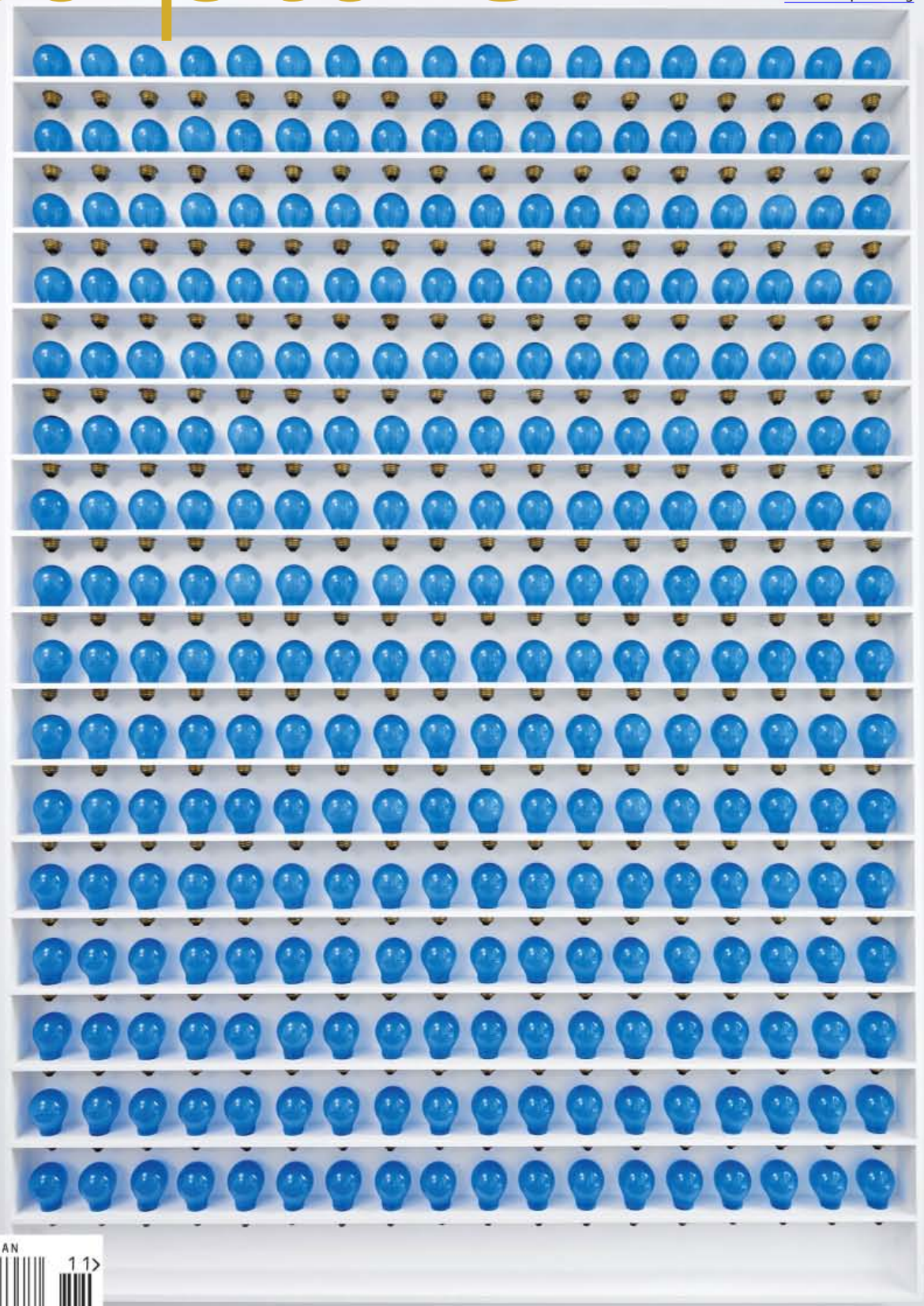
sculpture

November 2014
Vol. 33 No. 9

A publication of the
International Sculpture Center
www.sculpture.org



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Katie Paterson El Anatsui Alexandre Arrechea

Dark Matter

A Conversation with Katie Paterson

BY JOSHUA REIMAN

Campo del Cielo, Field of the Sky, 2012. Meteorite.

