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# Atlas Shrugs

## Commentary

**If scientists can be counted on for anything, it's for creating unintended consequences.** (Michael Dougan)

*Special to ABCNEWS.com*


David Melville is an eccentric physicist and thinker, and a friend of mine. He's also terrified.

Melville is preoccupied with what he regards as the most dangerous event in human history: an experiment, scheduled for November, at the Brookhaven National Laboratory in Upton, N.Y. Brookhaven has a device, called the Relativistic Heavy Ion Collider, that has the world's physicists tremendously excited. Scientists believe they can use the collider to duplicate the conditions that prevailed milliseconds after the Big Bang, when the universe consisted of a primordial soup called the quark-gluon plasma. Brookhaven scientists think that by colliding gold ions at extremely high speed, they can create a tiny, fleeting version of quark-gluon plasma to gain a better understanding of the origins of the universe.

Sounds like fun. The only problem, according to David Melville's panicky e-mail, is that, "It has been theorized by Steven Hawking that from this quark-gluon plasma other forms of matter are also produced. The most dangerous being a black hole."

## Consumed From the Inside Out

All I know about black holes is that they have zero volume and infinite density. They sit in deep space, trapping everything that comes near enough (crossing inside what's known as the "Schwarzschild radius") and letting nothing escape, even light.

So I am perplexed. What happens if you create one in a laboratory?

**SUMMARY**

**The hubris of trying to replicate the universe just after the Big Bang could have catastrophic consequences.**

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Melville says he believes it would be microscopic at first but would grow exponentially, eventually obliterating Earth. "The black hole would first eat its way down toward the center of Earth and consume from the inside out. It would not be a good time to be around to see this. In the end ALL of Earth would be consumed."

When I started looking into this, I was stunned to find that other physicists are speculating along the same lines as Melville. The July 1999 *Scientific American* contains letters debating the possibility Melville raises, and the July 18 *Sunday Times* of London reported on and editorialized against the experiment, which it considers frighteningly dangerous. So it's not just paranoid physicists and rogue journalists concerned about the RHIC.

Hoping to forestall the end of the world, I contacted Brookhaven immediately. "We certainly do not wish to destroy the earth," sniffed spokeswoman Diane Greenberg, who clearly has been fielding plenty of questions like mine. Then she sent me a statement by Brookhaven Lab Director John Marburger, entitled "On Consequences of RHIC Operations."

"The amount of matter involved in the RHIC collisions is exceedingly small — only a single pair of nuclei is involved in each collision," Marburger states. "Our universe would have to be extremely unstable in order for such a small amount of energy to cause a large effect. On the contrary, the universe appears to be quite stable against releases of much larger amounts of energy that occur in astrophysical processes.

"RHIC collisions will be within the spectrum of energies encompassed by naturally occurring cosmic radiation. The earth and its companion objects in our solar system have survived billions of years of cosmic ray collisions with no evidence of the instabilities that have been the subject of speculation in connection with RHIC."

## Playing at God

Why am I not reassured by this? The short answer is that the experiment is conducted by human beings — the same folks who brought you the internal combustion engine, which threatens to destabilize the planet's climate, and powerful antibiotics, which ultimately created an invincible staphylococcus bacterium. In other words, technopride goeth before the fall.

The longer answer is that Melville's scenario is perversely seductive in a Kubrickian sort of way. Think of *Dr. Strangelove* and *2001: A Space Odyssey*. There are few things quite as persuasive as the vision of humans, their thirst for knowledge and progress insatiable, stumbling on a way to destroy the planet. It is an end-of-the-world scenario that has launched a thousand movie

**considers frighteningly dangerous.**



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Human progress has always had a nasty habit of producing unintended consequences — usually because the prideful progenitors of progress insist on pooh-poohing any possibility of danger. Now, in recreating the beginning of the universe, we are essentially playing at being God — an unforgivable offense, punishable, as tragedians in the Bible and other literature have prophesied for centuries, by annihilation.

## The Doomsday Machine

This Doomsday scenario dovetails creepily with the speculation put forth by the late Carl Sagan in his book *Cosmos*. Sagan believed that we could never find evidence of life anywhere else in the universe because the pattern of evolution has been the same everywhere: Life begins and evolves through millions of years to the moment when it destroys itself. The nature of consciousness is such that evolution itself is a doomsday machine.

Sagan considered nuclear war the likeliest cause of destruction, but the creation of an annihilating black hole is more plausible. Not only does it explain the apparent absence of life anywhere else in the universe, it also explains the absence of any ruins of past civilizations. A black hole removes all traces of everything — including of the creating civilization's planet.

"So why am I telling you this?" Melville's message to me ends. "I think this should be brought out into the general public's view. For once, maybe once in the history of the universe, we can avoid THE END. Have a nice day." ■

*Fred Moody is the author of* I Sing the Body Electronic: A Year with Microsoft on the Multimedia Frontier *and of* The Visionary Position: The Inside Story of the Digital Dreamers Who Made Virtual Reality a Reality. *His column appears on alternate Wednesdays.*



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**"For once, maybe once in the history of the universe, we can avoid THE END. Have a nice day."**
**Physicist David Melville**