Katie Paterson: ‘As a child, I used to practise daydreaming’

With her largest UK show to date currently on at the Lowry, the artist talks about the relationship with heavenly bodies and the wider cosmos, her graveyard of stars and sending her work into space.

by VERONICA SIMPSON

The qualities of curiosity and wonder permeate the works of multidisciplinary artist Katie Paterson (born 1981, Scotland). Preoccupied with themes of nature, ecology, geology and cosmology, she has a genius for capturing big ideas – global warming, interplanetary time differences, the possibility of communicating with the moon - and rendering them into simple, poetic and lyrical pieces that connect personally with the viewer.

Syzygy opened on 29 April at the Lowry in Salford, a flagship event within the venue’s ambitious new annual, 11-day, multi-arts festival called Week33. It is Paterson’s biggest solo show in the UK, featuring highlights from her career to date, with two new works commissioned for it. The term Syzygy comes from astronomy, and is used to describe an alignment of celestial bodies. At the opening, Paterson said: “It’s a coming together of planets in space and time, and relates to how most of my work deals with Earthly time and cosmic time, and our relationship with heavenly bodies and the wider cosmos.”

Totality (2016) is one of the new pieces, commissioned in parallel with the Arts Council Collection at Somerset House (its twin is currently also on display at Somerset House in London). Looking much like a disco mirrorbll, it is a globe adorned with 10,000 tiny tiles representing every image of a solar eclipse gathered since records began. As the globe slowly rotates in a darkened room, spotlights bounce a multitude of reflections from the thousands of eclipsing suns. The second commission, Ara (2016), is an immersive light installation: a string of festoon lights whose tone and brightness has been finely calibrated to mimic that of the stars within this specific constellation.
Other works shown include Vatnajökull (the sound of), the Scapa degree show piece that launched her as a major talent, for which she hooked up a mobile phone to a melting glacier in Iceland, and published the number around the world so that people could call it and hear, live, the slow drip of global warming beamed directly into their eaves (the number is no longer live, but recordings have been archived). Echoing through the Lowry’s galleries is also: Earth-Moon-Earth (Moonlight Sonata Reflected from the Surface of the Moon 2007). For this piece, Paterson transcribed Beethoven’s Moonlight Sonata into Morse code, bounced it off the moon, and then had the subtly altered version that was reflected back to Earth played on a grand piano; at the Lowry, a self-playing piano performs the unaltered piece – mottlings of chords and sections are missing, thanks to the disappearance of the message into the moon’s many craters and crevices.

Less than two weeks after her Lowry show opened, her first permanent work on UK soil launched in Bristol. Hollow, a collaboration with architects Zeller & Moye, houses a miniature forest of all the world’s trees – 10,000 specimens, spanning the history and diversity of the planet. It was commissioned through Bristol-based public arts producer Situations, for the University of Bristol to mark the opening of its new life sciences building.

In her relatively short career (she graduated nine years ago), Paterson has exhibited internationally, from London to New York, Berlin to Seoul. And her works have been included in major exhibitions from Tate Britain to the Guggenheim New York. She was winner of the Independent’s Creative 39 award in 2008 and, most recently, the winner of the Visual Arts category of the 2014 South Bank Awards. She divides her time between studios in Berlin and London.

Veronica Simpson: The Lowry has made your show the key visual arts element within its new annual multi-arts festival of curiosity, Week33. It seems very apt to have you here, setting the tone for explorations on every scale, from the micro to the macro. There are two new commissions. Can you tell me a little about them?

Katie Paterson: For Totality, we collected more than 10,000 images of every single solar eclipse ever recorded. I think we found the entire internet library of solar eclipses — we missed the internet. We approached every telescope, and we have got drawings on there from before photography existed; the oldest is 1778. So there are images from countries all over the world. And it has been organised into a mirrorball, a “discotheque of the sublime”, as Sally O’Reilly called it. It looks like a planet and feels like a planet. It’s very heavy. It has lights beaming off it, which project these 10,000 images across the room. We also organised it into a complex structure where the solar eclipses rotate in a systematic manner as if the moon is eclipsing the sun. It actually rotates quite slowly but because of the lights, it has a galactic feel. It feels pretty cosmic in there.

VS: I was really struck by your work All the Dead Stars – I kept being drawn back to it, the physical and emotional weight of this huge, black piece of metal, on which you present a map of all the stars that have been witnessed going out across the ages. It has a real gravitas.

