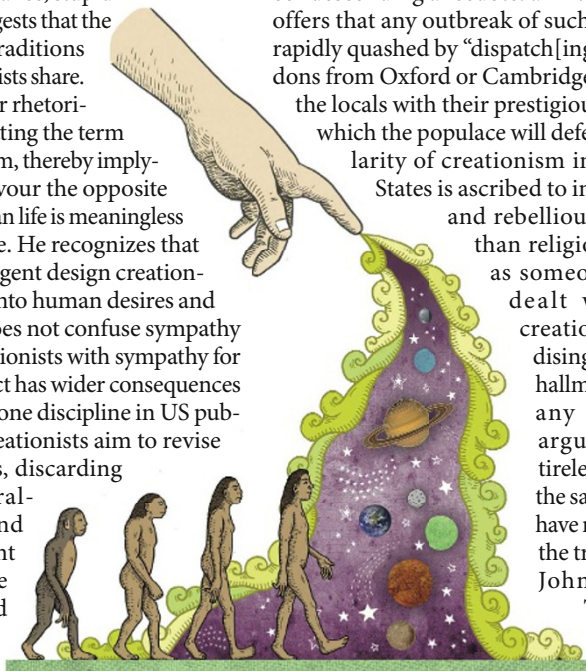


watchmaker argument for complexity, Miller discusses the contemporary biological explanations while refuting the errors.

Miller is sympathetic to the creationists' perspective but opposes them uncompromisingly. The book does not try to place the blame for creationism on ignorance, stupidity or malice, but suggests that the ideas are rooted in traditions and values that biologists share. He admires the clever rhetorical trick of appropriating the term 'design' for creationism, thereby implying that scientists favour the opposite and believe that human life is meaningless and without purpose. He recognizes that the concept of intelligent design creationism taps effectively into human desires and prejudices. Miller does not confuse sympathy for the intent of creationists with sympathy for its effects. The conflict has wider consequences than the teaching of one discipline in US public schools — the creationists aim to revise what science means, discarding rationalism, naturalism, materialism and other Enlightenment values to incorporate the supernatural and loosen the rigour of all sciences.



*Only a Theory* deals poorly with one central aspect of this battle: why this problem is so much greater in the United States than elsewhere. Miller's rationalizations are sometimes painful to read. Europe's relative freedom from the scourge of creationism is explained with a condescending anecdote: a British colleague offers that any outbreak of such nonsense is rapidly quashed by "dispatch[ing] a couple of dons from Oxford or Cambridge" to overawe the locals with their prestigious degrees, to which the populace will defer. The popularity of creationism in the United States is ascribed to independence and rebelliousness rather than religiosity, which, as someone who has dealt with many creationists, I find disingenuous. The hallmark of almost any creationist argument is the tireless bleating of the same points we have rebutted since the trial of teacher John Scopes in Tennessee in 1925, which tested the

law on teaching Darwinian evolutionary theory; the only twists come from new creationist authorities that enter the fray. An equivalent US variant of Miller's British anecdote is that the enemies of science need only dispatch Dembski or Behe from the Discovery Institute in Seattle, Washington, to stir up more doctrinaire creationism among school boards and in elections and churches. To call US citizens more independent-minded than European citizens flatters the creationists too much and demeans Europeans.

If Miller is on shaky ground in his explanations of the origins of creationism, he is rock-solid on where the creationists want to take us: "To the intelligent design movement, the rationalism of the Age of Enlightenment, which gave rise to science as we know it, is the true enemy ... science will be first redefined, and then the 'bankrupt ideologies' of scientific rationalism can be overthrown once and for all." Although his own religious leanings blind him to conflict between faith and science, they also give him insight into both sides of the struggle. *Only a Theory* is a useful overview of a perilous political attack on the nature of science. ■

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## Fictional quantum conspiracy

### Final Theory: A Novel

by Mark Alpert

Simon & Schuster: 2008. 368 pp.

