

Article

Incorporating Space: Protestant Fundamentalism and Astronomical Authorization

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Received: 9 October 2020; Accepted: 8 November 2020; Published: 10 November 2020



Abstract: The problem of authority is vital for understanding the development of Protestant creationism. Two discursive fields have figured centrally in this religious movement's claims to authoritative knowledge: The Bible and science. The former has been remarkably stable over a century with a continuing emphasis on inerrancy and literalism, while the latter has been more mutable. Creationism's rejection of scientific evolution has endured, but its orientation to a range of scientific models, technologies, and disciplines has changed. Astronomy is a prime example; once relatively absent in creationist cultural production, it emerged as yet another arena where creationists seek to corrode scientific authority and bolster biblical fundamentalism. Drawing on archival documents of creationist publications and the ongoing media production of an influential creationist ministry based in Kentucky, this article illustrates how creationism has sought to incorporate astronomy into their orbit of religious authorization. Ultimately, the case of incorporating space helps clarify fundamentalism's machinations of power.

Keywords: creationism; astronomy; incorporation; power

1. Introduction

Based in northern Kentucky, the ministry Answers in Genesis (AiG) is one of the world's most active creationist organizations. Much like other influential fundamentalist Protestant institutions, AiG operates as an empire of cultural production (Harding 2000). They publish books and periodicals, coordinate a research journal, produce films and radio programs, curate an extensive online library of resources, design Christian homeschooling curricula, host summer Bible camps for kids, and organize group tours on Alaskan cruises and Grand Canyon hiking/rafting expeditions. The ministry's most recognizable personality, Ken Ham, travels extensively to speak at churches and conferences, maintains an active weblog, hosts a daily online radio program, regularly speaks with major news outlets as a representative voice for Christian conservatism, and communicates daily with his nearly 66,000 Twitter followers.

AiG's Creation Museum established itself as the ministry's epicenter when it opened in May 2007. During its first decade, the attraction averaged roughly 300,000 visitors annually, a number that increased when a companion theme park, Ark Encounter, opened nearby in July 2016 (Trollinger and Trollinger 2016). The 75,000-square foot facility is set on 47 acres, including a botanical garden, petting zoo, and series of zip lines. Altogether, the attraction immerses visitors into a creationist vision of the Bible, human and natural history, and conservative Christian theo-politics (e.g., from scriptural inerrancy to denial of anthropogenic climate change).¹

¹ I use the term "theo-politics" to mark creationist cultural production as always thoroughly engaged in both the theology of Protestant fundamentalism and the political interests of the Religious Right coalition.

When you enter the main building, you move through an opening portico, a 300-foot curving walkway that guides you to the ticket booth.² Two displays in the portico area represent something of the diverse interests that animate the creationist imagination. The more elaborate display, installed in 2012, is “Dragon Legends.” This choreographed series of murals and artifact replicas presents the creationist argument for why dragons recorded in folklore were actually dinosaurs, supporting a young Earth chronology and the earthly co-existence of humans and dinosaurs. The other display is a single object and not a replica. Positioned across from the ticket booth, the sign at its base reads:

Historic

Planetarium Projector

This Spitz A3P Star and Planet planetarium projector, built in 1956, was used to train NASA’s Mercury astronauts.

Project Mercury (1959–1963) was the United States’ first manned spaceflight program. In 1958, special training began for 110 military pilots. This group included Alan Shepard, Jr. (first American in space) and John Glenn, Jr. (first American to orbit the earth), two of the famed ‘Mercury 7.’

The projector was retired by the US military in the fall of 2000. Satellites, computers and GPS devices have eliminated the need for training in celestial navigation.

For many people, especially critics of creationism, something like “Dragon Legends” is expected. Public representations of the Creation Museum—expressed as both skeptic ridicule and creationist pride—frequently emphasize images of humans and dinosaurs interacting (Laurence 2019). The NASA artifact, however, may be more surprising. One question is how AiG came to possess this object, something we might expect to reside at a place like the National Air and Space Museum. Another question is broader and helps organize the analysis that follows here: what value does outer space have for creationist cultural production? I will explore an answer to this question, illustrating how creationists have sought to incorporate astronomy into their repertoire of strategies for claiming scientific legitimacy. Ultimately, creationists mobilize astronomy in their ongoing effort to wrest authority from mainstream science and bolster their own theo-political ambitions (cf. Barone 2019).

