



EARTH - MOON - EARTH

EARTH-MOON-EARTH
NICHOLAS ALFREY/JOY SLEEMAN

DIAMOND & ART GALLERY



Earth-Moon-Earth
[Moonlight Sonata Reflected from the Surface of the Moon] 2007
E.M.E. transmitter/reciever, Disklavier grand piano
Courtesy of the artist and Albion, London
Photo: © 2007 Katie Paterson
Installation view, Slade School of Fine Art, 2007

TRANSMISSION, REFLECTION AND LOSS: KATIE PATERSON'S EARTH-MOON-EARTH (MOONLIGHT SONATA REFLECTED FROM THE SURFACE OF THE MOON)

BY NICHOLAS ALFREY

Katie Paterson's installation *Earth-Moon-Earth (Moonlight Sonata Reflected from the Surface of the Moon)* involves sending the first movement of Beethoven's famous sonata to the moon and back. The score has been translated into Morse code and transmitted using E.M.E. (standing for the Earth Moon Earth, as in Paterson's title), a method of radio communication in which radio waves transmitted from earth are reflected back from the moon to an earth-based receiver. The signals are then translated back into a musical score, which is programmed for a player piano.ⁱ But not every note has survived its lunar journey, and subtle changes and losses now hobble the familiar melody.

The idea for Paterson's piece began when she became aware of the activities of 'moonbouncers', a network of mostly amateur radio enthusiasts who specialize in sending messages to the moon.ⁱⁱ The transmission itself was effected by the Southampton-based Peter Blair, a much respected moonbouncer, acting on instructions sent by e-mail: this remoteness of the artist from the process of making or action is entirely consistent with the protocols of a certain kind of conceptual art practice. The first movement of the moonlight sonata ('adagio sostenuto') constitutes a much longer message

than those usually transmitted, especially given that the five and a half minutes or so it would take to play it on a piano are extended to three times as long once it has been transposed into Morse code. The returning signal from the moon was picked up by a receiver in Sweden, and the coded message reconstituted as a musical score in ten sections by different anonymous participants. This collaborative aspect has been characteristic of Paterson's work from the outset: the realization of her pieces has involved tapping into various kinds of network of expertise or enlisting the help, unconditionally given, of individual specialists.

What does it mean to send the 'Moonlight Sonata' to the moon? There is no suggestion of an equivalence between sound and moonlight in Beethoven's original conception of the piece: his Piano Sonata Number 4 in C sharp minor opus 27 number 2 was titled 'Quasi una Fantasia' when it was first published in 1802, and only acquired its nickname thirty years later, after his death, when the poet Heinrich Rellstab said that the music reminded him of a boat passing the wild scenery of Lake Lucerne in the moonlight. Arguably, this re-naming has already begun a process of debasement in which Beethoven's abstract musical values are

collapsed into a conventional landscape evocation. The sonata can still be regarded as the epitome of the Romantic spirit in music, but the long afterlife of the piece has made it a cliché, and its capacity to trigger the experience of authentic feeling is compromised by its popularity, the endless ways in which it has been packaged and commodified. It figures at the top of internet menus of moon-related music, for example, and it is in this spirit that Paterson selected it. She treats it as a found object, a debased cultural artifact to be sent through space to encounter the 'real' moon in a gambit that at first seems to suggest a sceptical attitude to the whole idea of the Romantic sublime.

The mechanical, inexpressive character of the music as it is played on the programmed Disklavier grand piano, produced by no visible human agency, and further impeded by those missing notes, clearly runs counter to any idea of the great flights of the Romantic imagination. By the same token, although the technologies that have made it possible to send the score to the moon and back are quite remarkable, there is nothing spectacular in the way in which they are presented in the installation itself. Paterson is an artist who is genuinely engaged with scientific ideas, but she is wary of making any easy connections between, say, the tradition of the sublime in western art and the hitherto unimaginable new domains revealed in fields such as communications technology or space research.ⁱⁱⁱ For all the daring scope of her projects and the tenacious, problem-solving approach she brings to the realization of each new piece, her work has been invariably characterised by a laconic, understated quality. It makes a continual play on the unexpected proximity of flatness and sublimity, the mechanical and the profound.



