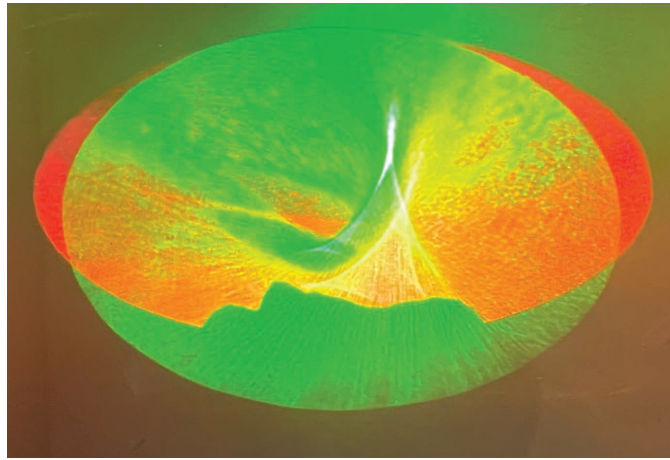


Analogue Virtual Worlds

DISPLAY HOLOGRAPHY AT THE DAWN OF CYBERSPACE





Analogue Virtual Worlds

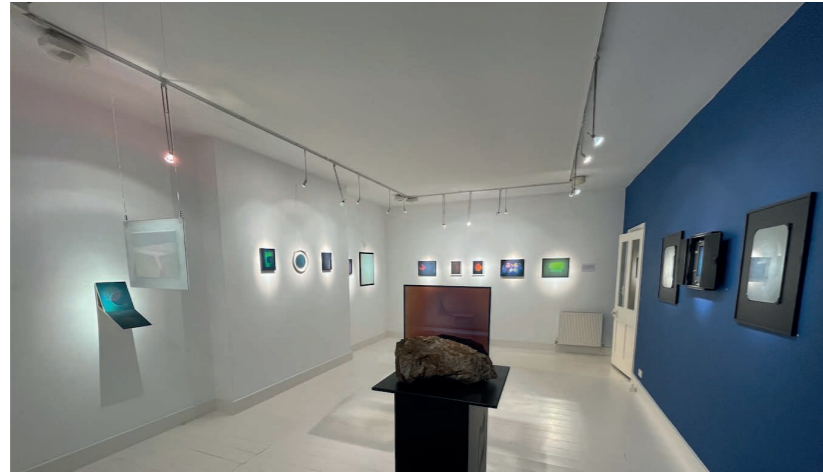
DISPLAY HOLOGRAPHY AT THE DAWN OF CYBERSPACE

Selected from the
JONATHAN ROSS HOLOGRAM COLLECTION

by
Sydney Koke

An exhibition at Gallery 286
April - June 2024

286 EARL'S COURT ROAD LONDON SW5 9AS
www.gallery286.com
www.jrholocollection.com



HOLOGRAMS ON DISPLAY, IN ORDER OF APPEARANCE

PATRICK BOYD Charles Bridge	ANDREW PEPPER Square Eclipse
MARGARET BENYON Wrapped Flowers	MARTIN WALL Large Circles
CAROLINE PALMER Sri Yantra Moiré Squares	JEFFREY ROBB Landscape 3
HARRIET CASDIN-SILVER Grater	DAN SCHWEITZER The Sleeper
JIM MCINTYRE Science Moths and Flies	SUSAN COWLES The Seedmaker
PEARL JOHN Kirsti	MARTIN RICHARDSON Young Woman in a Dreamlike State
ANDREW PEPPER Six Lines Folded	SUSAN COWLES The Juggler
JONATHAN MITTON Orgone Accelerator	



INTRODUCTION

In this second exhibition curated for Gallery 286, Sydney Koke has made another great selection of holograms from my collection, dating from between 1988 – 1992, which was the era during which I stopped working in the commercial holography sector and began to pursue my love of the medium as used by creative artists. At that time the Royal College of Art in London had a department dedicated to holography, equipped with the best lasers and optics as well as a reliable source of material, manufactured by Agfa-Gevaert. It was a golden era to be a holographer and most of the artists in this exhibition were at the RCA at some point and benefited from the experience of some highly skilled technicians working there. Ten years before, there was very little creative holography being done in the UK but suddenly there was lots and I was in the lucky position to be able to acquire some of it.

Seeing these holograms on the walls of the gallery again gives me a lot of pleasure and I hope that visitors who are seeing them for the first time share my delight.

