The big question

An existential detective story.

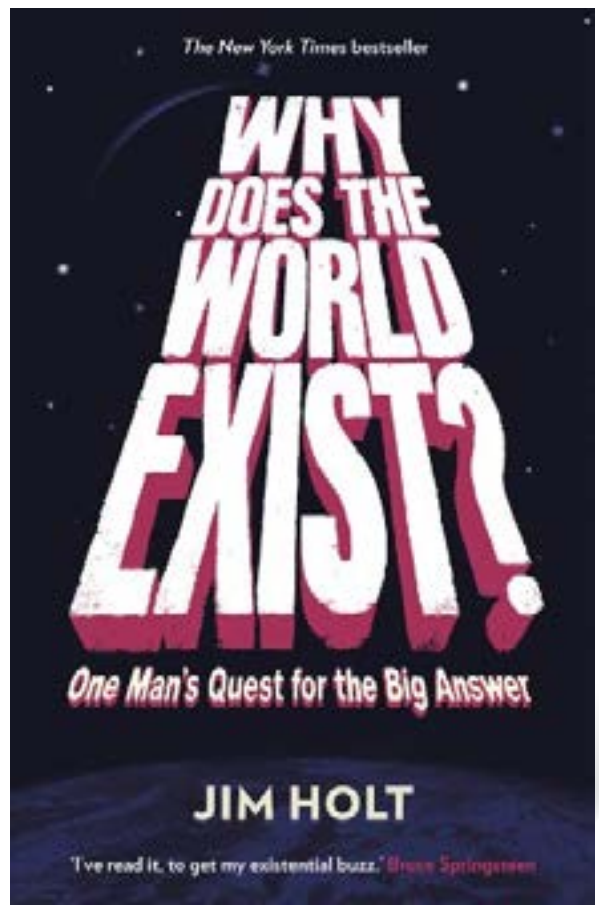
Reviewed by **Hazel Flynn**

Why Does the World Exist?
Jim Holt, Profile Books, New York, 2013, 307 pp.

THE PHENOMENAL, surprise success of Dava Sobel's 1995 book *Longitude* opened the floodgates for popular science writing. Suddenly publishers could see a market for topics previously viewed as too specialized to be commercial. Since then, writers such as James Gleick (*Chaos, Faster*), David Bodanis ($E=mc^2$, *Electric Universe*) and Simon Singh (*Fermat's Last Theorem*, *Big Bang*) have consistently produced work for lay readers that is intelligent, informative and highly engaging. (I'd never have guessed that a book about the science of electricity could move me to tears, yet Bodanis's chapter on Alexander Graham Bell did just that.)

Jim Holt's *Why Does the World Exist?* throws the net even wider, taking in philosophy and theology as well as science and advanced mathematics. The subtitle for US edition is "an existential detective story". The UK/Commonwealth version, "One man's quest for the big answer", may be less glamorous but it better captures Holt's ambition to answer a question that first troubled him as a would-be teenage rebel: "Why is there something rather than nothing at all?"

For his deeply Catholic parents and the nuns who taught him, the question was a non-starter. God created the world and Himself, period. But when, as a philosophy undergraduate, Holt discovered David Hume and the idea of a hidden cosmic algebra—an explanation for existence able to be uncovered by reasoning alone—there was no going back. Decades later he embarked upon a survey of



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leading thinkers in theology, philosophy and science to try to find an answer. Not just "Why am I here?" but "Why is there a here?" As my literate local barista said with a raised eyebrow, noticing the book's title, "Bit of light reading, then?"

Holt, a critic and essayist for the *New Yorker*, the *New York Times* and the *London Review of Books*, spends the first 60 pages giving us the basics we'll need to accompany him on his quest. He runs us through the approaches taken by historical figures including Leibniz (the universe was created by God, a "necessary" being), Kant (don't be illogical, there is no such thing as a necessary being; anything we can imagine being, we can imagine not-being), Heidegger (someday, maybe, we'll know) and Spinoza (the world

is the cause of itself—*causa sui*—divine, infinite and responsible for its own existence). We get a primer on some of the mathematical and scientific concepts involved, including empty set theory and the difference between nothing ("there's nothing left in the packet") and nothingness (the opposite of existence).