There may be something uncanny in the sight of a piano played as if by an invisible performer, and something faintly absurd in the sound of a much-loved melody, so steeped in romantic associations, rendered in such a strangely compromised and inexpressive way, but there is much more at stake here than simply a mockery of the aspirations of high romanticism and the mythologies that have clustered around space travel. Paterson has spoken of her anxiety on exhibiting the piece for the first time that the effect would be merely comical, and her relief when, on the contrary, the modified score seemed to have acquired an additional level of melancholy. There is something mysterious, too, in the possibility that the gaps in the music might represent a sort of sonic negative image of the moon's topography, with each missing note indicating some lunar crater or gulf in which the original signal was lost.

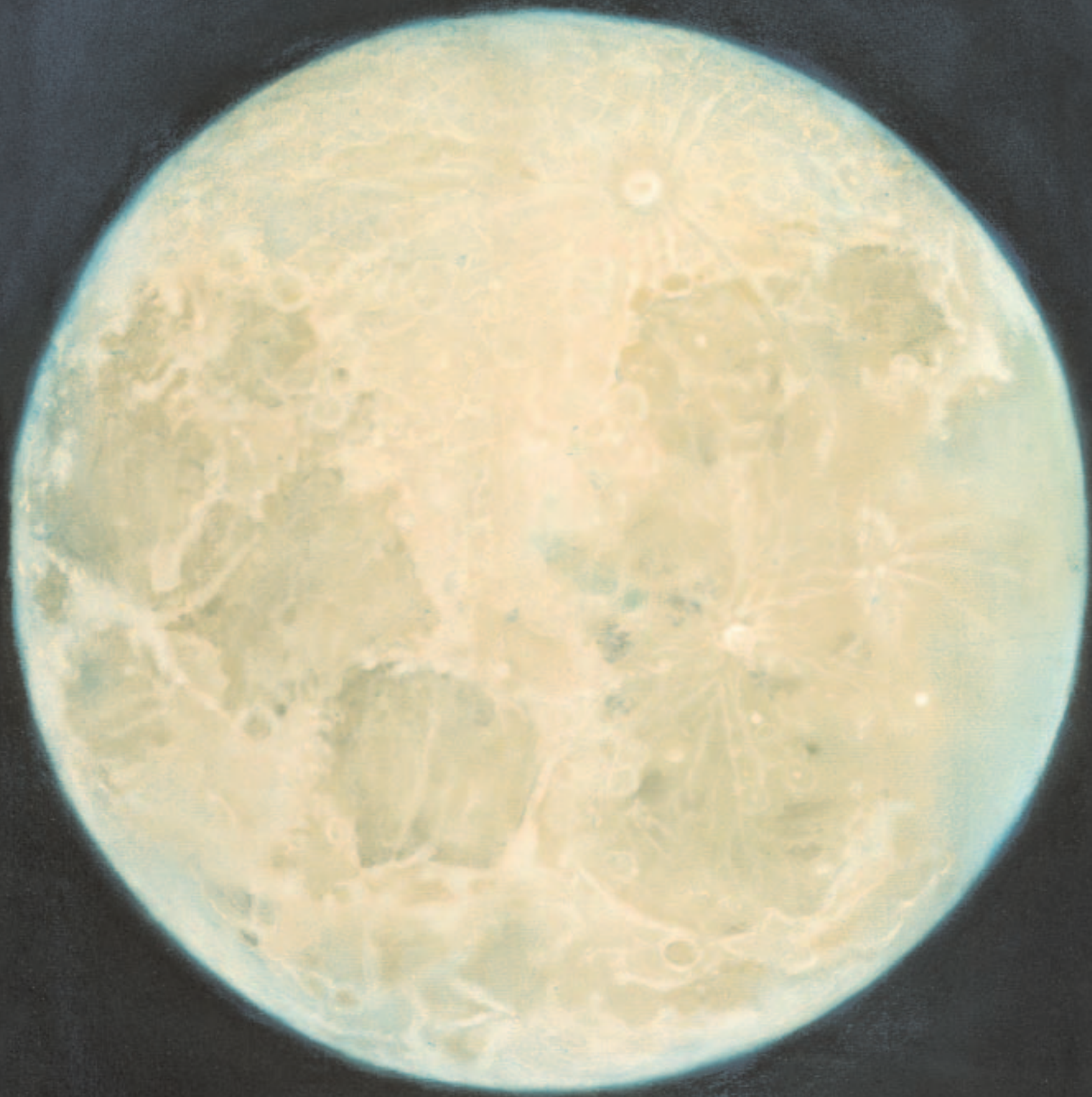
Earth-Moon-Earth
(Moonlight Sonata Reflected from the Surface of the Moon) 2007
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Earth-Moon-Earth (Moonlight Sonata Reflected from the Surface of the Moon) was first shown at Paterson's MFA degree show at the Slade School of Fine Art in 2007, along with *Vatnajökull (the sound of)*, a piece consisting of a telephone number in neon which gave anyone who called it access to a microphone embedded in a melting glacier in Iceland. Both works deal with time, distance and communications technology, and both bring the everyday into contact with a remote world, whether on a global or cosmic scale. Both were sufficiently low-key in their mode of presentation to mislead some people into thinking that here were examples of the kind of art in which concept and proposition is everything, the realization relatively undemanding. But the understated qualities of the work conceal the formidable logistics and complex processes, not to mention significant costs and the endless necessity to raise sponsorship, that lie behind their making.