Jonathan Ross, April 2024



Analogue Virtual Worlds

Display Holography at the Dawn of Cyberspace

The late 80s and early 90s were an exciting period for display holography, which was employed by numerous artists at the Royal College of Art in London. Holography had been established as a high-fidelity imaging technique, and artists began to look beyond this application. They created abstract compositions with unique temporal and spatial qualities, explored the psychological and spiritual properties of pattern and spatial position, developed new approaches to portraiture, and uncovered the inherent limitations or “glitches” associated with the medium. Their works often featured intense colours, bold and sometimes disorienting compositions, and eerie subject matter, and these themes have since become strongly associated with the medium as a whole. Accordingly, the holograms created during this era were influential for the work that followed, with important implications for the acceptance of holography by contemporary art critics.

As a guest curator in the Jonathan Ross collection, I wanted to examine the roots of some of the characteristic aesthetic features of holography, and collect some of the most iconic works and artists active during this era. During the selection of pieces that fit this theme, it became clear that many of them had been created in the same year – 1991 – the year that the internet was first made available to the public. Accordingly, this show considers how the aesthetics of holograms from the late 80s and early 90s represent the artistic conception of virtual space just before humanity entered cyberspace. Some of the included works may reflect an increasing collective awareness of the new virtual world that was being constructed, while others may have arisen from separate concepts, and thus provide poignant examples of virtual artistic conceptions at the end of the pre-internet era. Certainly the works in this show (along with those by peers in the holography community working at this time) influenced digital artistic aesthetics, as those working

in new media would have been exposed to holography as a cutting edge technology with many prospective applications.

The cyberpunk movement, largely thought to have been instigated by the publication of *Neuromancer* (William Gibson) in 1982, explores the dystopian possibilities of future high-tech worlds, and the existence of a virtual “cyberspace” that can be visited by humans. The eerie perceptual qualities unique to analogue holograms make them the perfect medium to explore these ideas. These include colour (the unique reds, greens, and blues produced via pure laser light are not found in nature), movement (movement in holograms can be “replayed” and reversed by the viewer), and space (holograms can be used to construct new spatial dimensions with unfamiliar laws of physics).

In “Glitch Feminism”, Legacy Russell speaks about how internet artists have constructed their own identities and expressions in the unfolding realm of cyberspace. Holography offered artists a way to explore an idea of virtual space before the internet was publicly available, and likely contributed to subsequent digital art aesthetics. Yet, few publications have linked holography to other movements in contemporary art. The internet has changed human society in ways that now demand careful reflection, and close examination of the history of holography offers an excellent opportunity to improve our understanding of the merging of art and technology at this critical moment. These works invite us to reflect on high-tech life just before the cultural dominance of the internet, and on our own experiences as we increasingly construct our lives and identities within a cyberspace of our own creation, a world to which we are becoming inextricably connected.

Sydney Koke, 2024



PATRICK BOYD
Born 1960

Patrick Boyd studied holography at the Royal College of Art in London, along with several other artists in this exhibition and went on to have residencies in the USA, Japan and Germany. He has made holograms using both pulse lasers for portraiture and the holographic stereogram technique, which uses a specially recorded photographic sequence to generate an animated 3D hologram.

'Charles Bridge' was recorded in Prague in 1991 on a trip to visit Steve Weinstock, an American holographer who was living there at the time. The hologram features Weinstock and Boyd's wife Susan along with some passing strangers.

The process involves photographing the scene with a hand held camera with a motor drive, while walking crablike from left to right, a motion that the viewer replays physically to see the hologram in action. While Patrick was filming, Susan and Steve walked backwards, and, as Boyd pointed out, "Most stereograms have a start and a finish but this one works both ways."

Boyd has continued to use the stereogram technique and last exhibited a body of holographic work at Gallery 286 in 2017. He currently works with lenticular photography, which he exhibited at 286 in 2020, and is engaged in an ongoing series of portraits of Hibakusha – the survivors of Hiroshima and Nagasaki- in collaboration with @8000voices and ICAN UK.



'Charles Bridge' 1991
2-colour holographic stereogram, silver halide on glass
32x43cm



MARGARET BENYON
(1940 – 2016)

Inevitably described as a 'pioneer', Margaret Benyon is acknowledged as the first artist to make her own holograms, a medium she adopted after earlier explorations into making optical art as a painter. Following collaborations with scientists in university facilities and research labs during a period in the late '60s when holography was unknown to the wider world, and some years living in Australia, Benyon eventually established a studio at her home in Dorset, where she was able to make works for exhibition, but continued to use facilities with more sophisticated equipment for mastering, such as the Musée Holographique de Paris and the Royal College of Art in London.