All the Dead Stars, 2009. Laser–etched anodized aluminum, 200 x 300 cm.

The work of Katie Paterson is ever expanding like the cosmos, opening up wonder and inquiry into the primordial density of our universe—a gravitational mass of the visible and the unseen, held together by dark matter. Few other artists can spark our interest in such a deeply sincere quest for the unknown, a search for greater understanding of our universe and beyond.

Paterson does this by creating a tapestry of worlds, successive moments that influence our future and tell us more about our past. Spanning the limits of time, her projects sometimes use materials that are billions of years old and sometimes rely on elements that have not yet been made. From records made of ice, to a re-cast meteorite, to a library 100 years in the making, her rich accumulations of ideas open us up to questioning the space around us, and where we are situated within it, as it is all just a grain of sand in a larger endeavor.

Joshua Reiman: *When I was doing research for a 2009 residency in Iceland, I came across your record piece,* Langjökull, Snæfellsjökull, Solheimajökull, *and found it incredibly moving and poetic. Could you talk about how this work operated for you in terms of its materials and their embedded history and how it informs what you do now?*

Katie Paterson: For *Langjökull*, *Snæfellsjökull*, *Solheimajökull*, I collected water from the three glaciers in Iceland and undertook a long period of experimentation with materials and ice-casting techniques to make records from glacial ice that played the sounds of the glaciers themselves. At the time, I was studying for my master's degree in London. I'd spent a long period in Iceland, which was pivotal for me—I was connected to the sky and the earth, space, nature, light, geology, and the cosmos in a way that I hadn't appreciated before. *Langjökull*, *Snæfellsjökull*, *Solheimajökull* was the beginning of a language, a language of ideas that can be expressed in just a few words (*Ice records…from frozen glaciers…that play the sound of themselves*). It dealt with time, the slow erosion of nature, the melting

water on the decks, the dying sounds, the visual landscape that unfolded—literally playing out the landscape.

JR: *Space is so vast that our quest to understand it becomes a spark for imagining the unknown. In some of your works, you create tools that ignite the wonder of the cosmos. They show us a physical space beyond the boundaries of reach. What are your thoughts on creating objects that hold such ideas of vastness and wonder?*

KP: Imagining the unknown certainly preoccupies me, from cataloguing vast areas of darkness in latent corners of the universe to mapping collections of dying stellar bodies that burned up millions of years ago, looking into deep cosmic time, the mysteries of dark matter, other dimensions, other universes. Space isn't apart from ourselves. Working on pieces like *All the Dead Stars* has brought me closer to a more embodied understanding of this: the matter that exists now as having always existed, the cosmos recycled, exploding stars creating new life—there are no beginnings, no ends. What seems particularly wondrous to me is that, with current technologies, we can look through immense distances, spaces, and times so utterly beyond to events that happened billions of years ago, only a fraction after the supposed dawn of the universe. We can look at them directly, right now. This is totally outside, but also completely inside, the boundaries of reach. We are face to face with the beyond; it is so very tangible, yet completely distant, a moment deep in the past. It has never been my intention to create immense artworks, but perhaps they can bring us a fraction closer to these boundary points, these liminal places.

JR: *In* History of Darkness*, you are continually building a slide archive of pictures of dark places in the universe. How important is the scale of this ongoing project to you? Is its ability to be viewed as a sculptural object important?*

KP: I've now catalogued about 8,000 slides of darkness. This is truly an ongoing artwork. The only end that I can foresee is a decline in the production and development of slides. There is certainly an endless amount of darkness. I don't find the scale of making the work daunting: when I first imagined it, I saw that it had no end and accepted that fairly quickly. I work on *History of Darkness* in fits and starts. The processes in my works all have different timespans, from the almost instantaneous moment of forming ideas, through the collaborative and research stages, to the material and production stages, which can span anything from one day to several years. Works like *History of Darkness* will go on throughout my lifetime. *Future Library* will unfold over a century. Within these durations are the time scales embedded inside the works themselves—millions of years of traveling light, billions of years of near-static darkness, ancient desert sands, the first signs of life strung on a necklace.