The two pieces in the Slade show attracted an almost unprecedented level of media attention. Paterson was invited to re-stage them at Modern Art Oxford in April 2008, this time in a prestigious solo exhibition.^{iv} One of the other gallery spaces was devoted to the photographs of Anselm Adams; this meant that visitors had the opportunity to compare directly Paterson's deadpan engagement with the themes of the moon and Icelandic glaciers with the work of one of the acknowledged masters of sublime landscape. The contrast goes even deeper than first appears: Adams had been trained as a pianist and believed that there was an analogy between the photographic negative and the musical score, and his most celebrated photograph is an image of moonrise. The Oxford exhibition of *Earth-Moon-Earth*, therefore, served to underline the piece's oblique and ambiguous relationship to the romantic tradition, making use as it does of second-hand elements – the 'Moonlight Sonata' – in order to sidestep any obvious overtones of grandeur or portentousness.

At Nottingham, *Earth-Moon-Earth* is shown in a dialogue with David Lamelas's seminal film of 1969, *A Study of the Relationship Between Inner and Outer Space*, bringing together two distinct phases of conceptual art, and framing both by an acknowledgement of the fortieth anniversary of the Apollo 11 moon landing. Other artworks, objects and documents have been included in the exhibition to suggest some of the contexts in which the two main works might be understood, ranging from memorabilia relating to the moon landing itself to artists' books and other items indicating that the moon and outer space emerged as a compelling theme for artists in the years around 1969, particularly for those associated with land art. There are also some items relating to earlier British artistic responses to the moon. These open up a way of working back from Paterson's engagement with the idea of the connection between earth and space, and are introduced here to suggest that an oblique and elliptical approach to this great theme has also been characteristic of certain earlier endeavours.

There have been several recent exhibitions that have dealt with aspects of the moon and the western artistic imagination. The most ambitious was *Cosmos: from Romanticism to the Avant-Garde*, held at the Montreal Museum of Fine Arts in 1999; it included sections devoted to geological views, the polar icecaps and imaginary cosmologies as well as the moon itself.^v The lunar section consisted mainly of photographs, some derived from NASA, with Vilja Celmins's graphite studies of moon surfaces and galaxies representing the avant-garde. Two historical exhibitions addressed the theme of moonlight in north European Romantic painting, both built around significant recent acquisitions by their host institutions: *Caspar David Friedrich: Moonwatchers* at the Metropolitan Museum of Art, New York in 2001 and *Moonrise Over Europe: J.C. Dahl and Romantic Landscape* at the Barber Institute of Fine Arts in 2006.^{vi} *The Starry Messenger: Visions of the Universe* at Compton Verney (2006), by contrast, dealt mostly with contemporary art, though it opened with a display of the text from which the exhibition title derived, Galileo's *Sidereus Nuncias*, published in 1610.^{vii}



