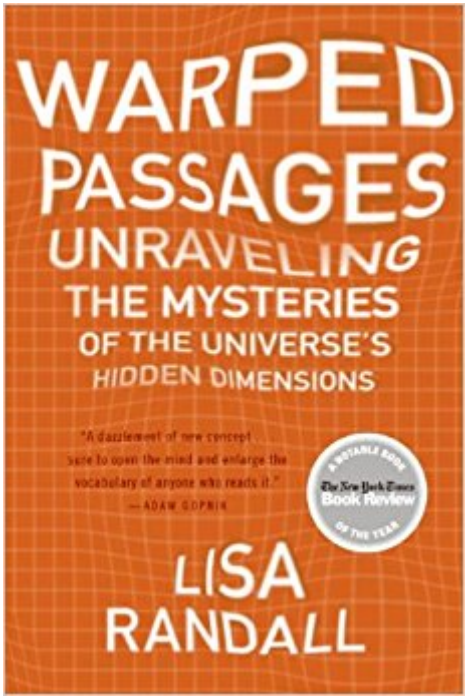
Warped Passages: Unraveling The Mysteries Of The Universe's Hidden Dimensions



Synopsis

The universe has many secrets. It may hide additional dimensions of space other than the familier three we recognize. There might even be another universe adjacent to ours, invisible and unattainable . . . for now.Warped Passages is a brilliantly readable and altogether exhilarating journey that tracks the arc of discovery from early twentieth-century physics to the razor's edge of modern scientific theory. One of the world's leading theoretical physicists, Lisa Randall provides astonishing scientific possibilities that, until recently, were restricted to the realm of science fiction. Unraveling the twisted threads of the most current debates on relativity, quantum mechanics, and gravity, she explores some of the most fundamental questions posed by Nature&#8212taking us into the warped, hidden dimensions underpinning the universe we live in, demystifying the science of the myriad worlds that may exist just beyond our own.

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Customer Reviews

The concept of additional spatial dimensions is as far from intuitive as any idea can be. Indeed, although Harvard physicist Randall does a very nice job of explainingâ ”often deftly through the use of creative analogiesâ ”how our universe may have many unseen dimensions, readers' heads are likely to be swimming by the end of the book. Randall works hard to make her astoundingly complex material understandable, providing a great deal of background for recent advances in string and supersymmetry theory. As coauthor of the two most important scientific papers on this topic, she's ideally suited to popularize the idea. What is absolutely clear is that physicists simply do not yet know if there are extra dimensions a fraction of a millimeter in size, dimensions of infinite size or

only the dimensions we see. What's also clear is that the large hadron collider, the world's most powerful tool for studying subatomic particles, is likely to provide information permitting scientists to differentiate among these ideas soon after it begins operation in Switzerland in 2007. Randall brings much of the excitement of her field to life as she describes her quest to understand the structure of the universe. B&w illus. Copyright Â© Reed Business Information, a division of Reed Elsevier Inc. All rights reserved. --This text refers to the Hardcover edition.

Randall, a professor of physics at Harvard, offers a tour of current questions in particle physics, string theory, and cosmology, paying particular attention to the thesis that more physical dimensions exist than are usually acknowledged. Writing for a general audience, Randall is patient and kind: she encourages readers to skip around in the text, corrals mathematical equations in an appendix at the back, and starts off each chapter with an allegorical story, in a manner recalling the work of George Gamow. Although the subject itself is intractably difficult to follow, the exuberance of Randall's narration is appealing. She's honest about the limits of the known, and almost revels in the uncertainties that underlie her work—including the possibility that some day it may all be proved wrong. Copyright Â© 2006 The New Yorker --This text refers to the Hardcover edition.

It has been on my bucket list for quite some time to update my knowledge of physics. I am an electrical engineer, concentrating in semiconductors, so I have at least a "working knowledge" of particle physics and quantum dynamics. I wanted to understand a little more about multidimensional thinking and string theory, which are essential to the most modern physics.Lisa Randall does a great job of explaining these concepts to the layman. She takes the reader through some marvelous explanations of spaces with more than three dimensions, and gives a great overview of the thinking that lead to string theory. While I do not have the most "conceptual" of minds, I did at least develop an understanding of what she was trying to explain.While I have a decent background in higher level math, I am not sure if that was an advantage in reading this book or not. I think if I knew a little less math, I would have been more comfortable with her simplifications and handwaving. As it was, I kept getting bogged down in "fighting" with her explanations, trying to square them against the math I do understand. I have the feeling that if my math had stopped at HS calculus/geometry, I would have been much more open to the material.But the biggest problem I had with the book was probably me. I discovered that in spite of my bucket-list, I was really not all that interested in the topic. I think I am just too old to upset my limited understanding of higher-level physics and starting all over. 6-dimensional spaces just give me a headache, and string theory isn't going to help my golf

game as much as I had hoped.So I would say that this book is as good an effort as you will find for walking you through these concepts, but just be careful what you ask for.