£12.99, \$24

Most conspiracy theorists focus on political cover-ups. But science is an excellent catalyst for this sort of paranoia too: so entrenched is the stereotype of the mad researcher that it is not surprising people might suspect that someone, somewhere, is hiding something for nefarious gain. Physics in particular lends itself to these

sorts of fears. Whereas most people can conceptualize tangible sciences such as biology, the quantum world is, by its very nature, largely ungraspable and seems to simmer with deadlier force. The Manhattan Project, which still casts a long and sinister shadow in the popular imagination, certainly didn't improve its reputation.

Mark Alpert's debut novel *Final Theory* is classic conspiracy fodder. It posits that Albert Einstein, who in real life spent his last decades failing to unify quantum mechanics with relativity, instead succeeded. Realizing the military

implications, yet incapable of destroying the beautiful mathematical proofs outright, Alpert's fictionalized Einstein decides to bury the information until mankind has outgrown its warlike ways. He duly entrusts various pieces of the puzzle to a select group of young protégés. Many years later word leaks out, and soon the US government and a rogue terrorist are hot on the trail. One by one, the protégés — now old men — are tortured and killed.

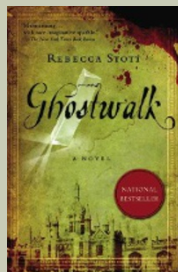
David Swift, the protagonist, is a failed physicist-turned-science historian who witnesses the dying words of one of these men, his former PhD supervisor. Before long, Swift has been taken prisoner by the FBI and, after escaping,

### Ghostwalk: A Novel

by Rebecca Stott

(Spiegel & Grau/Phoenix, \$14.95/£7.99)

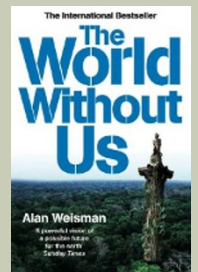
Seventeenth-century murder and present-day mysteries become entangled in Stott's *Ghostwalk*. Fine historical research is combined with a modern literary thriller when Lydia Brooke is asked by a former lover to complete his late mother's great work — a history of Isaac Newton's involvement in alchemy.



### The World Without Us

by Alan Weisman (Virgin, £8.99)

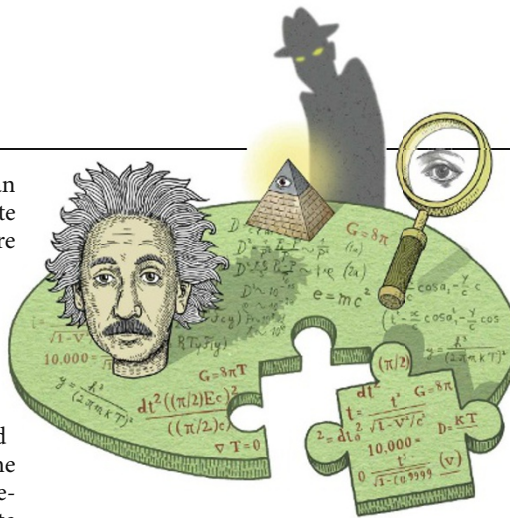
If humans disappeared, what would the world look like? Using evidence from places where war or disaster have created no-go zones for humanity, Weisman describes what would happen in our absence and what would be left behind. Stuart Pimm wrote: "There is no guarantee that even with all the pieces, we would be able to put nature back together again," (*Nature* **448**, 135-136; 2007).



goes on the run with Monique Reynolds, an up-and-coming string theorist, in a desperate attempt to find the secret information before it falls into the wrong hands.

The book is reminiscent of Dan Brown's *Angels and Demons*, about the exploitation of antimatter. But this is no ordinary thriller. First, Alpert can actually write. Like many 'lab lit' authors, he is clever with scientific metaphors: Monique is at one point described as "unyielding and unstoppable, bending the whole fabric of spacetime around her". Moreover, Alpert has made an effort to integrate serious physics into the plot. As a former grad student turned Einstein biographer, Swift knows the great man's work intimately and can explain the basics on behalf of the reader. In the author's note, we learn that Alpert has a lot in common with his protagonist. Both share a physics education, a defection to a peripheral career (Alpert currently writes for *Scientific American*) and, like Swift in the novel, Alpert is author of a seminal research paper that is enjoying a re-examination.