2. Creationist Astronomy

Every day, Answers in Genesis performs the work of religious publicity. I adopt this term from anthropologist Matthew Engelke (2013), who presents it as a critical reassessment of how to study religion in public life. “When we talk about ‘public religion’ today we are often actually talking about ‘religious publicity’” (xv). By this he means that the status of religion being public should not be taken for granted. Instead, “public” should be understood as a status that is actively imagined, pursued, established, circulated, and managed by socially positioned religious actors working toward particular strategic aims.

² This article is informed by an extended ethnographic project focused on the Answers in Genesis creative team who led the design of Ark Encounter (October 2011–June 2014) (cf. Bielo 2018). The participant observation focus of this fieldwork was on the everyday life of the team’s design studio, but also included public events organized by Answers in Genesis. In addition, between 2009 and 2020, I visited the Creation Museum (Petersburg, Kentucky) roughly 15 times, and also toured four other creation museums in California, Tennessee, Georgia, and Ohio. The primary data analyzed here are creationist astronomy writings published between 1981 and 2020, including articles from *Insight* (a monthly feature published by the Institute for Creation Research); *Acts & Facts* (a monthly periodical published by the Institute for Creation Research); and *Answers* (a quarterly periodical published by Answers in Genesis). The data corpus included three articles from *Insight*, drawn from 10 issues (1996–2015); 31 articles from *Acts & Facts*, drawn from 46 issues (2011–2015); and seven articles from *Answers*, drawn from 14 issues (2006–2017). The publications were collected by the author on visits to creation museums, received via free mail subscription, and purchased through eBay. The issues were reviewed for all creationist astronomy articles and were then analyzed using critical discourse analysis (Fairclough 1989). In addition to these print publications, numerous creationist astronomy articles and videos were drawn from the Answers in Genesis website, especially content produced by Danny Faulkner.

The religious publicity of Answers in Genesis is defined by several interlaced ambitions. First, they seek to educate the public about creationism. This is essentially about circulating creationist content grounded in the theological and political culture of Protestant fundamentalism. This basic ambition props up the twin goal of encouraging doubt about the veracity of evolutionary science and bolstering creationist claims to legitimacy. This double-edged strategy of “constructing and corroding” authority works in tandem with other creationist efforts, such as maneuvering to influence public school science curricula (Lincoln 1994). AiG also hopes to create alternative spaces of pedagogy, devotion, and religious entertainment, both brick-and-mortar and digital. The Creation Museum is a safe haven for committed creationists who are suspicious of evolutionary-based science and natural history museums.³ Finally, the religious publicity of the ministry is evangelistic. Through their cultural production, they hope that non-fundamentalists will experience spiritual conviction and a born-again conversion or rededication. Ultimately, Answers in Genesis’ religious publicity is designed with the structural ambition of culture change: irrespective of how many individuals might convert, they work to revise how the public orients toward creationism, constructing it as a legitimized modern identity.

As contemporary creationists jockey for cultural authority, a longstanding strategy has been the assertion of “creation science” as a viable alternative to evolutionary science (Numbers [1992] 2006). The modern creationist movement, of which Answers in Genesis has developed into an influential expression, traces to the 1961 publication of *The Genesis Flood: The Biblical Record and Its Scientific Implications*. The authors—a hydraulic engineer, Henry Morris, and a conservative biblical scholar, John Whitcomb—argued that natural science supports a strict biblical literalism that treats the Book of Genesis as an accurate documentation of early Earth and human history. Morris and Whitcomb’s treatise—later institutionalized through organizations like the Creation Research Society (1963), the Institute for Creation Research (1972), and Answers in Genesis (1994)—argued that all scientific inquiry is grounded in a philosophical worldview. In this ‘worldviews’ model creationists and non-creationists simply have different ‘starting points’ for practicing science. While biblical scripture is always the ultimate authority for creationists, the coining of “creation science” and its elevation as a movement strategy illustrates the cultural capital of science and the authority that is at stake in making this appeal for scientific legitimacy (Toumey 1996; cf. Huskinson 2020; Oberlin 2020).

