

Guy Stevenson

The Other Physicist

The Maniac

By Benjamín Labatut

(Pushkin Press 420pp £20)

*The Maniac* is Benjamín Labatut's second creative history of the humans behind the atomic bomb, computers and AI. The follow-up to his International Booker Prize-shortlisted *When We Cease to Understand the World*, it features some of the same cast and approaches all of the same themes, albeit from marginally different angles. Starting with an epigraph from a 13th-century mystic, Labatut reconceives mathematicians and physicists as terrible explorers of the modern world – mad, dangerous visionaries whose quests to understand how the universe works were not only epoch-shaping but poetic. Like his hero, W G Sebald, Labatut makes use of real quotations, photos and embellished personal recollections, turning abstract maths into full-blooded psychodrama.

The book opens in 1930s Mitteleuropa, a world upended by fascism and quantum mechanics. Through the intimate thoughts of real-life Hungarian and German mathematicians and scientists, Labatut gives the background to the maddening of reason that led to Hiroshima. It was a time, we hear, of 'a crisis of the foundations of mathematics', in which logicians 'could no longer trust their own arguments'. At the centre of this world, and at the heart of the book, is the Faustian Johnny von Neumann, an inspired thinker with total trust in his own logic, bent on uncovering the 'mathematical basis for reality'. The star also of Labatut's earlier novel, von Neumann is a handy vehicle for channelling 20th- and 21st-century moral-technological dilemmas. He was one of an extraordinary number of Hungarian émigrés who helped develop the atomic bomb, building the hardware that detonated it and advising Truman on which cities to target. Less famous than Oppenheimer or Teller (and flashier, according to this account), he also produced the blueprints for the personal computers of today and for the AI technologies that currently have everyone in a spin.

Caught between his 'otherworldly capacity to see into the heart of things' and a 'childlike moral blindness', von Neumann is presented successively as a spoilt, brilliant brat during his early years in Budapest, a prodigious 25-year-old professor in Berlin and the go-to mathematician for the American government in the 1940s and 1950s. We glimpse the origins of the modern computer and AI in prepubescent Johnny stripping the engine of a mechanical textile loom. His cold logic and hubris are juxtaposed with the religious motivations that drive such contemporaries as his teacher Gábor Szegő, who describes maths as the 'closest we can come to the mind of HaShem', or Jehovah. Szegő harbours a memory of von Neumann 'cackling maniacally' through a mouthful of blood in Berlin, having goaded a Nazi soldier into hitting him. Was he 'truly fearless or just reckless and irresponsible'?

Alongside god delusions, we hear about the many horrific breakdowns and deaths on the early 20th-century science scene, from Einstein's confidant Paul Ehrenfest shooting his disabled son and then himself to defy Hitler to the suicide by starvation of Kurt Gödel, whose incompleteness theorems made him 'godlike' in his time. Pulsing underneath is the suggestion that 'you actually had to *be* unstable to think in the way that Gödel did'. Against such madness and against Neumann's charismatic recklessness, Labatut has scientist after scientist speak plainly and believably of their horror on realising what they had done through the Manhattan Project. The straight-talking American Richard Feynman, for example, admits to being traumatised by his contribution: 'I felt sick. Physically ill ... why were they putting up bridges or apartments if was all going to be destroyed?'

Feynman's voice of conscience is leavened by his anecdotes of weird all-night parties on the test site, with ethanol-laced punch, bongo-playing and a 'manic' sexual energy that meant the 'population doubled every nine months'. His addiction to the strategy game Go dovetails with the theme of game-playing at the heart of deadly, species-changing research. In the prologue, this theme emerges in Labatut's tale of human Go players being beaten by machines. 'A novel form of torture', the South Korean Lee Sedol calls it, characterised by a 'feeling of being pulled down into a void, slowly but irrevocably'. This seems an apt summary of the sense of helplessness induced by AI.

In fictionalising the history of the atomic bomb, Labatut has landed on a chilling way to dramatise our contemporary fears. Science fiction-tinged nightmares about new nuclear threats and an alien, self-learning system of intelligence are made both more real and understandable through the voices of the people who gave birth to them. If he inevitably falls into some science-plaining (a few sections read like spruced-up Wikipedia entries), for the most part we feel let in on what one of the Manhattan scientists calls their 'dirty little secret': the 'sheer thrill of the science', of 'discovering something that not even God had created before us'.