## The Guardian



Interview

## 'I've breathed in some crazy things from outer space' -Katie Paterson's cosmic art

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The artist who once sent a meteorite back into orbit is now looking for the heavenly in Turner's paintings, in a show that explodes with moonlight and gamma ray confetti

Mon 28 Jan 2019 14.01 GMT

he confetti cannon is set to go off every two weeks, firing out 3,216 pieces of paper, each colour-coded to match the gamma ray bursts that destroy entire galaxies.

Nearby, a spinning wheel contains all the colours of the universe - today's is "cosmic latte". Elsewhere in Katie Paterson's new show, there's a lightbulb that emits "moonlight", an LP that turns at the speed of the Earth (one rotation a day), and letters of condolence sent to an astronomer mourning for dead stars.

Critics have marvelled at Paterson's ability to blend "the galactic and the mundane". They have also coined a term for the feeling you get when contemplating her work: ontological vertigo. "I love that expression," laughs the artist, who is busy installing what will be her largest ever British exhibition, at the Turner Contemporary in Margate. "That's what I get if I'm thinking about billions of years. It is sometimes dizzy-making, especially if you've got that colour wheel spinning."



100 Billion Suns, Katie Paterson's confetti cannon. Photograph: MJC, 2011. Courtesy of the artist

Paterson grew up in Glasgow, moved to Berlin for a decade and now lives in Fife with her artist partner and young son. She first gained attention for an installation in which people could call on a phone to listen – live – to a glacier melting. Since that MA piece, she has created many impossible-sounding artworks: sending a meteorite back into space, recreating the smell of Saturn's moon, compiling a picture archive of darkness throughout the universe, and mapping all known dead stars.

She was "a total daydreamer" growing up: "I would lock myself in rooms and spend time just daydreaming, which sounds completely nuts. I would construct worlds." Paterson, who has dyslexia, develops ideas by writing words on pieces of paper and rearranging them to create short texts.

In between her two art degrees, she worked as a hotel maid in northern Iceland for seven months. "That's had the biggest impact," she says. "That was my first true experience of landscape: northern lights, geysers, glaciers, midnight sun, and the energy, the bursting Earth, just seeing the strata - time physically embodied in the landscape. The light was phenomenal. That's when I started getting into sciences."



Vatnajökull (the sound of), 2007/08 – in a past installation, people could telephone to hear the glacier melting. Photograph: © Katie Paterson, 2007 Courtesy of the artist

The blizzard of improbable ideas she dreams up is at the heart of the new exhibition. Alongside her physical works are silver-lettered texts: "A foghorn set off at sea every time a star dies"; "A wave machine hidden inside the sea"; "Venus's sky recreated on Earth"; "A mountain carried away stone by stone". She has paired each idea with works by Turner.

She is publishing a book containing 120 of the silver texts, called A Place That Exists Only in Moonlight. Its cover is printed with cosmic dust. With Paterson, what sounds like an art hoax invariably turns out to be true: she acquired "quite a lot" of moon dust, she says, as well as meteor fragments from Mars and some asteroid remnants - and ground them up with a pestle and mortar.

"I breathed in some really crazy things from outer space and then I sent it off to the ink people," she says. The dust was added to the ink and each screenprinted copy has some of this mysterious blend. "There may even be nano-diamonds," says Paterson, stroking the cover. "And some extremely ancient meteorites that may be proto-planets - the really purist stuff from outer space."

Some of Paterson's ideas really are impossible, but they still possess imaginative power. "Not all of them need to come into existence to form something in your mind," she says. "They can exist in and of themselves, being something that people can make alive in their minds." Even so, Paterson has a gift for turning improbable fantasy into matter. "I hope I've proved many people wrong. I've had a lot of people say no. I really surprise myself that I've managed to make some of these things happen."