The social temporality of creationism is centrally concerned with the changes wrought by scientific modernity, namely the embrace of evolutionary science in the late 19th century. In their account of history, trust in evolution sparked a social and moral freefall and an active rejection of biblical inerrancy. The Darwinian turn in the natural sciences marks something of a Second Fall for creationists, nearly as damning as expulsion from Eden. Part of the creationist diagnosis is that science needs redeeming, needs to be rescued from the control of ‘secularists’ and returned to the rightful domain of ‘Bible-believing Christians.’

One observation this article develops about creation science is that it is not a fixed field of practice, but one that creationists continually fashion in dialogue with professional scientific inquiry, popular culture, and social change. In *The Genesis Flood*, creation science focused primarily on geology and archaeology, an emphasis which dominated the early institutionalization of creation science. Still today, ministries like Answers in Genesis and the Institute for Creation Research produce a tremendous amount of content that revisits issues such as the rock layers of Arizona’s Grand Canyon and how the hominid fossil record should be interpreted. But, through the decades, creation science has also grown to encompass other fields, such as astronomy and genetics. Creation science is a core strategy in the broader creationist project of seeking public legitimacy and its capacity to expand is worth theorizing. To do so I turn to a dynamic process termed “incorporation.”

³ As Barone (2019) observes, Answers in Genesis also produces content designed to guide creationists through evolutionary science and natural history museums.

In her critical analysis of Oprah Winfrey—as celebrity, commodity, and brand—religious studies scholar Kathryn Lofton (2011) observes that Oprah’s charismatic authority is reproduced and expanded through a variety of mechanisms. A primary mechanism is for Oprah to draw diverse “experts” (Lofton 2011, p. 74) into her orbit of cultural production. While these individuals (e.g., Dr. Phil on mental health, Suze Orman on financial health, Dr. Oz on physical health) benefit with respect to their own celebrity by association with Oprah, it is Oprah who incorporates them into her empire. To incorporate is to stake a claim of rightful belonging. It is about bolstering the power of one source by instrumentalizing other sources. Rather than engaging select cultural fields as antagonists or competitors, incorporation is about defining those fields as resonant and coherent with one’s own production.

Incorporation is a useful concept because it highlights how power is expanded and intensified through drawing symbolically and materially potent actors into an otherwise distinct institutional field. In the case of creation science, creationists seek to incorporate scientific disciplines, findings, technologies, and debates into their existing theo-politics; never altering the claims of fundamentalism, rather always mobilized to argue for the already presumed truth of fundamentalism. Unlike Oprah, creationists do not have the cultural capital to incorporate mainstream science in any fully successful way. Theirs is always an attempted incorporation, denied by mainstream gatekeepers. But their attempts are unceasing, and their tenacious cultural production forces mainstream science into a difficult position: to ignore or to confront and refute.

Creationists’ attempted incorporation of astronomy follows a series of organizing cultural logics. The objects of astronomical science—planetary motions, lunar cycles, meteor paths, star formation, and so on—are said to ultimately testify to ‘God’s handiwork’ and it is the creation scientist who is uniquely positioned to interpret outer space correctly. This article’s analysis is based on roughly 40 examples of creationist astronomy written between 1980–2020, and across this corpus a shared argument predominates: ‘Secular astronomers fail to explain fundamental questions, such as the formation of the universe, and in response to their failure they concoct ever more elaborate theories, which are anti-scientific and reveal their desperation to conjure a world that was not created and is not ruled by a sovereign God.’ Through these writings, creationists perform a proprietary stance toward astronomy. As they do with dinosaurs, creationists construct the stuff of astronomy as properly theirs and in need of reclaiming from ‘evolutionists’ (Laurence 2019).

