

good about their place in the world, whereas monkeys at the other end of the status scale are more inclined to self-medicate — with cocaine if given the opportunity.

The Spirit Level is a brave and imaginative effort to understand the intractable social problems that face rich democratic countries. For Wilkinson and Pickett, economic equality is the best way to improve the quality of life for all. Governments can get there by using redistributive taxation and an extensive welfare

state, as in Sweden, or by restraining income disparities and minimizing public spending, as in Japan. The book ends optimistically: whatever route is chosen, the authors argue, the current economic slump may be a providential opportunity to start righting the balance. ■

Michael Sargent is a developmental biologist at the National Institute for Medical Research in London and is author of *Biomedicine and the Human Condition: Challenges, Risks and Rewards*. e-mail: msargent@nimr.mrc.ac.uk

Fiction beyond the grave

Sum: Forty Tales from the Afterlives

by David Eagleman

Pantheon: 2009. 107 pp. \$20.00

There is no life after death. When our bodies fail, our minds go with them, and the game is over. Or is it?

Sum gathers 40 playful sketches of what an afterlife might hold for us, from expanding into a nine-dimensional cloud to working as an extra in other people's dreams. As rigorous and imaginative as the writings of Italo Calvino and Alan Lightman, each vignette is a glimpse into an expansive topic such as time, faith or memory. Together they illuminate an astounding range of possibilities for the meaning of human life.

Neuroscientist David Eagleman has written these fictional scenarios in parallel with a number of his popular science books about the brain, and while running a laboratory at Baylor College of Medicine in Houston, Texas. His research on time perception may have inspired some of his literary conceits. In the title story, a lifetime of activities is sorted into insufferable batches — 30 years of sleep, 200 days in the shower, 18 days staring into the refrigerator — suggesting that it is the transitions between experiences that make life worth living.

The book includes, as one might expect, a round of fables that deflate Christian stereotypes of the hereafter. In some, paradise is

vulnerable to the petty vices of men — holy war, bickering, bureaucracy, even communism — which makes these versions of heaven more like comic varieties of hell. In another, God is revealed to be an opportunistic tinkerer who doesn't understand His own creation.

Eagleman is at his sharpest when he envisions efforts to evade death using science. In one tale, a doctor rids the world of mortality only to be killed by rioters nostalgic for natural death. In another, the elderly pay a company to upload their minds into computers that would stimulate them with their own private afterlives



for eternity — if only the machines worked. Death is an essential part of life.

In other stories we are the malfunctioning machines, built by another species to map Earth, perform a computation or discover the meaning of life. The engineering project usually fails, but humanity flourishes nonetheless. The moral seems to be that we should look for the silver lining in our own design flaws.

Sum becomes unsettling when it turns to cosmology. A civilization, after discovering their universe to be alive, attempts to communicate with her. "We sent a sharply defined sequence of electromagnetic pulses," its citizens say, "which interacted with local magnetospheres, which influenced asteroid orbits, which nudged planets closer and farther from stars, which dictated the fate of lifeforms, which changed the gases in the atmospheres, which bent the path of light signals, all in complex interacting cascades" that "took a few hundred years... to arrive at her consciousness". The cosmic answer, perhaps nothing more than an immune response, is the destruction of their planet, leading a survivor to conclude that "communicating with [the universe] is not impossible, but it is pointless".

Hope returns when Eagleman trades in his telescope for a microscope. There is some comfort in the idea that "when you die, you are grieved by all the atoms of which you were composed".

The best stories in *Sum* remind us that it is natural to want to know our place in the scheme of things. The book is a scripture of sorts, but because each myth contradicts the last, it is not a dogmatic collection. Eagleman has said that he is neither a believer nor a non-believer in the conventional religious sense. Rather, he considers himself a "possibilian", which he defines as a creed for "those that celebrate the vastness of our ignorance, are unwilling to commit to any particular made-up story, and take pleasure in entertaining multiple hypotheses". These may indeed be the qualities of a good scientist — and a good storyteller. ■

Jascha Hoffman is a writer based in New York. e-mail: jascha@jaschahoffman.com

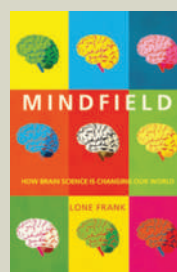


Guilty Robots, Happy Dogs: The Question of Alien Minds

by David McFarland

(Oxford Univ. Press, £7.99)

Taking a fresh angle on the question of 'alien minds' — whether animal or machine — and drawing on current research in computing, robotics and animal behaviour, David McFarland offers an accessible introduction to the philosophy of the mind. He explains why intelligence may be impossible to define.



Mindfield: How Brain Science is Changing Our World

by Lone Frank

(Newworld, \$16.95)

Lone Frank asks how neuroscience is transforming our society. By describing her own experiences while researching the book — from holding half a real brain in her hands to talking with leading scientists — she explains advances in the field for a general audience.