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Lunar Stories: The Violence of Creation

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Recommended Citation

Visscher, Channon, "Lunar Stories: The Violence of Creation" (2016). *Faculty Work: Comprehensive List*. Paper 551.
http://digitalcollections.dordt.edu/faculty_work/551

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Lunar Stories: The Violence of Creation

Abstract

"Tales of the moon's creation abound in myth, legend, history and science. Given its conspicuous brightness and nearness, we should not be surprised that the moon has captured the imagination since the dawn of human consciousness."

Posting about how the moon was made from *In All Things* - an online hub committed to the claim that the life, death, and resurrection of Jesus Christ has implications for the entire world.

<http://inallthings.org/lunar-stories-the-violence-of-creation/>

Keywords

In All Things, moon, science, planets, creation, God

Disciplines

Astrophysics and Astronomy | Christianity

Comments

In All Things is a publication of the [Andreas Center for Reformed Scholarship and Service at Dordt College](#).

Lunar Stories: The Violence of Creation

 [all in allthings.org/lunar-stories-the-violence-of-creation/](http://allthings.org/lunar-stories-the-violence-of-creation/)

August 26,
2016

Channon Visscher

Tales of the moon's creation abound in myth, legend, history and science. Given its conspicuous brightness and nearness, we should not be surprised that the moon has captured the imagination since the dawn of human consciousness, variously treated as a deity or a vessel of the divine (such as J.R.R. Tolkien's lunar *Isil*, guided by the reckless Tilion) or in a significant departure from other ancient Near East cosmologies, a creation appointed as the lesser light to rule the night (Genesis 1:16) and mark the seasons (Psalm 104:19) as a faithful witness in the skies (Psalm 88:37). However, although the moon is our closest cosmic companion, its *physical* or *material* origins have long remained a mystery: How was the moon made? Like all else in creation – from thunderstorms to canyons to comets – its very presence not only implies a history but also testifies to a history. In other words, a *story* of how it came to be as we perceive it. What story can we tell to explain the moon we see today? What do *these* kinds of stories say about the character and power of God? What do they tell us about the level of condescension needed for a meaningful relationship between creature and Creator?

My earliest attempt at making the moon was a mixture of Sunday-school theology and grade-school science. I explored my grandparents' Earth globe looking for a place where the moon could have reasonably split off from the spinning Earth, choosing a region somewhere in the south Pacific – my own adaptation of the fission theory, first formally developed, unknown to me, by G.H. Darwin (son of the famous biologist). Like most of my friends, I had an unarticulated appreciation of the conservation of angular momentum as applied on the school merry-go-round but was unaware of what that meant for my theory. As moons and planets go, our moon is relatively large for a planet the Earth's size. Consequently, as noted by one prominent lunar scientist, the angular momentum of the Earth-moon system "has been the rock on which most hypotheses of lunar origin have foundered." Including my own.

There are other clues to guide and shape our creation stories. We see a deep history written into the face of the moon: large swaths of dark-colored maria formed by ancient volcanic flows along with even older, bright highlands saturated with impact craters. These craters represent an uneasy marriage between uniformitarianism and catastrophism: each formed individually in a violent, catastrophic event repeated thousands and millions of times over the age of the solar system. With no water, wind or shifting plates to erase it, the lunar surface has been preserved as a witness to planetary history. Looking even further into the past, there are clues that, like the planets, the moon was formed in violence. This should perhaps not surprise us, as we see violence in the birth of stars, of black holes or even of the cosmos itself. The universe is not a *safe* place – especially when God is at play, making new planets and worlds. (But it is good.)

The return of lunar samples collected by the Apollo astronauts provided new data that triggered a textbook paradigm shift in the science of lunar origins. Careful study of these rocks revealed that the Earth and moon were formed out of the same stuff, a mortal blow to the theory that the moon had formed elsewhere in the solar system and was later captured by the Earth's gravity. But there were several key differences: The moon is quite dry compared to the Earth, short on elements that are readily vaporized and slightly enriched in high-temperature elements. Taken together, the new evidence seemed to require an energetic, violent birth for the moon. In the 1970s, scientists began to explore ways to understand it.

By the mid-1980s, a consensus had emerged for a new paradigm: The moon had formed in the aftermath of a giant collision between a planet-sized object (called "Theia") and the early Earth. The energy of this event is beyond imagination – large portions of the Earth and all of Theia melted and vaporized, mixed and flung into orbit, forming a disk of magma and vapor in a broad ring surrounding the Earth. Over time, this disk of debris cooled and dissipated, in new variations of the theory, much of it falling back to the Earth and some separating into small "moonlets" that merged to complete the formation of what would become our moon.

In science, the stories that endure are those that are most consistent with observations of the physical world around us. The best stories are those thought to most closely resemble the actual sequence of events of how things came to be. Recognizing that even small differences early in the story can lead to dramatically diverging results, a test of any physical theory of lunar origin is this: Does the moon in our story look like the moon as it actually exists? For the past three decades, the giant-impact hypothesis has provided, with great success, the basic framework for answering this question, and our latest attempts at making the moon – begun in afternoon discussions between a planetary chemist, physicist and dynamicist around a whiteboard – assume the basic outline of the impact events described above. Current research in the study of lunar origins is dedicated to filling in the plot details by addressing any remaining unexplained data or potential inconsistencies. This is the normal science consistent with the existing paradigm. So it remains the best story of *how* the moon was made. At least until a better story comes along.

This article was previously published in [Perspectives Journal, May/June issue](#). Republished with permission.

Dig Deeper

Want to hear more from Channon Visscher? Plan to attend Dr. Visscher's [First Mondays'](#) presentation, "Let the [Colliding Black Holes] Declare the Glory of God," on Monday, September 5 at 11 am on Dordt College's campus. Or, watch it via live stream [here](#).