JR: *This is an incredible amount of dedication. How about the physical scale and the accumulation of the slides as a sculptural object?*

KP: The slides so far are split into four sets of around 2,000. They exist in different places around the world. I held a live event as part of the Whitstable Biennale in the U.K. a few years ago, at which the slides were projected all night long, with a reading of the distance

Top: *Langjökull, Snæfellsjökull, Solheimajökull* (still), 2007. Three digital films, running time 1:57 minutes. Above: *Langjökull, Snæfellsjökull, Solheimajökull*, 2007. 2 views of installation.

History of Darkness, 2010–ongoing. Slide archive, view of installation at BALTIC Centre for Contemporary Art, 2010.

from earth in light years of each image. At the end, the black-out blind was ripped from the window, and we were very glad to be touched by the light on earth.

JR: *As someone who considers astronomical explosions in detail, I wonder what your thoughts might be in relation to the phrase, "The end of one object may be the beginning of another." Does this have any relation to sculpture?*

KP: I am drawn to this phrase. And vice versa. Sometimes ends and beginnings have no distinctions. For *Future Library*, I've planted 1,000 trees in a forest just outside Oslo, which will supply paper for a special anthology of books to be printed in 100 years. Between now and then, one writer every year will contribute a text, with the writings held in trust, unpublished, until 2114. The beginnings of this work could be anything from the small sketch of tree rings as chapters, which I made on a train several years ago, or the seedlings that have just been planted, or the first words written. Some of the authors who will write for *Future Library* haven't yet been born. And where does this artwork end? In 100 years, the books will be printed on paper made from the fully grown trees, but we have no sense of how long into the future these books might be read. And the 1,000 new trees may regenerate into other trees, and so on.

JR: *Could you talk about this work in relation to earthworks and stewardship? Who will care for the trees and carry out the work when your life is over? What if natural phenomena such as insects or weather change the course of the work?*

KP: Although I have been planning *Future Library* for the last three years, we are still in the early stages. It is a challenge in many ways: from the consideration of tree types, forested areas, Norwegian insects and climate, to working with lawyers on 100-year contracts, and selecting and inviting authors. Thinking and developing a work on such a timespan is new for me; trust is going to be a dominant concept.

The texts will be held in a specially designed room in the New Public Deichmanske Library, Oslo, which I'm working on in collaboration with Atelier Oslo and Lund Hagem architects. Support has been given by the City of Oslo, and we are working together to ensure the protection of the forest and the manuscripts until 2114. We are forming a Future Library Trust, which currently has seven members, including the director of the Man Booker Prize, the publishing directors of Hamish Hamilton and Forlaget Press, and the editor-in-chief of Oktober Press. The Trust will change its members decade by decade. In September, we announced that Margaret Atwood would be the first writer to contribute a text to *Future Library*. And in May 2015, a ceremony will mark the hand-over of her manuscript. [More details are available at <www.futurelibrary.no>.]