'Wrapped Flowers', 1991 was recorded at the RCA and forms part of a series of holograms which were exhibited under the title of 'Cornucopia', first at the Russell-Cotes Art Gallery & Museum in Bournemouth in 1996 and, subsequently, at Gallery 286 in 2001. Benyon explained that "The series explores bringing together what may be seen as feminine and masculine characteristics. Technology, which is often stereotyped as hard and masculine, is used to create images that relate to female concerns and perceptions of the world". This particular image also explores the themes of 'concealing and revealing' which are central to Benyon's work. The flowers and their wrapping, recorded as separate exposures, co-exist in the finished work and the viewer reveals or conceals the flowers by changing their viewpoint.



'Wrapped Flowers' 1991
2-colour reflection hologram, silver halide on glass
30x40cm



CAROLINE PALMER
Born 1957

"I first started making holograms in 1984 and was interested in the application of holography in museums. I set up a holographic studio trading as 3DI and produced an Ancient Art Series.

When I first learnt about holograms I was fascinated by their intrinsic nature, in particular the way in which they embodied a holistic paradigm. I was intrigued by interference patterns and how they enabled the hologram to capture a form without its substance.

Moiré Squares was an experiment with the moiré effect which is created by overlapping two surfaces to produce an interference pattern. I became interested in geometry while I was a student at the Royal College of Art from 1987-1989. This interest developed into a much broader investigation into traditional and sacred Art.

Sri Yantra: a study was made when I was looking at the Yantra diagrams in the Buddhist and Hindu traditions. I was drawn to the Sri Yantra as a symbol of wholeness in the universe, as well as the way it was represented in both two and three dimensions. The Sri Yantra is formed by the interpenetration of nine triangles. The four which point upwards represent the male principle, Shiva and the five pointing downwards, the female principle Sakti. The diagram symbolises non duality and the unity of male of female energy in the cosmos.

The Sri Yantra diagram is used as a tool to concentrate the mind during meditation and the symbols aid visualisation of the gods and goddesses. When the Sri Yantra is represented in three dimensions, it becomes a symbol of the holy mountain, Mount Meru. This symbol of a holy cosmic mountain often underlies the structure of many far eastern temples.

Through my practical experience of working with laser light and interest in metaphysics, I later went on to research the importance of light in sacred art."



'Moiré Squares' 1989
Reflection hologram on glass
10"x8"



'Sri Yantra' 1989
Reflection hologram on glass
10"x8"



HARRIET CASDIN-SILVER
(1925-2008)

Made at Larry Lieberman's Holographic Images Studio in Miami, 'Grater' follows in the tradition of earlier works by Casdin-Silver in using an everyday household object as a subject for a hologram but subverting one's expectations by employing the pseudoscopic image which turns the object inside out, so that what was at the front is at the back and vice versa.

'Equivocal Forks', 1977, which is perhaps her most famous hologram, uses a laser lit transmission hologram inverted in a similar way to show a bunch of tableware which, while it is arranged with the tines pointing away from the viewer, equivocates by simultaneously appearing to be projecting into their space and literally hanging in thin air as we would hope a hologram to do.

Equivocal Forks was made in collaboration with Stephen Benton at Polaroid and in the '80s Casdin-Silver continued her practice of working with scientists, at a facility in the Soviet Union, where amongst the holograms she made was one called 'Iron', 1989, in which the handle of an old fashioned smoothing iron appeared to project out from the hologram towards the viewer.

With 'Grater', if one were not aware of the title, the hologram might appear to be an abstract composition of light. It is an extremely interactive work, which rewards

the viewer who inspects it from all angles with a serotonin boosting rush and the sensation that one could dive right into its luminous embrace.

In her later career, Casdin-Silver worked intensively with the human body, creating hermaphroditic figures by transposing sections of men and women in multiple plate constructions, and documenting the ageing process unflinchingly in her nude self portrait '70+1+2'.

Visitors to the Real/Virtual exhibition at 286 will have seen her 'Venus of Willendorf '91', in which she recreated a neolithic fertility goddess as a plus-size icon for the '90s, in a miniature holographic stereogram the size of a small daguerrotype. Her next project was to be enormous portrait heads of elderly men and women, making the most of the one remaining facility in the world for large format holograms. Throughout her career she pushed the boundaries of her chosen medium to the limits.

