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Has Man Created Life?

Humanity had better think hard about whether this is a journey we are ready to entrust to scientists alone. The most urgent question raised by this new announcement is not so much what it means, but where it leads.

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The cover story of the June 2010 edition of *Scientific American* presents “12 Events That Will Change Everything.” Those events include human cloning, an asteroid colliding with the earth, a worldwide pandemic, and the creation of synthetic life. Each of the twelve proposed events is evaluated in terms of likelihood. The article on the creation of synthetic life ranks the probability of that event as “almost certain.”

Consider that a case of an argument made too late. Just days ago, Dr. Craig Venter and his associates announced the achievement of the first synthetic life form, a bacterium with DNA sequenced entirely by computer — a human-designed life form.

The international media have seized upon the news, published officially in the journal *Science*. In rather clinical language, *Science*, published by the American Association for the Advancement of Science, described the achievement. The journal explained that Venter and his associates “describe the stepwise creation of a bacterial chromosome and the successful transfer of it into a bacterium, where it replaced the native DNA. Powered by the synthetic genome, that microbial cell began replicating and making a new set of proteins.”



That is the stuff of which scientific breakthroughs are made, and no one is suggesting that Venter’s achievement is dubious in terms of scientific legitimacy. For years, Venter has been known to be working on such a project, with the express goal of creating a synthetic life form. Just a few years ago, he and his team announced a breakthrough in the technology that opened the door for this new development.

The Financial Times presented a headline that read, “Scientists Create Synthetic Life Form with a Computer and Four Bottles of Chemicals.” *The Wall Street Journal* announced, “Scientists Create Synthetic Organism.” *The New York Times* was considerably more subtle, “Synthetic Bacterial Genome Takes Over a Cell, Researchers Report.” *The Economist* [London] took the opposite approach: “And Man Made Life: The First Artificial Organism and its Consequences.”

In truth, what Venter and his team accomplished was the synthesizing of the largest-ever piece of DNA. They did not create an organism from the ground up, but used the existing cell of another bacterium. The synthesized DNA then took over the cell and began replicating itself. That is a remarkable feat of technology, but it is not the creation of an entirely synthetic organism.

Venter, never one to underplay his achievements, described the transformed cell as “the first self-replicating species we’ve had on the planet whose parent is a computer.” He added, “This is a philosophical advance as much as a technical advance.” But what kind of “philosophical advance”?

Writing at *The Guardian* [London], Andrew Brown described “this moment of complete victory for materialism,” noting that atheists would point to the announcement as evidence that there is no need for a divine Creator.

David Baltimore, another influential scientist, described Venter’s achievement as “a technological tour de force,” but he rejected the claim that Venter had created life. “He has not created life, only mimicked it,” he told *The New York*

Times.

On the other hand, University of Pennsylvania bioethicist Arthur Caplan described the achievement of Venter's team as "one of the most important scientific achievements in the history of mankind." He told *The Financial Times*: "Venter's achievement would seem to extinguish the argument that life requires a special force or power to exist."

A bit of perspective is needed here. In the first place, this news is hardly a "moment of complete victory for materialism." That is, not unless you are going to define Craig Venter and his team of human colleagues as merely material objects. But, if you are ready to reduce humanity — intelligence, emotions, and all — to mere materialism, you were surely not waiting for this news to confirm your position. In truth, this was a technological and intellectual achievement made by human beings, not by purely material objects.

Second, this was not the creation of a life form *ex nihilo*, nor even from entirely non-organic materials. These researchers used an existing cell and the catalytic agent of yeast in conducting their experiment. Thus, this hardly extinguishes the argument "that life requires a special force or power to exist."

No one should deny the groundbreaking achievement of Venter and his team. The synthesizing of a self-replicating life form is breathtaking in its monumental scale. At the same time, this is not the creation of an entirely new life form out of purely non-organic materials. Creation — as in the creation of life in the first place — is in no way comparable to what happened in this case.

Even if the achievement of a self-replicating synthetic life form made of purely non-organic materials were to be accomplished, it would still require the intelligence of organic human beings to bring it about. We are not looking at the moment of creation here.

There is a dark side to this news as well. As Venter acknowledged, there is the danger of a terrorist developing a synthesized bacterial agent as a weapon of mass destruction. Hearing of the news from Venter's team, President Obama established a task force to bring a report within six months on possible risks from the technology. There are also urgent questions about the meaning of this research for human experimentation.

Of course, the looming question is the large meaning of this research and the quest to manipulate and synthesize life. As David King of the Human Genetics Alert [London] commented, "What is really dangerous is these scientists' ambitions for total and unrestrained control over nature, which many people describe as 'playing God.'"

In his autobiography, *A Life Decoded: My Genome, My Life*, Craig Venter declared his ambition "to take us far from shore into unknown waters, to a new phase of evolution, to the day when one DNA-based species can sit down at a computer to design another. I plan to show that we understand the software of life by creating true artificial life."

Those are unknown waters, indeed. Humanity had better think hard about whether that is a journey we are ready to entrust to scientists alone. The most urgent question raised by this new announcement is not so much what it means, but where it leads.

I am always glad to hear from readers. Write me at mail@albertmohler.com. Follow regular updates on Twitter at www.twitter.com/AlbertMohler.

"And Man Made Life: Artificial Life, the Stuff of Dreams and Nightmares, Has Arrived," *The Economist*, Saturday, May 22, 2010.

"Genesis Redux," *The Economist*, Saturday, May 22, 2010.

Andrew Brown, "Has Craig Venter Made Us Gods?," *The Guardian* [London], Thursday, May 20, 2010.

Nicholas Wade, "Synthetic Bacterial Genome Takes Over a Cell, Researchers Report," *The New York Times*, Friday, May 21, 2010.

Clive Cookson, "Let There Be Life," *The Financial Times*, Friday/Saturday, May 22/23, 2010 (subscription required).

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