scale. “Orphan” Polonium-218 radiohalos, having no evidence of their mother elements, imply **accelerated nuclear decay** and very rapid formation of associated minerals.³⁴

It is not hard to see why this would look like “real science” to a layman. The keywords seem right: radiohalos, radioactive decay, Polonium-210, Jurassic, Triassic, and Eocene formations; accelerated nuclear decay. Yet, just as Ken Ham and AiG exploit the doubt enshrined by the scientific method in order to turn readers against it, “Evidence for a Young World” uses the visual and rhetorical elements of science to legitimise its argument, with a similar dependence on its readership to miss, or ignore, where it parts from mainstream scientific practice.

That the main value of these works is their aesthetic quality, rather than content, can be assessed by examining the papers in the “References” section. For example, citation 22, a paper titled “Radiohalos in Coalified

³³ Russell Humphreys, “Evidence for a Young World,” *Insight*, No. 384 (June 2005), pp. 1–6.

³⁴ *Ibid.*, pp. 4–5.

Wood: New Evidence Relating to Time of Uranium Introduction and Coalification,” is said to support the idea that the radioactive fingerprint on certain rocks indicates that certain formations were “deposited *within months* of one another, not hundreds of millions of years apart.”³⁵ Reading through the actual study itself, one finds no such information. Published in *Science* in 1976, “Radiohalos in Coalified Wood” is concerned with the question of the approximate date at which the wood in question might have been infiltrated by uranium. It does, at one point, question the contemporary understanding of the origins of the rocks, saying that the authors’ findings “raise crucial questions about the validity of present concepts regarding the antiquity of these geological formations.”³⁶ However, this observation does not question science’s understanding of the Jurassic, Triassic, and Eocene periods themselves, but simply the origins and placement of the rocks under study. The word “months” is never mentioned in the article, and neither can the concept be found under other terminology. “Radiohalos in Coalified Wood” has evidently not been chosen as a source because of its substance, but as an aesthetic touch to support the overall look and feel of “Evidence for a Young Earth.” Readers who have never received science training may well believe that the paper delivers reliable scientific information supporting the idea of a young Earth, as the author of the article must doubtless have intended.

Discussion

Questions might be asked at this point about who benefits from this material, and where it is accessed. It will not be surprising that the major exchange of this information is the internet. Answers in Genesis and the Institute for Creation Research both have active Facebook pages, the ICR with 150,419 and AiG with 449,193 followers at the time of writing.³⁷ Both of these organisations also have a major presence in Christian homeschooling. The ICR and AiG websites both have complete homeschooling education sets for sale in their online shop: the \$287.36

³⁵ Ibid.

³⁶ Robert V. Gentry, et al., “Radiohalos in Coalified Wood: New Evidence Relating to Time of Uranium Introduction and Coalification,” *Science*, Vol. 194, No. 4262 (1976), pp. 316–317, accessed 25 April, 2020, <https://science.sciencemag.org/content/194/4262/315>.

³⁷ *The Institute for Creation Research*, accessed 29 April, 2020, https://www.facebook.com/icrscience/?ref=page_internal; *Answers in Genesis*, accessed 29 April, 2020, <https://www.facebook.com/AnswersInGenesis/>.

ICR Homeschool Pack, featuring titles like *What You Aren't Being Told About Astronomy: Vol 1* and *Twenty Evolutionary Blunders*,³⁸ is accompanied by the 36-week Homeschool Creation Unit Study Plan.³⁹ The AiG “God’s Design for Science Curriculum, 4th edition,” is \$269. The product page says that “all 12 units in the new edition cover grades 3–8,” and encourages homeschool educators to “start their science education early—before evolution-laced secular media claims another heart by creating distrust of the Bible and disbelief in God.”⁴⁰ AiG also has an additional Facebook page called “Answers in Genesis: Apologetics for Homeschoolers,” on which homeschool families can post and view links to resources.⁴¹ As of late April 2020, virtually all of the posts made have to do with science in some way—showing that, for the followers of AiG at least, the word “apologetics” has become synonymous with science.

If you live in the United States, it is easy to come in contact with these ideas. They can be spread with the click of a button and their publishing organisations make it simple to download PDFs, sign up for a forum, or order print materials online. Churches have a well-developed social infrastructure and it is simple to schedule study groups, volunteer events, and public presentations. For many people in such communities, apologetics is a mainstay of conversation in everyday life, to be discussed with their friends and co-workers, their evening Bible study groups, their church committees, their mothers-in-law, their Facebook followers—and, if you meet them, even with you. Simply put, apologetics is popular, unlike mainstream science, which remains, to a certain extent, and in many ways necessarily, a rarefied activity. Apologists are conscious that ease of access is crucial, and do their best to promote it: One of the reasons that Ken Ham and AiG decided to locate the Creation Museum in northern Kentucky is that it is within a one-hour flight of most of the United States’ population.⁴²

³⁸ “Resources for Homeschool,” *The Institute for Creation Research*, accessed 27 April, 2020, <https://store.icr.org/pack-resources-for-homeschool-25050596.html>.