One artist was common to all these exhibitions: John Russell (1745-1846), and it is entirely appropriate that he also figures in the present exhibition at Nottingham. Russell was best known as a portrait artist, the leading exponent in eighteenth-century London of drawing in pastel, but he was also a notable amateur astronomer who succeeded in making a genuine contribution to knowledge in the field. He devoted forty years to the study of the moon, making a long series of drawings and measurements, all of which fed into the production of a large pastel portrait (or map?) of the gibbous moon, now in the Museum of the History of Science at Oxford, though better known through the smaller version in Birmingham. He also produced a large and spectacular engraving of the full moon, published in 1805; it offered the most complete account of lunar topography to date, and it has been said that 'the highly detailed nature and general accuracy of the image have never been surpassed'.^{viii} The small pastel of the full moon shown here is evidently related to this remarkable project. It is uncompromisingly direct in attempting to make a 'face painting' (to borrow a common eighteenth-century way of referring to portraiture) of a celestial body, surely the ultimate challenge to the goal of artistic objectivity. The radiant disc inevitably contains far less topographical definition than Russell achieved in the engraving, for as Patrick Moore once warned the amateur astronomer, 'full moon ...is the very worst time to start observing'.^{ix} But in this case, and in spite of all the perceptual difficulties, the artist is attempting to render the luminosity of the moon in its most spectacular phase.

Russell was unique among artists in his direct and scientific scrutiny of the moon, though some of the many artists who were interested in the *effect* of moonlight were serious about getting the astronomical conditions in their scenes right. Most preferred to use moonlight to enhance already picturesque or poignant subjects, such as rocky coasts, harbours, and above all, ruins. (Paterson would herself make moonlight the subject of a later work in her *Lightbulb to Simulate Moonlight*). Turner, in particular, took on the

great moonlight subjects - the Colosseum and the Venetian Lagoon - perhaps in deliberate rivalry to the word pictures by Romantic poets such as Byron that were already widely celebrated. But he also took an interest in the theories and speculations of scientists: he owned a copy of Mary Somerville's *Mechanism of the Heavens*, for example, and knew the author personally.

Turner made Galileo's villa at Arcetri the subject of one of the vignettes he produced to illustrate Samuel Roger's *Italy* (1830), and it has been suggested that a diagram of the solar system he included in a preliminary study for the design, propped up against the terrace wall in front of the villa, might have derived from a conversation with Somerville.^x In the final version chosen for engraving, there is a grouping of objects emblematic of astronomy in the foreground, arranged as if in an open-air study: telescope, globe and open book, though the diagram has gone.^{xi} Galileo himself is not in the picture, but then Turner always was the master of the absent hero, the empty chair, and in place of the astronomer we see his house, his vines, his accoutrements. The whole is flooded in moonlight, which is of course both atmospheric scene-setting and the implied object of Galileo's enquiry (he was the first to attempt to make drawings of the moon). The overall tone is almost impossibly romantic, as if in a tourist's dream. We are back to the world of Heinrich Rellstab and his image of a boat crossing Lake Lucerne in the moonlight now so indelibly associated with Beethoven's sonata, an image dating to almost the same time as Turner was creating. (Turner, as it happened, would make several paintings of moonlight on Lake Lucerne, a place Beethoven had never visited). He was quite comfortable with this kind of high-keyed, extravagant idiom, and he knew perfectly well that the Galileo design was destined for a drawing room table. But this frankly commercial quality does not preclude an astute approach to what might be called the scientific sublime. The seductive surface and layering of allusions in *Galileo's Villa* are combined with a shrewd awareness that some forms of knowledge can only be expressed obliquely.



