Review

Surrealism, Art and Modern Science: Relativity, quantum mechanics, epistemology by Gavin Parkinson, Yale University Press, £35, ISBN 9780300098877

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.

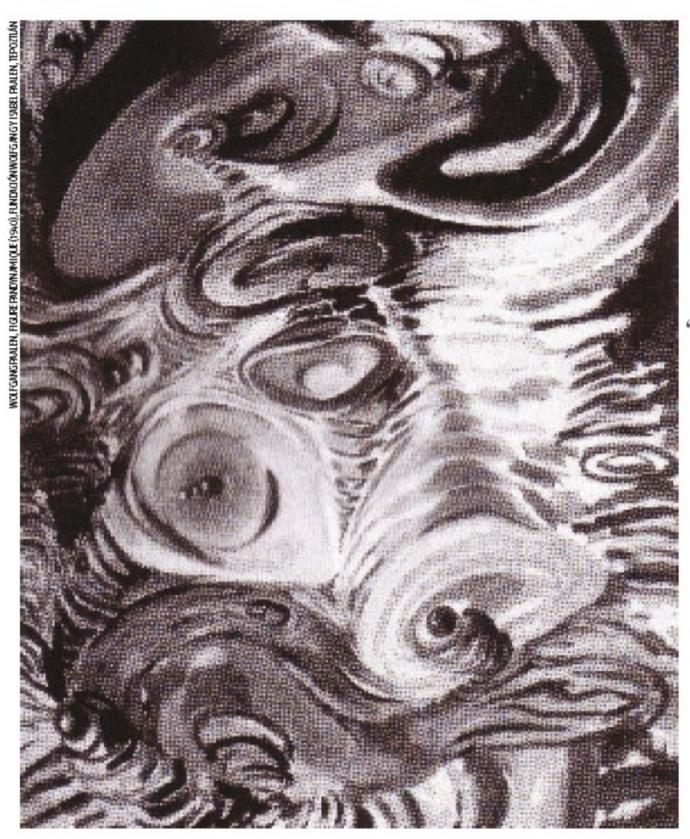
In the late 1920s, Breton read essays by Gaston Bachelard, a French philosopher. Bachelard knew his way around relativity and quantum mechanics, writing about the schizoid wave-particle duality: light and matter exist as waves and particles at the same time. Breton and the surrealists saw this struggle 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 culminating 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

AN AFFAIR TO REMEMBER

Did physics influence the development of surrealist art? Even more than this book portrays, says **Arthur I. Miller**



The epitome of quantum strangeness,
Wolfgang Paalen's Figure pandynamique

uncovering surrealism's scientific roots. However, he tiptoes around the question of why, from 1905 to 1907, 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 British astrophysicist Arthur
Stanley Eddington. Parkinson
offers exciting new revelations
about Eddington's role in
surrealism. The surrealists
were swept away by Eddington's
insightful and poetic explanations
of complex scientific concepts,
not to mention gnomic statements
like: "Human personalities are
not measurable by symbols any
more than you can extract the
square root of a sonnet." Even
to surrealists, this was surreal.

Parkinson conjectures
that Salvador Dali also read
Eddington's books. Dali threw
in his lot with the surrealists
in 1929 and produced works
that have become synonymous
with it, such as "The Persistence
of Memory". This painting
captured brilliantly the core

"Space and time were central to avant-garde ideas"

of relativity: each drooping clock shows a different time, embodying the truth that time is relative to the observer.

Does Parkinson succeed in his mission to transform our understanding of surrealism? In part when providing new information, but he leaves much to be desired. This is an exciting topic, but many of Parkinson's sources are published ones, so there are few surprises. Still, the book shows that proponents of surrealism, such as Dali and Paalen, were conceptual artists with a concept, unlike so many "conceptual" artists today.

It couldn't last forever, though.
"Surrealism's love affair with
modern science was well and truly
over" after the atomic bombs
were dropped, writes Parkinson.
Even so, its most famous member,
Dali−clinging to his fascist
beliefs − continued to extol the
virtues of modern science. As for
Breton, he threw in the towel.

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Arthur I. Miller is emeritus professor at University College London, and the author of Einstein, Picasso (Basic Books, 2001).

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