

The View From the Center of the Universe: Discovering Our Extraordinary Place in the Cosmos Joel R. Primack and Nancy Ellen Abrams Riverhead Books, 2006 304 pages. \$25.95

Finding Our Place

Do we need to know that our place in the universe is special? A lot of scientists apparently think we do. A recurring theme in modern histories of science is that ever since Nicolaus Copernicus removed the Earth from the center of the universe in the sixteenth century, humanity has had one notion of privilege after another yanked out from under it leaving us bewildered, upset, and afraid of just how insignificant we seem to be on what astronomer Carl Sagan called this "pale blue dot."

In an attempt to make us humans feel important again, husband-and-wife team Joel R. Primack and Nancy Ellen Abrams have drawn up a daring and nicely argued case for a new conception of our standing in the violent cosmos. In *The View From the Center of the Universe*, Primack, a cosmologist at the University of California, Santa Cruz, and Abrams, a science writer with a background in the philosophy of science, create a new picture of the cosmos that draws from ancient Egyptian, Greek, and Babylonian mythology, updating ageold images with fresh insights.

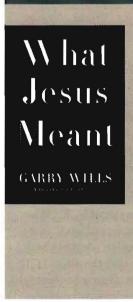
A few of the ways in which the authors illustrate humanity's place in the universe are particularly engaging. They re-imagine the pyramid on the back of the one-dollar bill as a "Pyramid of All Visible Matter," with the eye atop the pyramid representing a special vantage point for humanity. This eve houses the sparse but precious elements from which life is composed, and signifies a special place in a vast universe of cold dark matter and dark energy, hydrogen and helium. More clever is the re-imagining of the ancient symbol Ouroboros, the snake that devours its tail and, by doing so, forms a circle that signifies the cyclical and presumably eternal nature of things. Primack and Abrams consider the circle as a representation of scale throughout the cosmos, with humans, once again, occupying a special place: a unique section of the snake's body that allows us to see into the scales immediately above us (symbolizing the cosmological scale of light-years) and those below us (symbolizing the quantum scale of microscopic distances).

The authors present their models clearly and enthusiastically, and reinforce their new mythology with solid discussions of current trends in cosmological theory, including inflation theory and investigations into the role dark energy plays in the acceleration of the universe's expansion. The writing is, on the whole, clear and direct. In the end, though, the authors don't quite succeed in their goal

of creating a new sense of home in the cosmos-not for lack of sincerity or salient points about the inspiring nature of the universe in which we live, but rather because of a faulty initial assumption. They mistakenly suggest that people derive their sense of place-rather than their sense of purpose or moral codefrom myths, cosmologies, and religions. What worries people isn't necessarily the sense that we are not the center of a placid universe, but rather the idea that the universe is just an accident. "Claiming our centrality does not imply that the universe was created for our eventual arrival or evolved with us in mind," Primack and Abrams write. "Dark matter doesn't cradle the entire Milky Way-and all galaxies-in delicate, invisible hands ... because it cares about us. It does all these things because it has no choice." While attempting to re-create a meaningful place for us in the cosmos, the authors cannot posit a purpose for us-which may leave some readers unsettled still. - John Farrell

John Farrell is a writer working in Boston. His book The Day Without Yesterday: Lemaître, Einstein, and the Birth of Modern Cosmology was recently published by Thunder's Mouth Press.

New on the Shelves



What Jesus Meant by Garry Wills

For practicing Christians, the ultimate means of devotion is to do as Jesus did, to live as he lived. Yet historian Garry Wills writes in his latest book that such an aim is misguided, since Jesus was not human and, therefore, defies imitation. We have taken Jesus' words as political mantras and interpreted his life and actions for our own purposes; a more fitting tribute, Wills argues, would be to accept that Jesus was not who we have made him out to be and to accept him on faith rather than try to humanize him. "Trying to find a construct, 'the historical Jesus,' is not like finding diamonds in a dunghill, but like finding New York City at the bottom of the Pacific Ocean," Wills writes. "It is a mixing of categories, or rather of wholly different worlds of discourse. The only Jesus we have is the Jesus of faith."