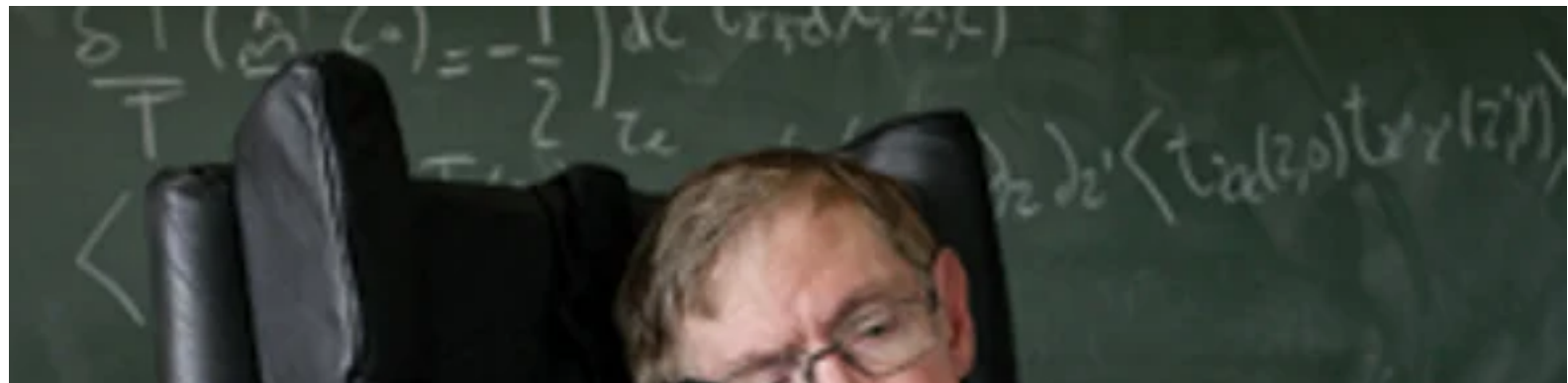
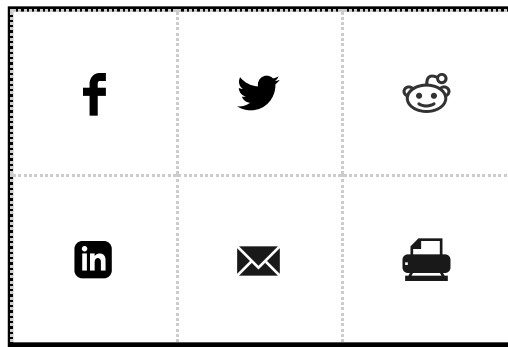


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The battle for eternity is fought on *Larry King Live*

By Davide Castelvecchi on November 1, 2010



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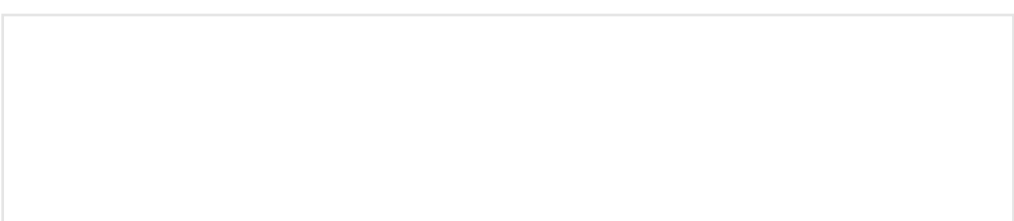
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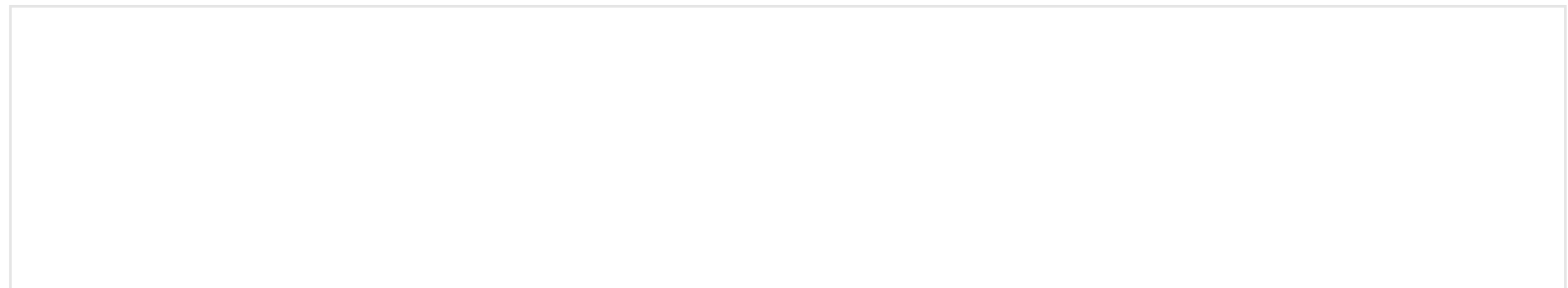
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Has Stephen Hawking overreached? The publication in September of *The Grand Design*, a book the British physicist co-authored with Leonard Mlodinow of Caltech, raised hackles as some saw it as denying the existence of God based on scientific arguments.

Physics, the book states, can now explain where the universe came from and why the laws of nature are what they are. The universe arose “from nothing” courtesy of the force of gravity, and the laws of nature are an accident of the particular slice of universe we happen to inhabit. “It is possible to answer these questions purely within the realm of science, and without invoking any divine beings,” the authors wrote. (An adaptation of the book appeared in the October *Scientific American*.)

Theologians were incensed, saying that the existence of a creator is by definition outside science’s domain. Some, including Reverend Robert E. Barron, a theology professor at the University of St. Mary of the Lake near Chicago, also complained that the book is philosophically naive. For example, Barron says, the existence of the laws that caused the appearance of the universe must have predated the big bang. “The ‘laws of gravity’ seem to be something other than nothing.”



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As the media frenzy spread from bloggers and tweeters to prime-time television, the authors countered that they never meant to claim that science proved that there is no God. “God may exist,” Hawking told CNN’s Larry King, adding, “but science can explain the universe without the need for a creator.”

“We don’t say we’ve proved that God doesn’t exist,” Mlodinow says. “We don’t even say we’ve proved that God hasn’t created the universe.” As for the laws of physics, he says, some may choose to call those God. “If you think that God is the embodiment of quantum theory, that’s fine.”

On the other hand, the scientific account of the origin of the universe may not be as complete as Hawking represents. It is based on string theory and on an even more mysterious—and just as untested—version of it called M-theory, as well as on Hawking’s own cosmological thoughts. “The theories that Hawking and Mlodinow use to base their arguments on have as much empirical evidence as God,” wrote cosmologist Marcelo Gleiser on an NPR.org blog. Moreover, Gleiser added, “because we don’t have instruments capable of measuring all of nature, we cannot ever be certain that we have a final theory.”

Stanford University theoretical physicist Leonard Susskind, whose 2006 book *The Cosmic Landscape* also questioned the need for a creator in the account of creation, agrees. “Not all physicists think the quest for a complete theory is over,” he says. “I don’t think we are anywhere near it.” Whether or not there is a God, his or her handiwork is certainly not easy to understand.

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## ABOUT THE AUTHOR(S)

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Davide Castelvecchi is a senior reporter at *Nature* in London covering physics, astronomy, mathematics and computer science.

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