A curator at the DeCordova Museum and Sculpture Park which held a major retrospective of her work in 1999 described Casdin-Silver as being 'among the most important American artists of the second half of the twentieth century'. If that is not apparent from this one small example, were you able to see her complete oeuvre you might be persuaded.



'Grater' 1991
Silver halide on glass
30x40cm



JIM MCINTYRE
Born 1962

"This was one of my earlier holograms produced at the Royal College of Art Holography Unit in about 1989/1990. Mastered by ruby pulse and transferred by a Krypton laser, it's a white light transmission hologram made with a combination of drawings and real objects. A lot of my work from that time was inspired by old encyclopedias and children's books, particularly ones presenting history, prehistory, the natural world and science. The title comes from an Open University course which presented that week's programme as being about moths and flies, but I misread it as science, moths, and flies, and thought of a mysterious package of the three topics as a larger entity sounding a bit more magical and less mundane than a study of small winged creatures (apologies to the entomologists of the world, to whom, bugs are all).

I wanted the "real world" glass science paraphernalia (which were all donated from a lab) to glow with light and energy while the flat, 2D insect world was literally "Drawn" to the centre, and moved as the viewer moved to study the hologram, like moths to a flame.

It's been nearly thirty five years since I made the hologram, and time, like moths and flies, flies."

'Science Moths and Flies' 1990
Mirror-backed multi-channel rainbow hologram
60x50cm