³⁹ “Creation Unit Study Outline,” *The Institute for Creation Research*, accessed 26 April, 2020, <https://www.icr.org/node/50/download/0da8734f79b39518d00017ad928beeb7>.

⁴⁰ “God’s Design for Science Curriculum,” *Answers in Genesis*, accessed 26 April, 2020, <https://answersingenesis.org/store/product/gods-design-science-curriculum-2016/?sku=13-1-071>.

⁴¹ *Answers in Genesis: Apologetics for Homeschoolers*, accessed 26 April, 2020, https://www.facebook.com/group/315432415136501/?ref=group_header.

⁴² “Onward the New Christian Soldier,” *The Sydney Morning Herald*, 17 January, 2005, accessed 20 April, 2020, <https://www.smh.com.au/opinion/onward-the-new-christian-soldier-20050117-gdki8b.html>.



Fig. 1 The “Archaeology Virtual Class” post on the *Answers in Genesis: Apologetics for Homeschoolers* Facebook page.⁴³

In the battle for accessibility, apologetics also takes full advantage of the inaccessibility of science, or rather its perceived inaccessibility. If the scientific-sounding language used by Dr Haynes in “Human Fingers Evolved from Fish?” or by the author of “Evidence for a Young Earth” appears dense and difficult to understand, then that serves the purpose of apologetics in three ways. First, it is an aesthetic feature. If readers believe that science is difficult, they will be more convinced that apologetics is using real science if the “science” in those materials also seems difficult. The more difficult the language is, the more it sounds like science. Second, using difficult language increases the authority of the apologist by putting

⁴³ Tammy Bruce Edwards, “Archaeology Virtual Class,” *Answers in Genesis: Apologetics for Homeschoolers*, 14 April, 2020, accessed 26 April, 2020, https://web.archive.org/web/20200429135306/https://www.facebook.com/groups/315432415136501/?ref=group_header.

him or her into the role of gatekeeper and interpreter, discovering, parsing, and communicating arcane knowledge to the reader. The underlying assumption of this type of apologetics is that mainstream science is factually inaccurate and morally misleading. The apologist becomes a protector to the reader, telling them only what they need to know so that the reader does not have to explore scientific material on their own. Third, the more opaque the science in apologetics sounds to the reader, the more unattractive actual science may become.

The most compelling quality of scientific legitimation in apologetics is its use of the scientific method's in-built dependence on doubt in order to erase readers' doubt in biblical literalism. Science runs on a willingness to accept that theories can always be supported more effectively than they currently are; that further data will always be needed; that any given theory is simply an argument for the best available interpretation at the time, no matter how well-supported. Science preserves its long-term integrity and effectiveness by keeping the door open for future data and explanations. Fundamentalist apologists exploit science's unwillingness to close that door, insisting that certainty is what is needed for legitimacy and, if mainstream science cannot offer certainty, then it is not real science. Josh McDowell's popular book is called *Evidence that Demands a Verdict*, and it is indeed full of language that sounds like science. However, real science is defined by its ability to suspend judgment. It is true that science and apologetics both muster evidence and present arguments, but there is an important difference between science and apologetics — only apologetics demands a verdict. That difference is why, of the two, the scientific method alone will always remain a universally indispensable driver of human progress.

Anne Mydla

Demanding a Verdict: Science and the Apologetics of Biblical Literalism

For many Americans, fundamentalist Christianity is associated with movements to promote biblical literalism and its key tenet, young-earth creationism. Fundamentalism has, for this and other reasons, garnered a widespread reputation for anti-intellectualism in America. However, an effort has been made within certain fundamentalist and evangelical groups to support literalist beliefs with rhetoric and data that imitate scientific discourse. This paper examines examples of science writing from three sources within popcultural apologetics: the bestselling book *Evidence That Demands a Verdict: Life-Changing Truth for a Skeptical World*; the fundamentalist apologetics ministry Answers in Genesis, and the evangelical parachurch organisation known as the Institute for Creation Research.

Keywords: apologetics, science, fundamentalism, evangelism, Christianity

Słowa kluczowe: apologetyka, nauka, fundamentalizm, ewangelizacja, chrześcijaństwo