

Book Review

Spaceland: A Novel of the Fourth Dimension

Reviewed by Jody Trout

Spaceland: A Novel of the Fourth Dimension

Rudy Rucker

Tor Books

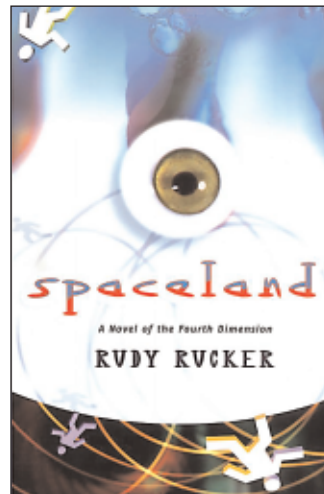
Hardcover, 2002, US\$24.95, ISBN 0-765-30366-3

Paperback, 2003, US\$13.95, ISBN 0-765-30367-1

Having a cell phone and living in Vermont are two things in my life that don't mix well. The modern technology of cell phones and their tiny antennas are no match for the ancient granite mountains and hills of Vermont, nor for the locals' stubborn opposition to those ghastly metallic towers and their bad environmental karma. Convenience be darned! But, what if my cell phone had a small antenna that went up and *over* our three-dimensional space into the unobstructed hyperspace of the Fourth Dimension and transmitted my voice directly to the extradimensional antenna of your cell phone? Could you hear me now? The IPO for that little gizmo would make Google's look like a mere giggle. This is the basic technological twist of *Spaceland*, the latest foray into four-dimensional sci-fi by Rudy Rucker, a mathematician and computer scientist who has twice won the Phillip K. Dick award for best science fiction novel. Rucker has also written several popular introductions to the mathematics and geometry of the Fourth Dimension.

Jody Trout is associate professor of mathematics at Dartmouth College. His email address is jody.trout@dartmouth.edu.

I would like to thank Allyn Jackson and the referee for their helpful comments in preparing this review.



But, alas, greed and the Fourth Dimension do not mix well, either. This is one of the many lessons that our conflicted, thirty-something protagonist, Joe Cube, learns along the way. Joe works as a low-level tech manager for Kencom, a small hardware dotcom in Silicon Valley. He is helping his boss, Ken Wong, develop the ultimate idiot box to pacify the masses: the 3Set, a truly three-dimensional television set. Instead, he will end up romping across the dimensions of space and time to save our universe from destruction! This book has a complex and convoluted plot, which I will now describe in more detail.

The story opens on New Year's Eve 1999, which even the most adept computer wizards feared would herald mankind's return to a New Dark Age, when all of our little electronic familiars were supposed to choke on a simple date flip. Midnight would be the switching hour that released the evil Y2K bug onto a species that doesn't know how to make change for itself in the grocery line.

Joe has an idea to ride out the coming madness and destruction and try to perk up his failing

marriage at the same time. Absconding with the 3Set from the lab, he hopes to spend a romantic evening with his young but demanding wife and some champagne and seafood, and hail the third millennium in 3D from their small-but-expensive Silicon Valley pad.

However, his wife, Jena Bonk, who is half Yavapi Indian and half Norwegian, has other plans. After greeting the New Year, which arrives without the apocalyptic electronic fireworks, they go out bar-hopping with friends and tipsily return home, where she falls asleep, leaving Joe to amuse himself with the grainy images of the beta 3Set. But when he turns his attention to the imaging tank, he sees that something very unusual is happening. The device is full of pink blobs that won't go away, even when he turns off the set. Even worse, these blobs begin to speak to Joe and manifest themselves outside of the 3Set. The blobs introduce themselves as "Momo", a friendly visitor from something called the Fourth Dimension!

Joe soon has the living daylighters scared out of him by Momo and her grotesquely undulating 3D cross-sections. But a quick trip into the Fourth Dimension convinces Joe that he is not dreaming or hallucinating in some alcoholic haze. Momo has chosen him to help her bring a change to our world by introducing a wonderful new form of technology to benefit humanity. Joe will eventually learn the hard way to respect an update to that old Greek chestnut, "Beware 4D beings bearing gifts."

Momo physically augments Joe by giving him a slight four-dimensional thickness with some 4D skin, thus protecting his "vinn" and "vout" sides that are exposed to the extra dimension of her reality, called the "All". This will allow him to "peel" himself out of our space and even propel himself in the Fourth Dimension like a flatfish. She also gives him an extra eye at the end of a stalk perpendicular to his "flat" 3D body, which allows him to see into the larger dimension of the All. Momo then leaves him alone for a time to get used to his new physical abilities and the new reality they represent. Joe quickly finds out that this extra eye allows him to see through walls and many other things, much as we can see everything in the 2D plane of Flatland without restriction.

Joe's many adventures begin with a trip to Las Vegas to get capital to develop Momo's new technology "for the good of mankind and the Kluppers (Momo's people)." (Imagine playing blackjack when you can see everyone's hand from the vantage of the Fourth Dimension.) Joe and others then create a venture company called Mophone Inc., which will market the new technology of the 4D cell phone antennae. As Joe learns more about Momo's world and the Kluppers, he learns of the Klupper's mortal enemy, the Dronners. The Kluppers and Dronners both live in the Fourth Dimension on opposite

sides of our 3-dimensional universe, called "Spaceland", which separates the realms of Dronia and Klupdom like an opaque screen, yet they can watch what goes on in our world without hindrance. Along the way, he is trailed by a demonic-looking Dronner named Wackle, who is stealing his money. As the story progresses, Wackle—who seems part mammal, part plant, and part sea anemone—breaks up into several self-similar versions of himself, much like the reproducing heads of the legendary Hydra. But of course looks can be deceiving, especially when viewing them from one dimension less. The various pieces of Wackle speak to Joe in a cryptic Rastafarian-surfer manner that seems confusing and threatening at first. Ultimately, Joe finds there are some ulterior motives behind Momo's new technology and a dangerous threat for our universe.