I first heard Lisa Randall flogging here latest book on Science Friday earlier this year. She was compelling enough that I thought I wade into one of her books so I went back to one of her earliest efforts. Unfortunately it's a little bit out of date as the LHC has since become operational and few of her points were awaiting proof.I'd tried a book on string theory about a decade ago by Brian Greene and a book on quantum mechanics by Richard Feynman and like those I found myself having to back track occasionally to remotely grasp the concepts. I'm a chemical engineer by training who has followed particle physics since the time there were only 4 elements. I think she's done a bit better than Greene in explaining the materials. Good enough in fact that I'll proceed to her next book and see if she improved her writing for the general public.I guess one way to look at it is read this and compare where the science was in 2005 with what has happened since the LHC has come on line.

I believe that science, religion, and the paranormal are not mutually exclusive. I see no basic divide separating Albert Einstein, the concept of intelligent design, and Edgar Cayce or the Michael Spirits. I believe they are all looking for the same thing - the truth. Of the three, I would consider theoretical physics to be the most outrageous with its multiple universes, hidden dimensions, alternate realities.The intellectually "correct" view would be that science is the only acceptable path to the truth, and that religion and spiritualism are utter nonsense. I consider that a form of snobbery, and a very popular one. The line "You have no evidence" is so often used by the science snobs, and yet there is no evidence of so much in today's science. For example, there is no evidence that an amoeba is capable of "evolving" into anything more complex than another amoeba, so how do we get from amoebas to trees to geese to humans? Not a shred of evidence that an amoeba can do that. Not a shred of evidence that much in theoretical physics is true. It's all a game of "what if" and of internal consistency. Show me the little dimensions. Show me the alternate universes. There's no evidence that they exist. But they might. So don't be a snob and don't complain that there is "no evidence" of life after death or of a designer. The "no evidence" argument is over-used. No, there's no evidence, but then again, there's no evidence to disprove things either, so you either think or you don't, and you can stuff the snobbery.Personally, I think that "dark matter", "dark energy", "multiple dimensions", "alternate universes", and "life after death" might all be related. Think about it. There is no evidence either way, but I think it all dovetails together well. Don't be a snob about it. You don't have the answers. Don't pretend you do.What if "dark matter" includes other dimensions and

alternate universes? What if other dimensions include heaven? What if "dark energy" includes the energy of our souls, of us, in the afterlife? Are you married to the idea that death means complete obliteration? You have no evidence either way, so why be so attached to one possibility and dismissive of another? Is it just snobbery? Or perhaps just a lack of imagination? Or an unwillingness to risk the disapproval of your teachers? Or your own desire to sit comfortably with the right people, the academics, as you throw scorn at all the ignorant people who have the nerve to think differently?

Warped Passages: Unraveling the Mysteries of the Universe's Hidden Dimensions DARK ENERGY: The Biggest Mystery In The Universe (dark matter, how the universe works, holographic universe, quantum physics) (black holes, parallel universe, the string theory) Curious Hieroglyphick Bible: or, Select Passages in the Old and New Testaments, Represented with Emblematical Figures, for the Amusement of Youth. or, ... Passages in the Old and New Testaments,... The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory When to Rob a Bank: ...And 131 More Warped Suggestions and Well-Intended Rants Warped and Witty Cross-Stitch: 30 Feisty Postcards for the Honest Crafter Wired to Create: Unraveling the Mysteries of the Creative Mind Sea of Darkness: Unraveling the Mysteries of the H.L. Hunley The Secret Life of Lobsters: How Fishermen and Scientists Are Unraveling the Mysteries of Our Favorite Crustacean (P.S.) Sneaking a Look at God's Cards: Unraveling the Mysteries of Quantum Mechanics The Miner's Canary: Unraveling the Mysteries of Extinction Secrets of the Savanna: Twenty-three Years in the African Wilderness Unraveling the Mysteries ofElephants and People Secrets of the Savanna: Twenty-three Years in the African Wilderness Unraveling the Mysteries of Elephants and People The Book of Secrets: Unlocking the Hidden Dimensions of Your Life The Book of Secrets: Unlocking the Hidden Dimensions of Your Life (Chopra, Deepak) Hidden In Plain Sight 6: Why Three Dimensions? Burn for Me: A Hidden Legacy Novel (Hidden Legacy series, Book 1) (Hidden Legacy Novels) Unraveling Anne Who Really Discovered America?: Unraveling the Mystery & Solving the Puzzle (Kaleidoscope Kids Books (Williamson Publishing)) The Statues That Walked: Unraveling the Mystery of Easter Island