These are weighty ideas that demand concentration. But Holt is writing for a general audience—intellectually curious but not necessarily versed in the latest developments in astrophysics. It's his ability to communicate profound ideas in a witty, readable way that saw the book become a US bestseller. Even if not everything sticks, plenty will.

HOLT INTERVIEWS leading thinkers in theology (Richard Swinburne), quantum mechanics (David Deutsch), cosmology (Alexander Vilenkin and John Leslie), theoretical physics (Steven Weinberg), mathematical physics (Roger Penrose) and philosophy (Derek Parfit), all interesting encounters. Sometimes, as with Pittsburgh-based Adolf Grünbaum, "arguably the greatest living philosopher of science", not to mention an enthusiastic drinker and terrible driver, they are funny and charming as well as enlightening.

"People have made arguments against the coherence of the concept of nothingness, but many of these arguments seem fallacious to me," Grünbaum tells Holt, "… proving that the Null World is a genuine possibility is not my problem. It's the problem of Leibniz and Heidegger and Christian philosophers and all the boys who want to make hay out of the question Why is there a world rather than nothing at all? If nothingness is impossible, then, as the medieval used to say, *cadit quaestio*—'the question falls'—and I'll just go have a beer!"

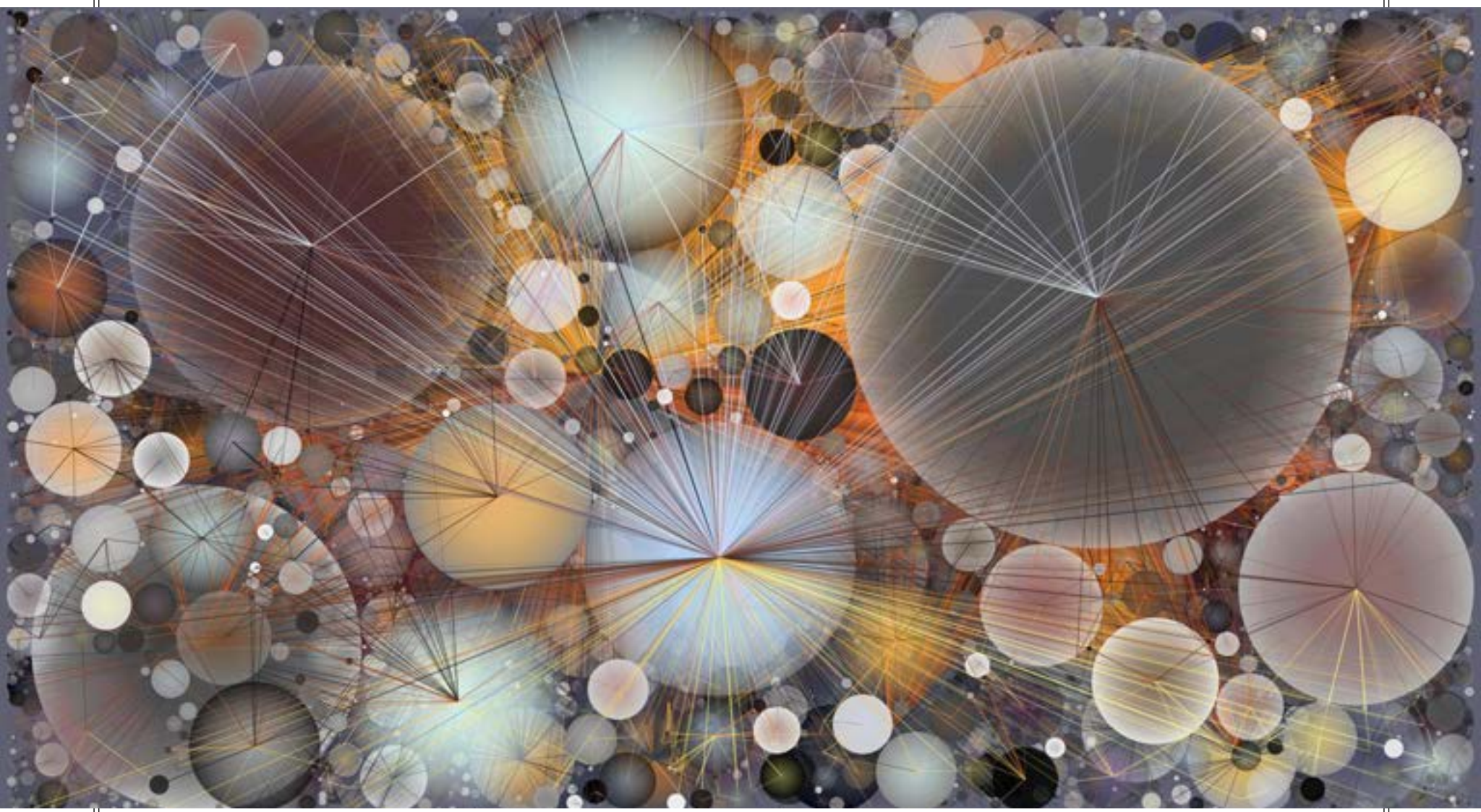
But a sameness creeps in. The interview chapters begin with Holt placing in context the great mind he is about to meet. The pair converse, Holt questions, proposes and clarifies. He takes his leaves and then—and only then—details his reasons for rejecting the theory that has just been outlined. Early on, describing those he interviewed, he writes, "Sometimes they would say the most astonishing things … But I also found it oddly empowering. When you listen to such thinkers feel their way around the question of why there is a world at all, you begin to realize your own thoughts on the matter are not quite so nugatory as you imagined."