KP: This one involved me contacting about 100 astronomers all over the world to collect the documentation on the dead stars that have been witnessed. It took two years to make. I had the idea without knowing how many I would end up (having to chart). I really had no idea. I worked initially with a number of people to work out what a dead star is, and then to figure out how to represent the huge reams of data. This map represents everything that has been seen of stars dying, through a telescope. Some parts of the map are more dense with shapes and dots because that’s where most of our telescopes are concentrated. What I find wonderful was learning that when stars die, all the material they eject becomes other planets. A star dying millions of years ago formed the Earth and who we are. I just find that really fascinating. So this map is almost like a graveyard.
VS: I find myself wondering, what you were like as a child?

KP: Very introverted, a real daydreamer. I actually used to practise daydreaming. I used to put time aside every day for daydreaming. I'm an only child, which maybe explains it: I mean, I spent a lot of time with other people and other children, but I still love being alone. I love daydreaming. An adult version of daydreaming is my creative practice. Apparently, so my mum says, I would avidly sit at a desk and draw all the time, not a normal level of drawing.

VS: What were your drawings of?

KP: Goodness knows (laughs). I wasn't into space. I wasn't into science.

VS: So science was not an early interest?

KP: Absolutely not. Quite the opposite. I was terrible at all that stuff at school. I was failing at all the science subjects. I was very good at maths, strangely. It was going either way for a while. It was going to be either art or maths. I'm so glad I didn't go down that route, because now I can kind of use both in a way. Not that I could ever stretch to degree-level mathematics.

VS: But an ability to grasp numbers is important for what you do — to be able to translate the extraordinary data you amass into something visual that also makes sense.

KP: Yes, I agree — there are enormous amounts of individual things in every work.

VS: Where did you grow up?

KP: I grew up in Glasgow. In a tenement flat in Glasgow.

VS: So daydreaming was a form of escape?

KP: Yes, I love where the imagination can take you. It's like reading a book or doing something that transports you to another place and time.

VS: Did you initially think you were going to follow a more orthodox approach in your art?

KP: I never knew. I was quite a mixed-up student. It was really obvious it was going to be the arts (but) I flitted between the departments all the time, thinking: "Where's my place?" I then settled in the most interdisciplinary department there was (MA Fine Art Media, at the Slade). That's where I found my home in art school.

However, I would often turn up at crits [group tutorials] with a few words written on a piece of paper and a very frustrated feeling of: "I want to phone a glacier!" But I had no idea how to achieve it.

VS: Did anyone suggest working with scientists while you were at college?

KP: Not exactly. I studied first in Edinburgh, on what was very much a fine art course, and then the Slade. And because the Slade is part of University College London (UCL), by sheer accident, or maybe not — who knows — there is a department behind the Slade called the Rock and Ice Physics Laboratory. So I just wandered in there when I was making the ice records. I thought: "Hang on a minute, this is on my doorstep!" So I started walking around the university, finding astrophysics, finding everything that was there, on my own. They were all very willing to have conversations. Having said that, as a student, things were pretty tough. They're still quite tough. I had so many ideas, but making them happen was really difficult.
VS: In that time, the whole idea of collaborating between artists and scientists has become almost mainstream. It's a very exciting field.

KP: Yes. I suppose eight or nine years ago, it was there, but it wasn’t easy. It’s not easy now, but people are more aware, and it’s an easier network to access. When I approach people now, they have that general awareness, not just with the arts but interdisciplinary practice, in other areas of medicine, science, you name it, there are collaborations everywhere. It’s lucky the work I wanted to make is happening in this moment.

VS: Do you find that the scientists appreciate the way an artist’s perspective opens up their understanding of their own work; the visuals can articulate what they are doing in a whole new way?

KP: That would be my highest hope for a great collaboration. I do feel that has genuinely happened, in several cases. Say, with All the Dead Stars, I made that during a one-year residency in astrophysics, at UCL. It can be really fruitful if you have a genuine dialogue, a connection between disciplines. With astrophysics, we’re both in some way looking into the depths of time. I know that sounds very grand, but I feel like astrophysics is at the edge of research. It’s looking at the furthest, the deepest, the most remote, or even on the tiniest scale, the nano-scale, it’s looking so deeply into things, and that’s where my interest is.

VS: It’s quite thrilling, though, to feel that you can represent something like astrophysics in a physical way, with a work as beautiful and profound as All the Dead Stars. I am struck by the elegance of your solutions. How much fine tuning and whittling do you have to do?

KP: Oh, so much (laughs). You wouldn’t believe it. I am the number one perfectionist. Everything looks quite discreet, quite subtle, quite minimal, but it’s taken a lot of work to get there. The new lights, (Aur), they’re all white, but there are these incredibly complex little chips inside of them; for Steve to even manage to fit six wires into that cable without it looking too big is phenomenal.

VS: Who did you work with to make that happen?