The special promise of astronomy, compared to geology or archaeology, is that it can reveal previously unknown truths about the universe. Again, tracking with established creationist logics, the emerging findings of astronomy are mobilized to reinforce what creationist have always claimed: we live in a world of natural order, the earth is far younger than evolutionary science claims, and the only viable explanation for the origins of life and matter is a creator God. Consider an illustrative example.

Answers is a quarterly periodical published by AiG, a glossy magazine with a mix of popular and technical writing, features marketed to different age groups, and ads for diverse creationist commodities (from homeschooling materials to conferences and university programs). Imagine being part of a creationist household: the newest issue arriving in your mail would offer something of interest for the whole family. The April–June 2012 issue included a three-page article entitled “New Discoveries of Order in the Sun.” The author, Jason Lisle, earned his doctorate in Astrophysics from the University of Colorado-Boulder and for several years worked for AiG as a staff astronomer. In the article’s opening, Lisle frames his discussion of new research about the sun’s physical properties with an enduring creationist trope:

We cannot see inside the sun. Thankfully, new tools and techniques are available. Astrophysicists can use these methods to probe beneath the solar surface. The closer

they look, the more structure they see. The marvelous design of this supersized energy factory points clearly to the wise Sustainer of life.⁴

Creationist astronomy also performs an enduring creationist discourse strategy. This strategy emerges from the conspiratorial dimension of creationist culture, in which they claim a marginalized identity amid a public life dominated by ‘secular humanist’ proponents of evolution (cf. [Toumey 1994](#); [Butler 2010](#)). In response, creationists construct a stance in which they are revealers: making clear how creationism is constantly censored by ‘evolutionists’ who promote an ‘atheistic’ and ‘un-biblical’ worldview. A common expression of this stance is to coach creationist media consumers on how to read, listen, and watch popular culture, news, and scientific research. In turn, part of fundamentalist enculturation is learning to look for, and find, the naturalization of evolution and its flipside, the suppression of creationism.

For example, in April 1996 the Institute for Creation Research (a creation science organization formerly based in San Diego and relocated to Dallas in 2007) published a pamphlet commenting on new images released by the Hubble Space Telescope, “New Stars, New Planets?” The author, Donald DeYoung, earned his doctorate in Physics from Iowa State University. In his closing paragraph, he both warns and instructs readers:

Claims of discoveries are flooding in from the new generation of space instruments. These reports are often given an evolutionary “spin,” especially regarding new stars, planets, and origin theories. Creationists are encouraged to enjoy and study the new data and photographs. They should also be ready to separate the unneeded, anti-creation statements that often accompany these reports. Our enlarging view of creation shows a complex universe that completely frustrates any attempt to explain its origin or content by natural processes alone.⁵

A similarly framed article appeared in the April–June 2012 issue of *Answers*. In “The Earths Keep Coming,” the author (unnamed) reports on new data released by the Kepler Space Telescope. Its assessment directly echoes DeYoung, coaching creationist readers in the same way 16 years later:

With each discovery and press release, NASA’s researchers reveal their bias more and more. Kepler isn’t intended as just a research mission for scientific exploration; it’s an attempt to prove evolutionary concepts. If life evolved here—as they already believe—then they assume it likely evolved elsewhere. But they’re missing the bigger point. Each of these planets showcases not the possibility of life, but the far-flung wisdom and power of our Creator.⁶

3. Life in a Young Universe

The U.S.–Soviet Union Space Race and national investments in scientific infrastructure helped mobilize the modern creationist movement. After the Sputnik launch in October 1957, the U.S. Congress authorized “millions of federal dollars to support scientific research and training” ([Eve and Harrold 1991](#), p. 28). This included a \$100 million National Science Foundation program in 1958 to reform public school science curricula, and the formation of NASA that same year. This sharpened a double-edged sword among conservative Protestants who felt alienated from these public changes. It “marked a high point in the prestige of science,” but also a peak in populist “suspicion, mistrust, and misunderstanding” of scientific institutions ([Gilbert 1997](#), vol. 5, p. 7). While the public at large invested significant trust in scientific authority, there was a class-inflected sentiment that elite experts controlled mainstream science and excluded non-liberal political foes.