Russell's close account of the moon's visible surface was not as well known as it deserved to be, since the print was not widely disseminated, but there was another notable attempt to bring the moon to earth that proved more influential. James Nasmyth and James Carpenter's *The Moon: Considered as a Planet, a World and a Satellite*, first published in 1874, is as striking for its oblique, artistic qualities as for its scientific ambition. Nasmyth, the son of the landscape painter Alexander Nasmyth, was an engineer by profession, and is best known for his invention of the steam hammer and for innovations in the design of the mounting of the astronomical telescope. He had studied the moon for more than thirty years, almost as long as Russell, and made a series of large drawings of its surface in black and white chalk.^{xii} He made them the basis for twenty-four plaster-of-Paris models, and it was these, photographed in oblique light, that were used as the illustrations for his book. The plaster models were a necessary intermediate stage because it was not technically possible at this date to produce photographs through a telescope that would have sufficiently high definition to serve the didactic purpose Nasmyth and Carpenter had in mind, a demonstration of the volcanic origin of lunar craters. The resulting plates, it has been said, 'make the book almost as much a work of art as a piece of scientific literature'.^{xiii} These simulacra are convincing enough to have shaped subsequent perceptions of the moon's topography, although they exaggerated relief and rendered mountain ranges as too high and jagged. Mocking one world up on another, this is a project that tends to blur distinctions between material and distant domains.

Images from top:

Galileo's Villa, Arcetri [Moonlight]
Chromolithograph after J.M.W. Turner, 1884

The Lunar Appenines, Archimedes, etc
from 'The Moon: Considered as a Planet, a World, and a Satellite'
by James Naysmyth and James Carpenter.
London: John Murray, Albermarle Street, 1885.

To SWL
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Katie Paterson

Confirming ~~QSO~~ UR REPT

No

DAY	MONTH	YEAR	JST/UTC	RST	BAND	MODE
23	Nov	2007	0947	/	144M	EME CW

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Rig TX FT847 + FT43R Ant M2 17el x 2x4

Rmks 4'33" WRD/CLO with JH2C02 (Yasu)

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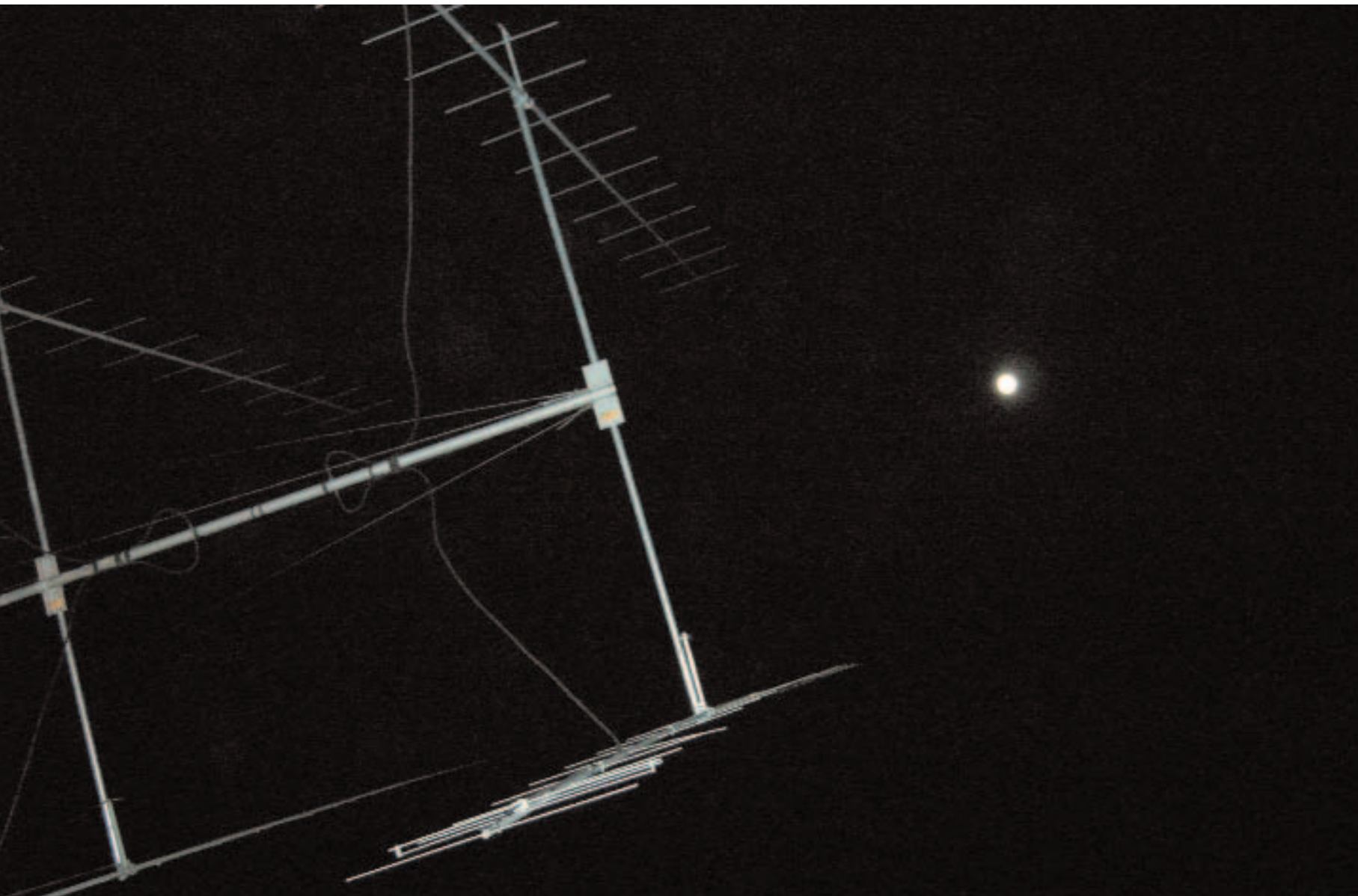
OP. JH0WJF Noriyuki Yaguchi
QTH. 2862 Ikeda Kita-Azumi 399-8603 Nagano JAPAN