Her works often require lengthy collaborations with scientists. When she began a residency at University College London's astrophysics department, scientists asked if she was simply going to paint a mural on their corridor. Once she put them straight, she was surprised at how openminded they were when faced with her challenges. "It's been amazing," she says. "Steve Fossey at UCL is our go-to scientist. Poor Steve is inundated with some of the most absurd questions, like trying to puzzle the colours of the entire universe."



Words worth waiting for ... novelist Margaret Atwood with Paterson at the inauguration of the Future Library forest in Norway. Photograph: Giorgia Polizzi

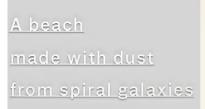
Sending the meteorite back into space – one of her favourite improbables – was a collaboration with the European Space Agency. "That moment where they agreed to send it back to space, to the International Space Station, that shocked me," she says. Another favourite is the Future Library. This newly planted forest of 1,000 trees near Oslo will be tended for 100 years. Each year, an author writes a book and gives it to the library to be buried. The first was Margaret Atwood; the latest is South Korean Han Kang. In 2114, the trees will be harvested to print and reveal Paterson's anthology of 100 books. Of course, neither Paterson, nor anybody reading this today, will be alive to witness this moment.

"I don't know if I'm sometimes the luckiest person ever," says Paterson. "Things just fall into place." She found unexpected support for this long-nurtured idea in Oslo: some land was

donated and she returns every year as each new book is committed to the library. The Norwegian spruce saplings are now above waist height.

"I feel like my life grows with this yearly ritual. One year I'm pregnant in the forest. The next year I have a child. It sort of snowballs with all the authors." Paterson is a member of the Future Library's board of trustees. Eventually she'll be replaced by a younger person. "The mandate is to compassionately sustain the artwork for its 100-year duration," she says. "The foresters have a big part to play, they tend to the trees. It's my dream project because it's got every aspect of what I like - the collaboration with authors, foresters and librarians. And it operates on slower time. It's not this rush to make something for a deadline. It's really nice to let something organically evolve. I couldn't ask for anything more."

This year, Paterson has more deadlines than ever, with another big solo exhibition at the Scottish National Gallery of Modern Art, and First There Is a Mountain, an epic set of 25 beach events every second Sunday over British Summer Time. People can sign up to make miniature sand mountains from pails that are tiny casts of five real mountains. A new piece of writing about each place, from Orkney to Margate, will also be read out.





Katie Paterson's texts appear with Turner paintings. Composite: Courtesy of the artist and Ingleby Gallery, Edinburgh

"It is quite a small gesture," she says, "yet it does connect the ephemeral to these vast mountains and the deep time of sand." The biggest challenge was making her mountain casts from compostable material. "It's been a complete nightmare but we got there in the end. We don't want to be putting more garbage in the sea." After the events, the pails will be composted by a farmer. "I'd like some of the soil back at the end," she says.

At the Margate show, the connection between a Romantic painter and a Scottish conceptual artist is not as tenuous as it might first appear. Turner was friends with Michael Faraday and was deeply curious about science, geology and the natural world. Critics have noted that Paterson's work, like Turner's, raises Romantic questions of loss and reflects the awe and terror we feel when faced by the mighty universe.

As Paterson installs her exhibition, new connections keep arising. Like Paterson, Turner kept a book of ideas and tried to create "moonlight" through mixing paint. "In the beginning," she says, "I would've never had the audacity to exhibit with Turner works but, as it's gone on, interesting relationships have been opening up." When she first chose the Turner works, including many of his little-known sketches, "it was like breathing the freshest air ever. His work was so shockingly beautiful. I hadn't had that experience before."

The most serendipitous connection is visible in the gallery. A Turner sunset - chosen to represent her idea of "Venus's sky recreated on Earth" - perfectly matches the colours of the universe spinning on her wheel. "I was so happy about that," she laughs. "Turner's been painting with the colours of the universe, without knowing. Or maybe he did. Ultimately, we're all drawn to the unspeakable wonder of everything."