Alpert manages to avoid some of the usual fictional-scientist stereotypes. His coup is Reynolds, a black female physicist who drives



a Corvette with the number plate 'STRINGS'. Her geek chic is as far from the boffin cliché as you can get; indeed it is a reasonable representation of what modern scientists can be like. Alpert does occasionally slip: grad students are described as pale, gangly, poorly dressed and bespectacled, and the last Einstein protégé left standing goes mad while seeking to exploit the theory for his own ends. Yet right up until the point he starts waving around an Uzi, the protégé's 'madness' is relatively harmless, fixated on unlimited energy and new medicines.

It is disappointing when these wild but admirable dreams degenerate into frank evil.

It would have been more elegant had Alpert explored scientists' obsessive nature without actually crossing that line. Nevertheless, even this character is not half as mad as the rogue terrorist nor as evil as the FBI. The flip-side of yearning for plausible scientific characters in fiction is to recognize that, as human beings, scientists should be allowed to be as prone to crazy or bad behaviour as any other member of society.

The more disturbing stereotypical trait in the book, however, is that scientists shouldn't meddle with things they aren't meant to know. Swift "thought he could get a glimpse of the Theory of Everything without suffering any consequences, and now he was being punished for this sin of pride, this rash attempt to read the mind of God". This could be a sentiment straight from *The Clouds*, Aristophanes' cautionary comedy about the hubris of the sophist school, or the myth of Icarus, who flew too close to the Sun. Haven't we moved on a bit since then? ■

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## Inside the mind of a marathon runner

### What I Talk About When I Talk About Running

by Haruki Murakami  
Translated by Philip Gabriel  
Harvill Secker/Knopf: 2008. 192 pp.  
£9.99/\$21

Reading, writing and running: three skills I did not expect to encounter alongside each other with much passion. I grew up playing sports and desired a physically active career. Of the three skills, running came to me last and the hardest. I took it up after the Athens 2004 Olympic Games. One Olympiad later, I find I share these interests with Japanese novelist Haruki Murakami, who has written

a memoir about the role that marathon running plays in his life.

The Athens Olympics was a turning point in my amateur athletics career because the city's heavy smog made me rethink my asthma treatment. I enjoyed anaerobic or short-burst events, but quickly became short of breath. After taking my fix of salbutamol — technically doping, if not prescribed — I could continue in some limited fashion, but endurance events eluded me. I decided on returning from Athens to start taking a preventive inhaler, beclomethasone dipropionate. My doctor had prescribed it, but I had never taken it, objecting to being permanently medicated for a mild and reasonably well-controlled condition. Within a

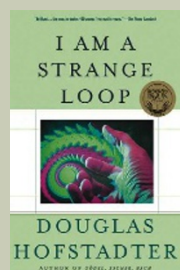
month of using it, I could run for an hour without taking a deep breath or additional medication. The experience was transformative.

This is how it felt reading *What I Talk About When I Talk About Running*. At the start, I thought Murakami and I were different: he is human and I am a cyborg. When I run, I am motivated by the thought that this should not be possible, that I am defying nature. I feel 'better than well'. Murakami started running when he was 33, about the same age I am now, so I hoped to find some common ground. And so it proved.

I was asked to review Murakami's memoir in the context of my expertise on the ethics of biotechnological enhancements. Perhaps

### I Am A Strange Loop

by Douglas R. Hofstadter  
(Basic Books, \$16.95, £9.99)  
Hofstadter extols his views on the nature of consciousness and the self. The book provides an interesting journey whether you agree with his conclusions or not. He "whisks us away to tangle with ever more layers of paradox and wonderfully mind-wrenching questions," wrote Susan Blackmore (*Nature* **447**, 29–30; 2007).



### The Frog who Croaked Blue: Synesthesia and the Mixing of the Senses

by Jamie Ward  
(Routledge, \$16.95, £8.99)  
A fascinating introduction to synaesthesia, explaining how the trait gives insight into the way the senses are organized. Ward also delves into other sensory experiences, such as phantom limbs and sympathetic touch, in an accessible introduction to this growing research field.