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POST CARD



Earth-Moon-Earth (4'33'') 2007
E.M.E. transmitter/receiver
Courtesy of the artist and Albion, London
Photo: © 2007 Katie Paterson

From Nasmyth and Carpenter's 'The Moon Considered as a Planet, a World, and a Satellite' it is a logical step back to Paterson, given the role of the moon in her work as a passive communications satellite from which a radio signal can be reflected. She has gone on to make one further piece utilizing the same 'moonbounce' technology, but with some subtle changes of implication due partly to the location from which the transmission was made, and partly to the nature of the piece transmitted. Following the exhibition of *Earth-Moon-Earth* at the Slade in the summer of 2007, Paterson won a scholarship to travel to Japan where she was able to experience the custom of *tsukimi* or 'moon watching', traditionally associated with the autumn full moon. This first-hand encounter with the long-established cult of the moon in Japanese culture, with its moon-viewing castle towers and gardens with their raked gravel specially designed to be experienced by moonlight, gave a new dimension to her existing concerns with long-distance radio communication and networks of coded signals. Nevertheless, the main purpose of the trip was to send a new message to the moon from a transmitter at Nagano-Ken. The result was *Earth-Moon-Earth (4'33")*, alluding to John Cage's composition of four minutes and thirty-three seconds of silence.

The shift from Beethoven's *Moonlight Sonata* to Cage's 4'33" is richly significant: from romanticism to modernism, and from a found musical object to an avant-garde work structured by an interval of time but entirely open to chance. It was a symbolically appropriate gesture to make a pilgrimage to Japan in order to transmit a canonical work by an artist deeply influenced by the Japanese culture of Zen Buddhism, and also a way of acknowledging Cage's influence on so many aspects of contemporary art practice, ranging across minimalism and conceptualism to time-based and performative modes of working. It might be inferred from this shift in musical 'message' that the scepticism that had inflected the choice of sending a romantic classic into space and back is no longer an issue. But it must also be said that the Japanese interlude has helped to make clear a latent romanticism that was always an element in Paterson's practice, already implied, perhaps, by her relief when the *Moonlight Sonata* came back from the moon sounding sadder than ever.

i Katie Paterson, *Earth-Moon-Earth (Moonlight Sonata Reflected from the Surface of the Moon)*, Oxford, 2008. The publication comprises the transcript of the Morse code as sent from earth and as received from the moon, and the score as it was originally sent and received. It also includes a CD playing the sounds of the Morse code as it returned to earth.