⁴ “New Discoveries of Order in the Sun,” *Answers* (April–June, 2012). Periodical published by Answers in Genesis, author’s collection.

⁵ “New Stars, New Planets?” *Insight* (April, 1996). Pamphlet published by Institute for Creation Research, author’s collection.

⁶ “The Earths Keep Coming,” *Answers* (April–June, 2012). Periodical published by Answers in Genesis, author’s collection.

The Genesis Flood appeared in February 1961, just a few months before the first human traveled in outer space. Despite the zeitgeist, early creation science had little to do with astronomy. In Morris and Whitcomb's 500-page book there are only two entries, each one page long, that address "the origin of the solar system" and "the origin of the universe." As part of the effort to establish itself as a legitimate alternative to evolutionary science, creation scientists formed their own research journal in 1964 (*Creation Research Society Quarterly—CRSQ*). The inaugural issue included a one-page article, "On the Origin of the Universe," that used the physics of light measurement to argue for a young universe. Over the next decade, *CRSQ* published several space-oriented articles, but none were authored by individuals with advanced degrees in astronomy. A 1973 review surmised that "much work remains to be done in the area of creationist astronomy." (Mulfinger 1973, pp. 170–75).

The first book-length account of creationist astronomy appeared in 1979, Paul Steidl's *The Earth, the Stars, and the Bible*. Though not sporting the academic credentials of later figures such as DeYoung and Lisle, Steidl's book is well-remembered in the creation science community. Danny Faulkner, another AiG researcher, earned his doctorate in Astronomy from Indiana University-Bloomington. In his 1998 review of creationist astronomy, Faulkner comments favorably on Steidl, though is also clear to mark the professional distance separating them:

Because [Steidl's] book does not go into great depth nor is it a primary source in the sorts of arguments that will be described here, it will not be referenced often in this paper. Its great strength is that it is a general treatment of astronomy that covers a broad range of subjects with emphasis given to Biblical and creation interpretations. While nearly 20 years old, the book has aged very well considering the rapid advances in astronomy in the intervening period. (Faulkner 1998)

While Steidl advanced creation science's attempted incorporation of astronomy, it was a popular cultural phenomenon that escalated the effort. *Cosmos: A Personal Voyage*, hosted by Carl Sagan, aired in 13 episodes on the Public Broadcasting Service from September through December 1980. Sagan, who earned a doctorate in Astronomy from the University of Chicago, pitched the series as an "attempt to bridge the division between the scientific community and the general public" (Lessl 1985, p. 177). The series budget of eight million dollars was, at the time, a record for U.S. public television and it received widespread critical acclaim, earning Emmy awards and Peabody awards. In a rhetorical analysis of the series, Lessl (1985) argues that Sagan performed a double-voiced stance of seer-saint that leveraged and celebrated the cultural authority of science: "As seers, scientists hold the keys to all cosmic secrets, making the ways of evolutionary progress known to the human species. As saints, they are in closest touch with the evolutionary essence of the cosmos; they purify the human species by their redeeming presence among us, and as teachers they bring us closer to what will pass as ultimate" (Lessl 1985, p. 178).

Sagan's rendering of life in the universe resonated with a long tradition of figuring outer space as sacred space, and encounters with the vastness of space as a religious experience (Weibel 2016). In doing so, he drew together religion and science in a materialist register, "reaffirming the soundness of evolutionary theory and refuting theistic notions of creation" (Lessl 1985, p. 178). The series positioned creationism as absolutely at odds with science and unviable as an explanation of the past. This direct critique, coupled with the series' popularity, and its airing on public television, raised the ire of creationists and fit snugly in their narrative that evolution was public dogma and creation science was censored truth.

