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Time Tunnels Meet Warped Passages
 By: David Kushner
 Our Science of Hollywood columnist spotlights the celebrated work of Harvard physicist Lisa Randall, who's become quite the scientific celebrity herself.



PHOTO: BETH KELLY
 David Kushner

Just in time for its 40th anniversary, the classic sci-fi television show "The Time Tunnel" is out on DVD. In case you missed it the first time around, "The Time Tunnel" is a lost gem from the mind of Irwin Allen, creator of "Lost in Space" and a bunch of 1970s disaster flicks, including The Towering Inferno and The Poseidon Adventure.

The conceit is something every engineer can relate to: a pulled plug. Scientists in an underground lab are working on a secret government experiment in time travel. Then the Feds threaten to cut the project short, so naturally, two intrepid scientists leap into the machine to show that it's for real. And, surprise surprise, they get stuck. So every week the show finds Dr. Tony Newman and Dr. Doug Phillips valiantly ping-ponging through history as they try to get back to the lab.

Time travel and hidden dimensions, of course, have long been the stuff of Hollywood. From H.G. Wells' Time Machine to The Matrix, "Sliders" to Time Bandits, audiences are endlessly obsessed with the idea that at any given moment, we can slip into some sort of alternate world. "The Time Tunnel" taps into the paranoia that surrounds this sort of escape. What if we slip away into these warped passages but don't come back?



PHOTO: JACK R. LINDHOLM
 Lisa Randall

In a twist of timing unto itself, the release of "The Time Tunnel" comes when the real science of warped passages is making waves. Warped Passages is the trippy and groundbreaking book on the hidden dimensions of the universe by Harvard physicist Lisa Randall. With its quirky fusion of style and substance, it's been gathering legions of acolytes, from Nobel Prize winners to great American novelists, since its release in September and indelibly changing the way we view our world.

It has also transformed its author into an unlikely star. At the heart of the 500-page book is a mind-blowing pill—that like the title character of Alice in Wonderland, a tale Randall often cites, we live amid unseen worlds, both huge and tiny. "There could be a vestige of extra dimensions hidden in your kitchen cabinet," Randall writes. These extra dimensions, or passages, as she calls them, could explain everyday phenomena—such as how a tiny magnet can defy the earth's gravitational pull—and may even support life, though likely not life as we know it.

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Randall, 48, isn't the first physicist to go down the rabbit hole. But she builds on the work of Einstein and string theorists by demonstrating that such worlds could exist if space warped just so. As a result, she's said to be today's most cited theoretical physicist, the talk of the blogosphere, and, as physicist David J. Gross put it, "an eminent pioneer." Cormac McCarthy, the author of acclaimed books such as *All the Pretty Horses* and *No Country for Old Men*, became so enamored of her work that he volunteered to copyedit her manuscript.



Randall's journey began in Queens, N.Y., where she grew up reading Lewis Carroll and rubbing protractors with other teenage brainiacs at the ultra-competitive Stuyvesant High School. "I didn't have an active imagination," she says, "I like games and puzzles more than science fiction." One of her classmates was Brian Greene, now an esteemed string theorist at Columbia University and author of the bestselling physics book, *The Elegant Universe*.

Randall, who speaks frequently at high schools, says reaching out to young girls was part of the inspiration for the pop culture in her book.

After completing her Ph.D. in particle physics at Harvard University, Randall did stints at the Massachusetts Institute of Technology and Princeton University. She returned to her alma mater only to encounter an unlikely Mad Hatter—the school's then-president, Lawrence Summers. During a speech early last year, Summers suggested the lack of women in science could be attributed to "a different availability of aptitude at the high end."

Randall, who single-handedly disproves Summers' theory, is reluctant to stir the controversy further. But she admits to being taken aback. If anything, the ensuing debate has established her as even more of a role model for women in science. Randall, who speaks frequently at high schools, says reaching out to young girls was part of the inspiration for the pop culture in her book. "One of my goals," she says, "is to show them that there are people like me out there."

To help ground out-there stuff like quantum mechanics and symmetry transformation, she anchors chapters with lyrics from songs by such varied artists as Slim Shady, Blondie, Aretha Franklin, and the Talking Heads. A riff on string theory starts with a shout-out to the band Kraftwerk ("she's a model and she's looking good"). "Part of the idea was to be playful," Randall says, "and I figured we've seen enough quotes from the Greeks."

While science fiction enthusiasts can dream about the possibilities inside hidden dimensions, proof of these lost worlds may soon come. Sometime in 2007, the most powerful particle accelerator in the world, the Large Hadron Collider, is due to fire up for the first time at CERN (the European Center for Nuclear Research), near Geneva, Switzerland. When this happens, the Collider could show evidence of particles traveling through a fifth dimension. The proof of extra dimensions, Randall says, would be the most dramatic reality of all. "It's a humbling statement about world in which we live," she says. "It could be that we're just in a pocket." And compared to the scientists' slipping through "The Time Tunnel, there's nothing cooler than that."

About the Author

David Kushner is a journalist and writer. His latest book, *Jonny Magic and the Card Shark Kids* (Random House), is about underdog gamers who hit Las Vegas. His previous book, *Masters of Doom* (Random House), about the co-creators of the video games *Doom* and *Quake*, is being developed into a movie for Showtime. He has also written for *Rolling Stone*, *The New York Times*, *Wired*, *Salon*, *Spin*, and other publications.

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