ii Sally O'Reilly, 'Introducing Katie Paterson', in *Modern Painters*, March 2009, pp.34-5. Other information derives from a conversation with the artist in London on 26th May 2009.

iii For a different view on the continuity of Romantic aesthetics and the findings of contemporary astronomy see Elizabeth Kessler's contribution to David de Vorkin and others, *The Hubble Space Telescope: New Views of the Universe*, National Geographic Books, 2004.

iv *Encounters: Katie Paterson*, Modern Art Oxford, 2 April-1 June, 2008. The other concurrent exhibitions were devoted to Anselm Adams and Mircea Cantor.

v Jean Clair, ed., *Cosmos: From Romanticism to Avant Garde*, Montreal, 1999.

vi Sabine Rewald, *Caspar David Friedrich: Moonwatchers*, New York, 2001; Paul Spencer-Lonhurst, *Moonrise Over Europe: J.C. Dahl and Romantic Landscape*, London, 2006.

vii *The Starry Messenger: Visions of the Universe*, Compton Verney, 2006.

viii See also *Like the Face of the Moon*, an exhibition curated by Brendan Prenderville for the South Bank Centre in 1991 dealing with objectivity in art.

ix Ewen A. Whitaker, *Mapping and Naming the Moon: A History of Lunar Cartography and Nomenclature*, Cambridge, 1999, p.98. See also W.F. Ryan, 'John Russell and Early Lunar Mapping', in *Smithsonian Journal of History*, Vol. 1, 1966, pp.27-48.

ix Patrick Moore, *Guide to the Moon*, Guildford and London, 1976, p.218.

x John Gage, *J.M.W. Turner: 'A Wonderful Range of Mind'*, New Haven and London, 1987, pp.222-4. The preliminary sketch is reproduced in James Hamilton, *Turner and the Scientists*, London, 1998, p.69. See also Jan Piggott, *Turner's Vignettes*, London, 1993.

xi The version included in the exhibition is a chromolithograph by M.H. Long published in a portfolio of Turner's vignette drawings by George Rowney, 1884.

xii Nasmyth received a medal from the Great Exhibition of 1851 for his series of drawings of the lunar surface.

xiii William P. Sheehan and Thomas A. Dobbins, *Epic Moon: A History of Lunar Exploration in the Age of the Telescope*, Richmond, Virginia, 1999, p.146. See also the online exhibition *The Face of the Moon: Galileo to Apollo*, Linda Hall Library. The entry (no.20) on Nasmyth's book gives details of the exacting Woodburytype process used to reproduce the photographs, in which a lead relief mould was made of each image. www.lindahall.org.

Other illustrations taken from 'The Moon: Considered as a Planet, a World, and a Satellite'.

Front cover: *Theophilus, Cyrillus and Catahrina* (detail)

Page X: *Group of Lunar Mountains. Ideal Lunar Landscape.*

Page X: *Aspect of an eclipse of the Sun by the Earth as it would appear seen from the Moon*

Back cover: *The Lunar Appenines, Archimedes* (detail)

This catalogue has been published in conjunction with the exhibition

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EARTH - MOON - EARTH

20 June – 9 August 2009

Curated by Joy Sleeman of the Slade School of Fine Art, University College London and Nicholas Alfrey of the Department of Art History at the University of Nottingham, and linked to the activities of an AHRC-funded Research Network on *Land Art and the Culture of Landscape, 1967-77*.

Earth-Moon-Earth (Moonlight Sonata Reflected from the Moon) 2007 was presented at the Djanogly Art Gallery courtesy of the artist Katie Paterson and Albion, London. *A Study of the Relationships Between Inner and Outer Space* 1969 David Lamelas, and *One* 1971-2003 Ian Breakwell & Mike Leggett, were presented courtesy of the artists and LUX, London.

Organised by Neil Walker, Visual Arts Officer, Djanogly Art Gallery

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Inside cover illustrations:

Earth-Moon-Earth (Moonlight Sonata Reflected from the Surface of the Moon) 2007
Morse code sent to the moon and Morse code received from the moon
Katie Paterson