Consider one example published soon after *Cosmos* aired, a review of the series in a collegiate newsletter called *Origins Research* that was founded in 1975 at the University of California-Santa Barbara. Authored by Dennis Wagner, the newsletter's editor at the time and an engineer by training, the review appreciates Sagan's eloquence but pans the series as non-scientific:

It was disturbing, however, to watch a very popular scientist stand before a 150 million viewers and proclaim that what he was offering them was science and facts when in reality he was presenting to them Carl Sagan's philosophy of life. (Wagner 1981)

Throughout, Wagner works to de-legitimize Sagan as an untrustworthy source. Citing a reference Sagan makes to humanity's connection with the cosmos, he quips:

We are the soul of the cosmos—sound familiar? If not, then a visit to your local guru might clear things up. (Wagner 1981)

Wagner's review is grounded in both the theology and discursive strategies of creationism. He draws in a moral critique of evolution by assessing how Sagan would address the question of life's purpose:

The impact of survival ethics is both obvious and devastating. The sick, the poor, the weak, and the uneducated become more casualties of evolution. (Wagner 1981)

And, he draws on a strategy that became a pillar of creationist argumentation, a distinction between "observational" and "historical" science. While not a meaningful distinction among mainstream scientists, creationists assert this as a way to claim that evolution cannot offer the certainty it promises because empirical observations about the past cannot be made in the same way as those about the present. He writes:

Several times Sagan stated very matter-of-factly that the laws of Nature are the same everywhere in the universe. I admit that this is a reasonable working assumption. But unless I had been to the ends of the universe in my starship to conduct my experiments, I don't think I would venture to make such a statement as a fact of science. Even Captain Kirk appears more scientific in his analysis of the universe than Captain Sagan does at times. (Wagner 1981)

Creationists used the success of *Cosmos* as an opportunity to re-assert their conspiratorial claim of public marginalization and to capitalize on the renewed public excitement about astronomy. In the wake of the series, creationists placed new emphasis on astronomy; that is, they made a more concerted effort to incorporate this field of science into the domain of creation science. A compilation of CRSQ articles, *Design and Origins in Astronomy*, was released in book form in 1983. DeYoung published *Astronomy and the Bible* in 1989, the first creationist astronomy book written by a PhD-educated scientist. This post-*Cosmos* period of focused incorporation solidified astronomy in the creationist repertoire. In the decades to come, creationist organizations would add astronomers to their paid staff and integrate them into their systems of cultural production. For example, Answers in Genesis added Lisle and Faulkner, and the Institute for Creation Research added Lisle following his employment at AiG and Jake Hebert, who earned his doctorate in physics from the University of Texas-Dallas.

Performing Incorporation

Creation science's work of incorporating astronomy is an ongoing labor. It is continually performed and circulated through printed books and articles, online materials, DVDs, programming at creationist attractions, public presentations, and media interviews. Here, I present just two examples of how Answers in Genesis seeks to authorize the legitimacy of creationist astronomy for its audiences.

Visitors to the Creation Museum in northern Kentucky have numerous opportunities to encounter creationist astronomy. The most popular venue, and the costliest for the ministry, is the Stargazer Planetarium. Located inside the main building, the digital projection theatre has been part of the site's programming since the opening in 2007. In 2019, the Creation Museum invested roughly five million dollars in an extensive redesign, which included a 1.2-million-dollar upgrade for the planetarium: new projectors, new computer software and hardware, a tilted dome to replace the previous ceiling,

and an acoustic system enabling a more immersive aural experience. Every day, multiple shows play on rotation. The planetarium's inaugural show, "Created Cosmos," a 22-minute production written by Jason Lisle, still plays every day, eight times a day Monday through Saturday.

"Created Cosmos" greets audiences by combining discourses of awe in the face of a vast universe, an affirmation of humanity's original sin, the claim of a sovereign creator God, and a promise that astronomy is a tool for religious understanding.