KP: That was with Steve Pippett at Arts and Film Fabrication. There are a few key people I go to when I have an idea. For Timepieces (Solar System), a series of clocks that tell the time on other planets, the face has been designed by Fraser Muggeridge, a graphic designer in London, to look almost like it’s not been designed. It’s really minimal. I always return to monochrome everything (laughs). I take a lot of care and pay a lot of attention to detail. The map of the dead stars was a very difficult fabrication process: to find a laser bed of 3 x 2 metres was hard. People told me I would have to make it in three parts, and I thought: ‘I’m not going to make it in three parts!’ But we found a place that anodised for aerospace, and we did it in one. It may not look like it, but there are so many processes each project goes through.

VS: Your pieces take a lot of time and research. This must require enormous patience. Is this a skill you knew you had?

KP: It’s something I have learned over time: that I can’t work at the same rate as other artists necessarily do – exhibition timetables, art fairs. I can’t do it. These works are different, these is so much research behind them. They need it. They would really lose something if we somehow skipped through that process. So they do take time. And they need the time and they embody time, so it’s kind of crazy to rush them. Saying that, the mirrorball was made in seven months and that was quite an achievement. On my time scales, that’s pretty fast.
VS: How do you find your scientific partners?

KP: I’ve done a number of residencies. I did (the aforementioned) one at UCL, and another residency at the Sanger Institute in Cambridge, where they study the DNA genome, which was incredible. Other than that, I just approach people. Usually the subject is so specialized that I can approach a number of scientists and say: “Who studies gamma ray bursts?” And then you research that person and then contact them, and sometimes they’re interested. But I started working with [Dr] Steve Fossey [UCL teaching fellow in astronomy]. He’s just remarkable. He knows everything. Any complicated question, I just ask Steve. And if he doesn’t know, he’ll tell us who will know. So it has got a bit easier over time. We’ve got a network, as things have opened up.

VS: And do you have a library filled with New Scientist and National Geographic magazines that you go to for inspiration?

KP: Sort of. I wish there was more time for that to be honest, and that’s what I’m working on. I need more creative time. I want to read more, more time for investigation. Actually, something I will be working on is a book of ideas – I’ve got 130 ideas for new works, and they come from all over the place. So there will be a book.

VS: Many of your works have no fixed time scale, such as the History of Darkness (a slide archive, containing thousands of images of darkness from different times and places in the history of the universe).

KP: Yes, it’s an ongoing work I could be making for my whole life, or until people stop making slides, which is an unfortunate probability. Each set contains around 2,000 images of darkness from throughout the universe. They are all black. They look empty, but they’re all full in my view. Every single image is taken from telescopes and arranged in terms of its distance. So they span from 7,000 light years from Earth to 13bn light years from Earth. So it’s a history of darkness throughout time and space. And every single slide is handwritten with the distance in light years from Earth. They look like black spaces but because they come from the past, every time we look at the sky we’re looking back in time. Even the light from the sun, the light from the moon is old light coming back at us. It’s like cosmic archaeology. One of the images is from 13.7bn years ago, the darkest dark, when the stars were just beginning to form. You can hold the slides up to the light, and you can see almost nothing, but given that millions of years have passed, probably things exist in these empty places, planets, galaxies and other lives. I’ll leave that to your imagination.

VS: You have also become somewhat famous for being the first artist to send one of your own pieces into space.

KP: This is the piece called Campo Del Cielo, Field of the Sky. It’s a meteorite. It fell to Earth a thousand years ago, but it is more than three billion years old. I cast it, melted it and recast it back into its identical form, almost like a doppelganger of itself. It has gone through this alchemical process. All the ancient atoms inside it have been reset. I made a family of meteorites. This is the biggest one (on show at the Louvre). The smallest I sent back into space with the European Space Agency (ESA) last year. So it fell to Earth, got remade, the ESA took it up to the International Space Station and it floated around in zero gravity for about six months, and then it released it and it fell back to Earth and burned up through the atmosphere.
VS: One of the most poignant, long-term pieces has to be your Future Library [2014–2114, commissioned through Situations by Norway’s Bjørnwik Utvold].

KP: This is a 100-year work. I will be working on it throughout my whole life. This one really is the longest work I’ve ever made. Future Library is a forest. I planted a forest in Oslo. In 100 years’ time, the trees grown there are going to be cut down and pulped and made into a book that’s written now but will never be read until the forest is fully grown. We’re inviting one author a year for 100 years to write a piece that gets contributed to this Future Library. Nobody will read it. Not this generation, maybe the next. We work with one author a year. The first was Margaret Atwood. This year it’s David Mitchell. The authors come to the forest in a yearly ritual and hand over their manuscript, which gets taken away and hidden in the archive in Oslo. I’m working with the architects of the new library in Oslo [opening in 2020, it has been designed by Lund Hagem Architects along with Atelier Oslo] to design a special silent room that all the manuscripts are going to be held in over time, and it’s going to be made using the wood cleared from the forest as well. It’s going to be a small room, perhaps with 100 drawers that will light up year by year as the manuscripts get inserted. This print [she indicates a framed print in the exhibition] is also made from the felled trees. There are 100 tree rings for each author. This certificate entitles the owner to a set of the anthology in 100 years’ time. It’s a work that can be passed down through the generations, through libraries and museums and so on and they will receive 100 books when we’re all gone. This is a work that will outlive us.