It seems that the true purpose of the Mophone antennas is to leak energy out of Spaceland's 3D membrane, thus violating our universe's Law of Conservation of Energy, until the energy pops a big hole in the membrane and tears the fabric of our space like a pair of tight Levi's on an elephant. The Kluppers will then no longer have any obstruction to blasting their Dronner enemies into oblivion, because the obscuring barrier of Spaceland will no longer hide them. Joe realizes all the Mophones they have sold must be shut down before it's too late!

Things develop quickly as Joe discloses the Klupper's evil plan to the Dronners, who help him track down the remaining Mophones. However, his wife ends up having the last Mophone, and Jena's call is the proverbial pin that pops the bubble. Joe uses his augmented 4D abilities to stop the expanding spatial rip by holding the edges like a dimensional band-aid. Joe calls out to the Dronners, and they temporarily sew the hole with hyperropes like an embroidery loop. They tell him that he must make a pilgrimage across High Dronia to the mysterious Drabk, the Sharak of Okbra, to get a piece of space to permanently seal the breach. The Wackles will hold off the assault of the Kluppers in the meantime. Joe uses a 4D flying saucer stolen from Momo to make the veritable Alice-in-Wonderland trip to the higher-dimensional hideout of the Sharak. Along the way Joe meets many strange creatures and learns a lot about himself, the various dimensions, and the interconnectedness of all reality. In the end, of course, he saves the universe, saves his company, and, most of all, saves his failing marriage.

Rucker's *Spaceland* is another companion/sequel novel to Edwin A. Abbott's mathematically minded nineteenth-century classic novel, *Flatland: A Romance of Many Dimensions* (1884). Other Flatlandesque novels are *Sphereland* (1965) by Dionys Berger, *The Planiverse* (1984) by A. K. Dewdney, and *Flatterland* (2001) by Ian Stewart. (See the author's

review of Ian Stewart's *Flatterland* in the April 2002 issue of the *Notices* for a discussion of Flatland history and its sequels.) The fact that over one hundred twenty years after *Flatland* was published authors are still writing homages to this little book is a testament to its timeless popularity and literary value. Rucker's previous Flatland homage was a wonderful short story, "Message Found in a Copy of Flatland", which appeared in his now out-of-print anthology *Mathenauts: Tales of Mathematical Wonder* (1987). It was set in modern-day London and explored a dark answer to the question, "What if Flatland were in the basement of a shady restaurant?"

There are many parallels (pardon the pun) between *Flatland* and *Spaceland*. Recall that in *Flatland* the humble 2D protagonist, A. Square, is contacted by an entity, A. Cube, from the Third Dimension on the last day of the 1999th year of the Flatland world. Rucker picks up on this by having the protagonist, J. Cube, contacted by the entity Momo from the Fourth Dimension on New Year's Eve 1999, with a little Y2K hysteria added in the mix. Also, both stories are told in the first person by the main characters. *Flatland* was an ingenious satire on Victorian society and misogynistic views and treatment of women, as well as an excellent introductory didactic of higher dimensions and their geometry. Although Rucker's hard sci-fi satire puts some witty and imaginative spins on the notion of communication between beings with different, even multidimensional, points of view, the story contains some weak literary elements.

The accounts that Rucker gives of basic 4D geometry and how ordinary human beings would experience the world of the Fourth Dimension are interesting and mind-bending enough, but readers will most probably get the idea long before the narrative is through telling them about it—again and again. There is too much discussion of how strange and nauseating the constantly changing and undulating 3D cross-sections of a 4D being would appear to a 3D being. These discussions could have been supported by a few more (and better drawn) diagrams and pictures, such as in Clifton Pickover's didactic and *X-Files*-ish novel *Surfing through Hyperspace* (1999). The physics premise of the story that the Mophones leak energy out of the fabric of Spaceland is weakened by the fact that beings who are "vinn" or "vout" of Spaceland can see what is transpiring in Spaceland. Hence, energy (in the form of photons) is already leaking out of Spaceland. But, of course, one must take some literary license to move the plot in the right vector.

Another weak spot is that the characterization in the book is a bit flat. All of the main human characters—Joe, Jena, Joe's coworker Spazz, and Spazz's girlfriend, Tulip—are rather one-dimensional

(pardon the pun) and not very likable. Their motivations are shallow and all too transparent. Their love quadrangle, which is the most unappealing aspect of the story, plays out like a dull soap opera set in Silicon Valley. Not to mention that such a dysfunctional emotional entanglement would certainly ruin an upstart venture company! The Kluppers are mostly irrational medieval capitalists. The most intriguing characters in the story are the devilishly cryptic, bohemian, and sage Wackles. And although there is some socioeconomic commentary from Rucker's frenzied look into the biz-tech dotcom world, the detailed ins and outs of starting a new technology venture don't necessarily make for the most compelling reading. It is also frequently difficult to tell where *Spaceland* is trying to be satirical and where it is taking itself (sometimes too) seriously. As a result, readers may be left in ambivalent confusion or may simply conclude that the book is downright silly. Despite these shortcomings, *Spaceland* is a fun read—and everyone needs a fun read now and then.