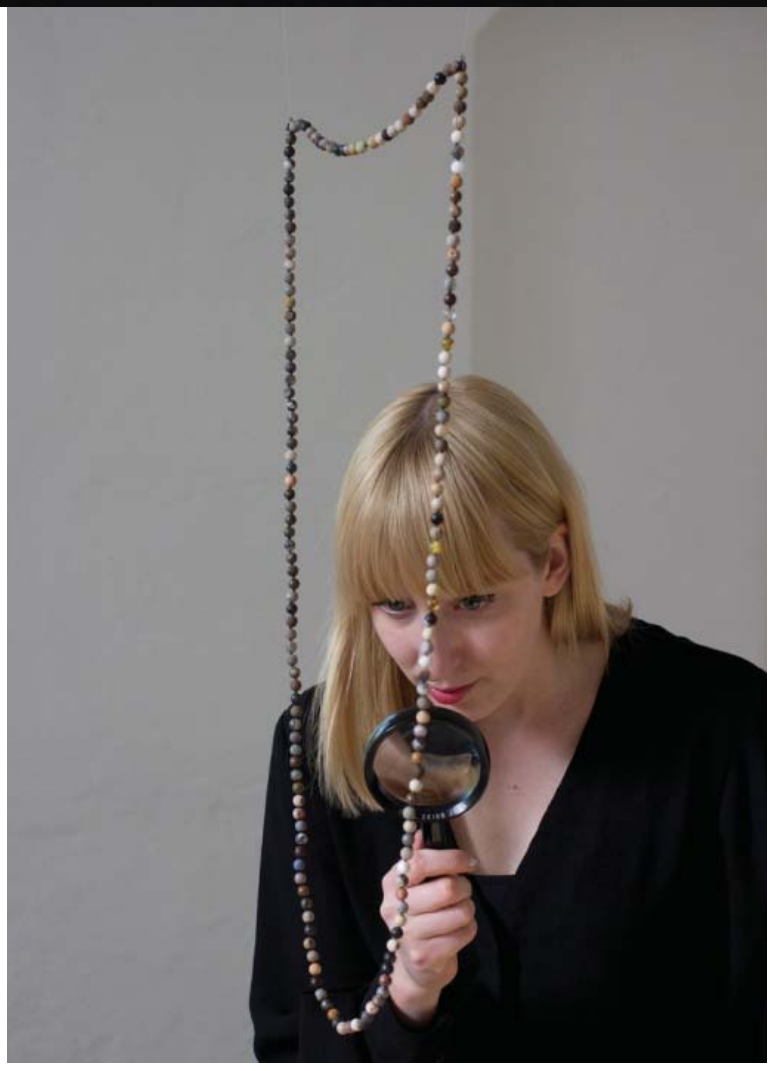
JR: *In* Campo del Cielo, Field of the Sky, *you molded, cut apart, and melted a 4.5-billion-year-old meteorite in order to cast its replica. This project underscores ideas of transformation and of the doppelgänger. How did you come up with this idea, and is there a*

Above: *Campo del Cielo, Field of the Sky* (detail), 2012. Meteorite. Left: *Campo del Cielo, Field of the Sky*, 2012. Inkjet print.

sense that you destroyed a history in order to create a new one for yourself as an artist? Would you be interested in sending this work back to outer space?

KP: I came up with the idea for *Campo del Cielo, Field of the Sky* while walking on the barren Baltic coast. I was imagining objects falling from the sky—cosmic dust, asteroids, and meteorites—imagining layers of time and existence, built up atom-by-atom inside the stone and metal, carried across from a time before earth existed. I put a Campo del Cielo meteorite through an intricate and elemental manmade process, almost mimicking the cosmic melting that may have brought it into existence in the first place, the alchemical process that goes on all around us, thereby collapsing a sense of cosmic and human time.

The next stage of *Campo del Cielo, Field of the Sky* was to send the meteorite back into space. Remarkably this happened at the end of July with the cooperation of the European Space Agency. A hand-sized, re-formed meteorite launched on the Automated Transfer Vehicle, *Georges Lemaître*, which carries cargo to astronauts aboard the International Space Station. I am very pleased indeed about this; I never thought it would get beyond the dreaming stage. The meteorite will later fall back to earth with the ATV, burning through the atmosphere on re-entry, in yet another cyclical process. We can only imagine what might happen next, perhaps the grains of metal will be discovered again on a desert expanse or dissolve into the sea.



Right and detail: *Fossil Necklace*, 2013. Carved rounded fossils.

JR: *How much time do you spend working on aesthetics and form as opposed to the completion of an idea?*
KP: The two go hand in hand, and it's difficult to differentiate. Often while I am visualizing the initial idea, I see the form clearly. The form can also be determined by the information or material that I gather, such as the dead stars map, which relied on more than 27,000 coordinate points. Choosing to laser-etch it in a minimal way on heavy matte-black metal was, of course, an aesthetic choice. I tend to play down the visual in my work, with the hope that what is unseen becomes completed by the imagination.

On the other hand, during the creation of *Fossil Necklace*, which consists of 170 carved fossils spanning geological time, I was continually surprised by the multitude of colors, forms, and intricate textures; each fossil was a micro-world expanding into macro, where Nautiloids became little Saturns. The structure of the eight-millimeter beads was determined before I acquired the fossils, but the aesthetics were completely unpredictable.