This strikes me as disingenuous, given the confidence with which he rejects their ideas. ("Richard Swinburne seems to have solved one mystery at the price of introducing another … he concedes that he can find no explanation for God himself … If this is the best that theism can do";

They are united by one thing: they're all by men (including the sole non-academic, novelist John Updike).

"Vilenkin's calculations appeared to be sound. Yet … I had to confess that my imagination bridled at his scenario of creation from nothing"; "I couldn't help noticing what looked like a failure of nerve on Penrose's part"; "Maybe Leslie is right … about one thing. Maybe the world really does owe its existence to some sort of abstract principle. But it seems unlikely that this principle should be intimately bound up with human concerns and judgements"). So confident is Holt that, by the end of the book, he has developed his own theory, complete with a formal logical proof.

The theorists he meets offer a range of answers to his central question: it's a manifestation of divine will; an expression of a Platonic mathematical essence; a fluke, a fluctuation in a quantum vacuum; it satisfies a cosmic need for "goodness". The diverse views are often diametrically opposed, but they are



Generated by random fractal calculations, Holger Lippmann's art may echo the creation of life. SOURCE: WWW.LUMICON.DE

united by one thing: they're all by men (including the sole non-academic, novelist John Updike). Women get only passing mentions, as in the vet resembling "a young Goldie Hawn" who puts Holt's beloved dog to sleep.

Holt's choice of detail is sometimes odd. In context, walking through the colour and chaos of New York's Washington Square after interviewing the mathematical Platonist Roger Penrose allows Holt to ponder how such concepts play out in our everyday world ("I left his penthouse world of Platonic ideals … These people! I thought, What do they know of the serene and timeless Platonic realm?"). But we could have done without the inclusion of Holt's meal choices, down to the amount, type and national origin of the wine.

For Nobel laureate Weinberg, "The effort to understand the universe is one of the very few things that lifts human life above the level of farce, and gives it some of the grace of tragedy."

Whether or not you agree with this rather stark view, Holt's book, while not perfect, is well worth reading. At worst you'll have boned up on enough state-of-the-art thinking to stand you in good stead for many dinner parties to come. At best you'll find a perspective that personally resonates.

For me it's that of physicist Ed Tryon who, in 1969, began to develop quantum fluctuation theory based on the idea that the universe has a net energy of zero—a concept so startling it had literally stopped Einstein in his tracks when he encountered the idea two decades earlier.

In answer to the ultimate "why" question Tryon said, "I offer the modest proposal that our universe is simply one of those things which happen from time to time." ✜