VS: This work expresses your feeling for trees as well as books, with a timeline to the future. While Hollow, your latest piece, in Bristol, is a love song to all the trees that have existed on our planet, in the past.

KP: It is a love song! Hollow came about three years ago, possibly even longer. It’s been three years in terms of the physical making. I was commissioned by the University of Bristol life sciences department, for their new building that has a lovely garden outside, the Royal Fort Gardens. So I made the work for the garden. It has gone through various forms, but always linked to the idea of bringing together a planet’s worth of trees, making a microcosm of all the trees on Earth, developed through various forms. At one point, I bit a block because I couldn’t visualise what it might be. That’s when I started working with architects [Christoph] Zeller and [Ingrid] Moye. It’s a joint artwork, and my first architectural collaboration. They have brought it into another dimension, spatially – working with the embodied person in a space. The collaboration has been amazing. I am not sure it’s luck, but we have same aesthetic sensibility. Where I baulked, they took off, they visualised what Hollow would become. Meanwhile, the wood collection was slowly coming together. I wanted it to contain every tree family, every country, every kind of forest - coastal, jungle, rainforest, cloud forest – and to move across time. There are petrified tree fossils from the first ever forest on Earth, through the first 450,000, to petrified trees, to the present day to trees that are enlaced.

About half the collection is donated, which is amazing. We contacted lots of zoos (tree libraries), herbariums, botanical gardens and research institutes such as Sustainable Humanity in Kyoto. We’ve contacted just about everyone in the world of wood. Situations co-ordinated the wood collecting. Rachel Cartwright has catalogued every single piece - she’s an archivist by profession, working in the arts. It needed someone with that kind of mind, a real archival, cataloguing skill but with a connection to the arts at the same time. I also bought lots of wood samples from eBay in the beginning, when we were just starting. One of the key moments was getting hold of [wood collector] Robert Ritchie in Canada. He very kindly gave us his entire collection, of 5,000 species. That’s what pushed us ever into towards 10,000 specimens, this somehow unreachable number - imaginable and unimaginable. At that point we stopped. It felt like we had enough.
YS: No wonder you were daunted at weaving all these specimens into a structure. How did you find the architects?

KP: Claire Foxley at Situational used to work at the Serpentine (where Zeller & Moye worked with Ai Weiwei on the 2013 pavilion) and had worked with Zeller & Moye. There was something about their aesthetic that I really liked - minimal and with a stark geometry. We quickly bonded over the project and we took it from there. What was wonderful was that they were able to imagine the more sensory impacts - colour and touch. There are design elements in everything I do, but this took it to another dimension altogether. It's a building, really. It only fits two or three people at a time. A seating area made of some of the logs is built in, which encourages visitors to take it in and slow down a bit and transport themselves to these distant forests. The outside of Hollow is made entirely of Douglas fir. The inside is where the rare species are. The light is meant to filter through like a forest canopy. You get dappled light, but it's quite dark, and it changes with the daylight. There's a lot of colour inside - that's something I did not expect. We've got a gradient going from darkest reds to purples and greens. Every single piece of wood has been catalogued: its common name, botanical name, origin and continent, and that information is all being brought together in a website, where Hollow can be explored remotely.

There's so much to see ... it does stop you in your tracks: spaces, clusters, effects and shadows. Even now I find, after all this work, there's so much I haven't looked into. It will change in the sun. The whole structure outside will have changed to silver grey in six months.

YS: Life scientists are a new collaborative sphere for you: did they get involved as well?

KP: The life scientists played a big part. One thing I struggled with was how to systematize the trees in the structure. What we came up with was not imposing another human narrative on it. The one thing it does run with is time – from the new (to) the extinct species. Jon Biddle was really involved. He's an evolutionary biologist [at the University of Bristol]. He gave a lot of insight into the way human beings relate to trees, going back through time and culture.

YS: So what’s next on the horizon? Any time for daydreaming?

KP: It’s really important I get back to the creative heart of things. This last year I’ve been so involved in production. I’ve been glad we’ve seen Hollow through to the end, but I’m quite looking forward to getting back to the lightness of ideas.

*Sympy nexus The Lowry, Pier 5, The Quays, Salford, Greater Manchester, until 1st July. Hollow is open during daylight hours at the Royal Fort Garden, Bristol.*