JR: *Your work is very clean in its display, yet in some respects, what you are studying and sifting through is quite dirty, explosive, and rich in texture. How did you arrive at this aesthetic?*
KP: Funnily enough, I only recently came to realize that despite the minimal appearance of my work, I seem to use a lot of messy, industrial techniques: laser-etching the dead star map on an industrial-size laser bed, on metal so big it had to be anodized in a tank

used for aerospace; fireworks exploding from molten meteorites, with a temperature so high it almost broke the machinery; cutting down trees with an alien-looking machine in a Norwegian forest; breaking record players with glacial-melt water; and giant mammoth thighbones cluttering up the studio.

JR: Light Bulb to Simulate Moonlight *must have required quite a bit of collaboration with industrial fabricators. Could you talk about this lovely work?*

KP: I collaborated with Osram to produce *Light bulb to Simulate Moonlight*, specifically with Dieter Lang, senior innovation manager and lighting engineer in Munich, swapping ideas and prototypes. He took the final light measurements under a full moon—color temperature, spectrum, and so on. The light bulbs were then made at the Osram factory in Nové Zámky, Slovakia. The glow is a cool, milky blue with a yellowy tint. They are surprisingly bright. The light bulbs exist in sets of lifetimes, burning for 66 years in total, the average length of a person's life at the time of their making. A small logbook accompanies the piece, to note down when each bulb is turned on and when it expires. When you first enter a space lit by a moonlight bulb, it doesn't appear hugely different from regular surroundings. But after immersing yourself in the light for a while, the world looks a very different color when you return.

JR: *What are you working on right now?*

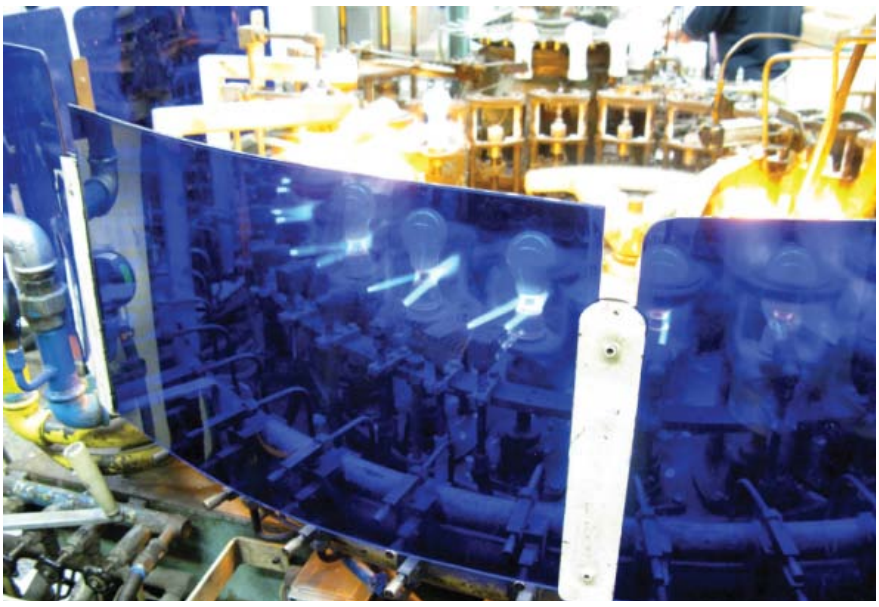
KP: I'm very excited to be moving forward with *Future Library*. Another new direction is *Idea-Objects*, which I exhibited for the first time at Ingleby Gallery in Edinburgh over the summer. These are short texts, almost like haikus, cut in solid silver, which take shape in the imagination of the reader. Eventually the texts will be collected into a large volume.

JR: *What is your studio practice like?*

KP: Very changeable, dynamic. I have a fairly small studio in Berlin, and two assistants. We are rarely bored. In the last few months, our research has ranged from lunar chemistry, forestry, and geology to clock-making, paleontology, and perfumery.

Joshua Reiman is an artist living and working in Pittsburgh, where he is a visiting professor of art at Carnegie Mellon University.

Above: *Light bulb to Simulate Moonlight*, 2008. 289 light bulbs, installation at Matthew Bown Gallerie, Berlin, 2010. Below: *Light bulb to Simulate Moonlight*, 2008. OSRAM factory, Nové Zámky, 2008.



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