

Duane Michals' best photograph: French Vogue does quantum physics

'I bought the mirror in Bath. It was the perfect way to illustrate Heisenberg's Uncertainty Principle'

Interview by Karin Andreasson

Thursday 26 February 2015 02.30 EST



Dr Heisenberg's Magic Mirror of Uncertainty, 1998, by Duane Michals, shot for French Vogue.
Photograph: Duane Michals/courtesy DC Moore Gallery, New York

One day in 1999, French Vogue called me up to see if I could illustrate a feature on quantum physics for a special science issue of the magazine. I've always been interested in physics and I like trying to photograph things that seem un-photographable – rather than looking at reality, I aim to get deep inside it and explore. So I said yes.

When I was at school in Pennsylvania in the 1940s, our science teacher Mr Dunlap taught us that atoms had electrons, neutrons and protons, and that was pretty much it. But after the second world war, with the development of accelerators, much smaller particles were discovered: muons, quarks, gluons, bosons and others.

Then Werner Heisenberg, a quantum pioneer, said you cannot predict with any certainty the position or velocity of a particle – they interact in total chaos. That was revolutionary and it prompted Einstein to say he could not believe God would play dice with the universe. The notion that the fundamental expression of energy is something chaotic pulled the carpet from under a lot of thinking. How could anyone not be curious about that?

I bought the convex mirror in an antique store in Bath, on a visit to the Royal Photographic Society. I was so excited by its distortions, I brought it back to America. People on the flight must have thought I was the vainest person in the world – carrying a big mirror with me in the cabin.

I thought I could illustrate Heisenberg's Uncertainty Principle with the mirror, which transforms everything in front of it. When my model moved it even slightly, her image changed completely. It was strange, liquid-like and very exciting. It seemed as if I was looking at her energy evolving and vibrating right in front of my eyes. Of course, we can't see energy changing state at this level, but to see her distort into all these faces was still marvellous.

I made a series of shots and called them Dr Heisenberg's Magic Mirror of Uncertainty. In the pictures, the models lips get bigger, her eye stretches and – in the last image, when I made her look at the camera – her cheek appeared in the mirror and there was no face at all. It was just a blank slate. That seemed the perfect way to end it – like pure white energy.

- Duane Michals: The Portraitist is at DC Moore Gallery, New York, until 31 March.

CV

Born: 1932, McKeesport, Pennsylvania, US.

Studied: Self-taught.

Influences: René Magritte, Giorgio de Chirico, Balthus.

High point: “I've been lucky. I've been able to express myself on my own terms. I don't owe anybody.”

Low point: “It sounds boring, but there haven't been any low points. I also loved doing commercial work. I've never been a photo-snob.”

Top tip: “Don't try to be an artist. Find the thing within you that needs to be expressed. You might find it is art.”

<http://www.theguardian.com/artanddesign/2015/feb/26/duane-michals-best-photograph-french-vogue-quantum-physics-heisenberg>