As we learn more about the universe we are continually amazed at the astonishing diversity and beauty we find. Though marred by the Curse, the universe still exhibits the handiwork of the Lord. By learning more about the intricacies of the celestial realm we gain an infinitesimal glimpse into the infinite mind of God. (Lisle 2007)

The show begins with the earth's distance to the moon and moves to the orbital paths of the planets in our solar system, the distance to other star systems within our galaxy (e.g., Alpha Centauri), the location and composition of the sun, well-known star constellations, globular clusters, the scope of the Milky Way, the presence of other galaxies composing our universe, and concludes by zooming back in to the earth with a satellite view of the Creation Museum. As it takes audiences on this galactic journey, the show returns to the organizing argument that only creationist astronomy can offer full access to the truth of the cosmos. For example, when presenting the constellation Orion's Belt, it compares stars of differing heats:

Blue stars like Alnilam are very luminous, they expend their fuel quickly and cannot last billions of years. So, blue stars remind us that the universe is much younger than is generally claimed. Secular astronomers are forced to assume that stars, like Alnilam, have spontaneously formed in the recent past. However, star formation is riddled with theoretical problems and has never been observed. (Lisle 2007)

Along with these critiques of mainstream science, the show performs fundamentalist theology by equating the vastness of space ("distances that we cannot truly comprehend") with the power of God and the miracle of humanity's special place in creation. Its closing works as something of an astronomical altar call, pitched dialogically in response to Sagan's discussions of "star stuff":

The earth may seem an insignificant speck compared to all that God created. Yet, this tiny world is where God placed the crowning jewels of His creation. Of all that the Lord created, human beings alone have the privilege of being made in God's own image. And though we have rebelled against our creator, he's paid the penalty for our treason. It was on this small planet where the creator of the universe became a man and died our death. He then rose again and offered forgiveness for all who call upon his name. It is fitting that we should honor God for who he is and for what he has done. (Lisle 2007)

If "Created Cosmos" performs the incorporation of astronomy onsite for visitors to the Creation Museum, a slew of articles does so for visitors to the Answers in Genesis website. The organization's current staff astronomer, Danny Faulkner, writes regularly on topics ranging from "Alien Abductions: Freaky or Fiction?" to "Cosmic Bubble Hypothesis Highlights Another Big Bang Problem." Amid this abundant selection, Answers in Genesis continues the strategy of transforming widely publicized popular culture into an opportunity for creationist incorporation. As creationists did with the 1980 *Cosmos* series, Answers in Genesis used the 2014 *Cosmos* reboot, hosted by astrophysicist Neil deGrasse Tyson, to circulate the theology of creationist astronomy.

For each of the 13 episodes in the 2014 *Cosmos* production, AiG released a review and group discussion guide. In an introductory video recorded in his Creation Museum office, AiG CEO Ken Ham frames the review series with the same revealer stance analyzed above, as a way for creationists to understand the pop culture mediascape as corrupted by evolution:

[*Cosmos*] really is a very intense attempt to brainwash and indoctrinate people in the religion of evolution. Basically, you know, worship the stars because the stars gave birth to us... I encourage you to use this as a resource tool from Answers in Genesis to equip you, to prepare you, to equip your children, your students, ready for what they're going to hear out there in the world that's going to try to drag them away from the truth of God's Word. (AiG 2014)

The author of the reviews is one of AiG's employees, a medical doctor named Elizabeth Mitchell. Throughout, Mitchell rejects *Cosmos*' self-presentation as an attempt to improve the public's scientific literacy and claims to reveal it as yet another attempt to naturalize evolution as the only rational view of how the universe began and life emerged. For example, her review of the series' first episode challenges Tyson's assertion that there is empirical proof for the Big Bang. Appealing to the scientific legitimacy of her colleague, Faulkner, she quotes one of his weblog posts:

This is not "observational evidence" about our origins but rather "an interpretation of the data, data that could be interpreted a number of different ways apart from the big bang." (AiG 2014)

Ultimately, of course, Mitchell's reviews are designed to bolster creationism's incorporation of astronomy. They do so by circulating the same claim that has always animated creation science, that science properly done will only ever support creationism. This is addressed directly in Mitchell's discussion leader guide for episode one, where she teaches group leaders what questions to pose and how to answer them. Here, she returns to the enduring creationist discourse strategy that natural order must reflect supernatural order:

Do Bible-believing Christians reject science? ANSWER: No, Bible-believing Christians not only use science but also understand that the scientific method works because God created an orderly world governed by the laws of nature. While the Bible is not a modern scientific textbook, whenever it addresses a scientific point, it is a completely reliable yardstick to guide our discoveries and interpretations of scientific questions. Bible-believing scientists understand that the reliable and predictable laws of nature on which science depends come from our all-powerful Creator. Bible-believing scientists enjoy discovering how things work that God created and learning how to use science to benefit mankind. (AiG 2014)

4. Conclusions

What value does outer space have for creationist cultural production? This article has ventured an answer to this question, arguing that creation science has sought to incorporate astronomy into its repertoire. Energized by the public popularity of the 1980 *Cosmos* television series, creationists have spent four decades constructing a claim that astronomy testifies to their young universe interpretation of the biblical Book of Genesis as literal history. This process of attempted incorporation is performed through print and online media as well as highly choreographed productions, such as planetarium shows at creationist museums. The attempt to mobilize astronomy in this way illustrates an enduring creationist strategy: to challenge the scientific and cultural authority of evolutionary science, re-directing legitimacy to their own account of history and, ultimately, the theo-politics that orients the movement.

Creationism expresses a particular configuration of the religion-science relationship. Namely, it is a hierarchical relationship in which science is always subordinate to religion; truths about the natural world can only ever support the supernatural truths revealed by divinely authored scripture. The case of incorporating astronomy certainly illustrates how this hierarchical relation is performed, though that is not the primary goal of this analysis. More than illustrating this well-known configuration of religion-science, the goal has been to make clear one way in which power operates in the creationist movement. Whatever else it is, creationism is an attempt to wrest authority away from evolutionary science and secure it with fundamentalist Protestantism.

The creationist claim to cultural authority and legitimacy is an ongoing effort, composed of strategies that abide by a system of cultural logics, material practices, and discursive tactics. Following Lincoln (1994), I understand authority as an emergent process, not an already cohered product that is then sought, gained, or lost. Authority is “an effect, the capacity for producing that effect, and the commonly shared opinion that a given actor has the capacity for producing that effect” (Lincoln 1994, pp. 10–11). Authority is fundamentally relational and grounded in trust: “[It] depends on nothing so much as the trust of the audience, or the audience’s strategic willingness to act as if it had such trust” (Lincoln 1994, p. 8). The process of incorporation outlined here is one example of how this appeal to trust is performed by creationists, as they dialogically construct a fundamentalist self against an evolutionist other.

In this framework, authority is contestable; it is exerted and challenged, obeyed and critiqued, internalized and rejected, persuasive and doubted. Lincoln argues that these qualities are constantly negotiated through two kinds of cultural labor: constructive and corrosive discourse. Constructive discourses work to bolster, promote, support, and otherwise reproduce appeals to the public trust. Through biblical authority, embattled identity, and the revealer stance, creationist incorporation is partially grounded in constructive labor. Corrosive elements are also present; discourse that seeks to challenge, erode, critique, damage, and otherwise disrupt or undermine competing authoritative sources. Creationist incorporation integrates tactics such as portraying evolutionary arguments and pop culture phenomena as both morally corrupt and intellectually flimsy to foster anti-evolution sentiment.

Taken together, and working in tandem with other forms of creationist cultural production, the incorporation of a scientific field is targeted toward divesting legitimacy away from evolutionary science’s established authority. By claiming astronomy as their own, creationists re-create a broader project of rendering authority as a zero-sum game and making a bid for total legitimacy.

Funding: This research received no external funding.

Acknowledgments: I would like to thank Deana Weibel and Glenn Swanson for their generous invitation to participate in this special issue, and two blinded peer reviewers for their constructive critiques of earlier drafts. Also, I am grateful to Muriel Blaisdell (Miami University) for contributing materials from her personal archive of creationist writings dating from the mid-1970s through the mid-1990s.

Conflicts of Interest: The author declares no conflict of interest.

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