IN 1919, 23-year-old artist André Breton, enamoured with the latest developments in science, decided it was time to leave the world of Dada behind. The Dada art movement, born amid the turmoil of the first world war, sought to expose the absurdities of society and existence. Breton wanted to continue challenging society’s prevailing social and political values, but hoped to trade in Dada’s “anything goes” message for a reconciliation of the rational and the irrational, which he believed would lead to truth.

Thus surrealism was born.

Enthralled with Sigmund Freud, Breton wanted to express the Freudian unconscious in art. He encouraged the technique of “automatic drawing”, in which the artist’s hand, liberated from conscious control, moves freely across the canvas.

In the late 1920s, Breton read essays by Gaston Bachelard, a French philosopher. Bachelard knew his way around relativity and quantum mechanics, writing about the schizoid wave-particle duality: light and matter exist as waves and particles at the same time. Breton and the surrealists saw this struggle to reconcile opposites as a supreme example of Marxist dialectics, the notion that human history is shaped by conflicting forces and that only through their reconciliation can a new social order emerge.

In *Surrealism, Art and Modern Science*, Gavin Parkinson aims to “transform our understanding of surrealism” by examining sources from art, literature, physics, politics and philosophy. The book centres on the Viennese artist Wolfgang Paalen, who, according to Parkinson, attempted to capture the essence of the wave-particle duality as a symphony of vibrating lines circuiting in dots. But does this really depict the duality? Quantum physics clearly influenced Paalen’s art, but the results are disappointing.

Parkinson traces surrealism back to cubism and its founder, Pablo Picasso – a crucial step in uncovering surrealism’s scientific roots. However, he teipses around the question of why, from 1905 to 1927, Picasso was simultaneously struggling with the same issue as Albert Einstein – the nature of space and time – though Picasso was unaware of Einstein’s work.

Parkinson brushes off the question by quoting Paalen: “Great thoughts in the same period often follow parallel ways without their authors being aware of it.” In fact, scholars have shown that this was no coincidence. Questions about space and time were central to the avant-garde ideas sweeping across Europe at the beginning of the 20th century. Both Einstein and Picasso encountered the work of French polymath Henri Poincaré, from whom they learned about four-dimensional geometry.

Cubism was largely a scientific art movement, but Parkinson ignores the texts that prove it.

In the 1920s and 1930s nobody was bringing quantum theory to the masses, but relativity had