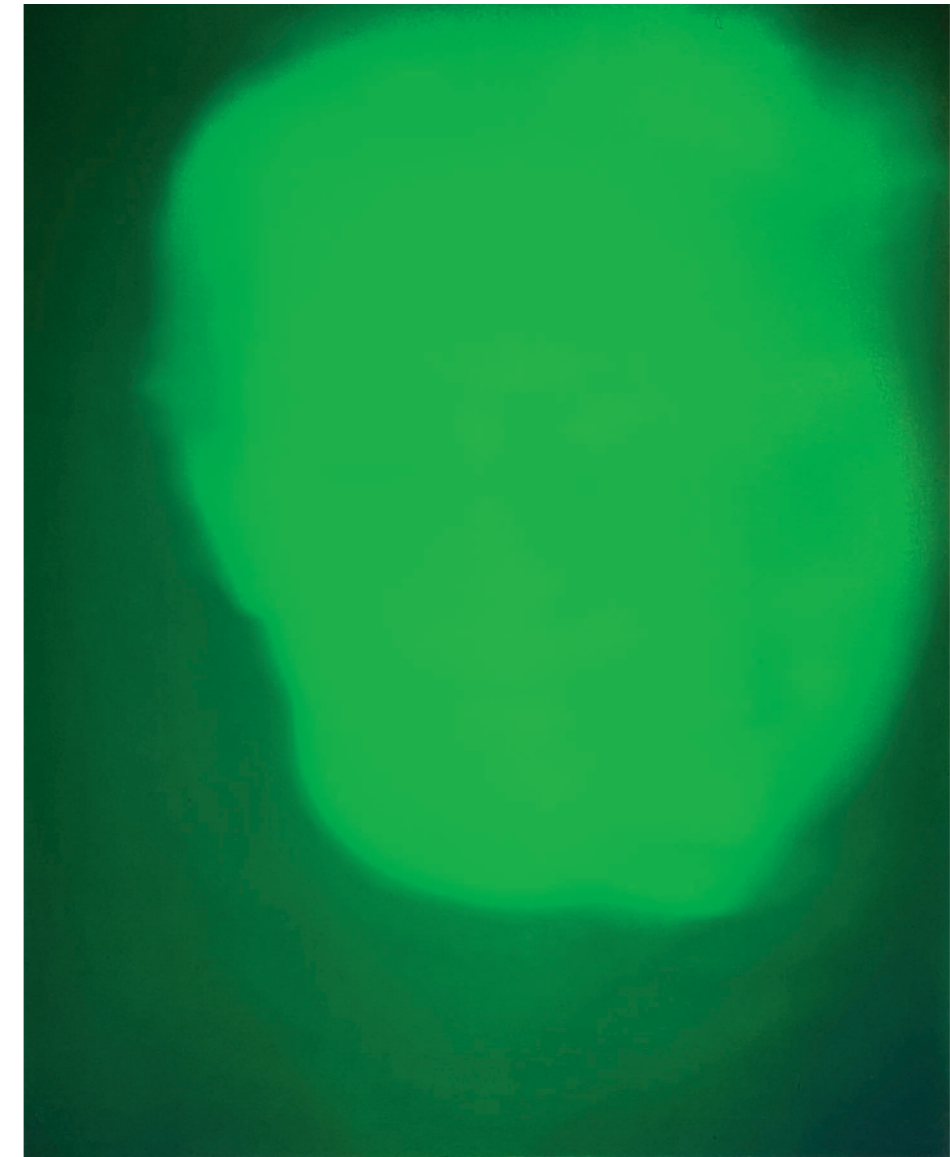




PEARL JOHN
Born 1968

Kirsti is a pulsed portrait reflection hologram of a woman with closed eyes sat behind a curtain of rippled glass. There is a serenity and warmth to the portrait, but the woman's face appears elusive and shimmers in response to any slight movement by the viewer. This movement reflects the complex and intangible nature of communication between the sitter and the artist - and the artwork and the viewer.

Pearl John Ph.D is an artist who has been working with holography for over 30 years. She has an on-going interest in humanising technology and exploring relationships between the hologram and the viewer. She has studio at the University of Southampton's School of Physics and Astronomy where she works as a Photonics outreach specialist - teaching holography and making her artwork.



'Kirsti'
Reflection hologram, silver halide on glass
10"x8"



Several variations of tilted and folded lines were produced around the late 80's and early 90's, leading to a number of 'drawing' works using simple shadows falling onto, or around, flat surfaces within the holographic volume. Many of the pieces display the holographic images inside out and back to front (pseudoscopically).

With object-based images, this causes considerable optical confusion, but in these examples the flat dark lines, and their shadows, act as 'drawn' marks, apparently devoid of this inverted confusion. A simple flat line does not immediately have a front or a back (which dimensional objects do). Similarly, the shadows of the lines become visible 'off' the work's surface and are no longer defined by the picture plane. They become drawings in space.

Square Eclipse is one of Pepper's early pieces using shadows cast by an object or drawing.

Here, a rectangle is eclipsed by its own shadow which protrudes from the holographic plate and is visible in the space between the viewer and the framed surface.

We have learnt to take the picture plane very much for granted. It is the surface on which images and marks are located and, in many examples, graphic perspective is used to generate the illusion of a 'window' through which we view the depicted scene.

In *Square Eclipse*, moving in front of the piece causes the protruding rectangle to appear to 'shift' in space, allowing the viewer to take visual control and look behind the shadow to the object which caused it.

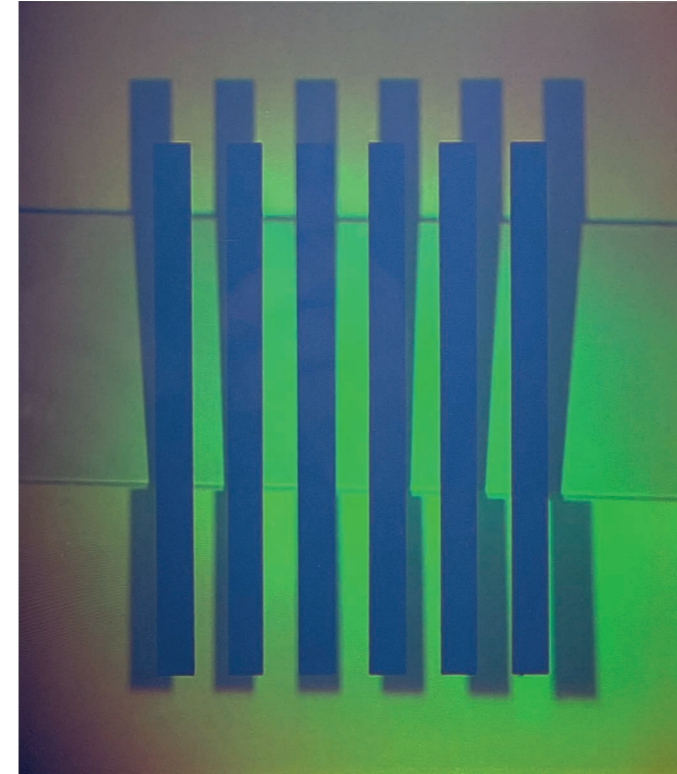
The underlying question of whether a shadow can become an object remains.

Both of these pieces were produced in a holography studio specially built by Pepper in the Department of Fine Art at the University of Reading, UK, as part of his PhD research into Fine Art Holography.

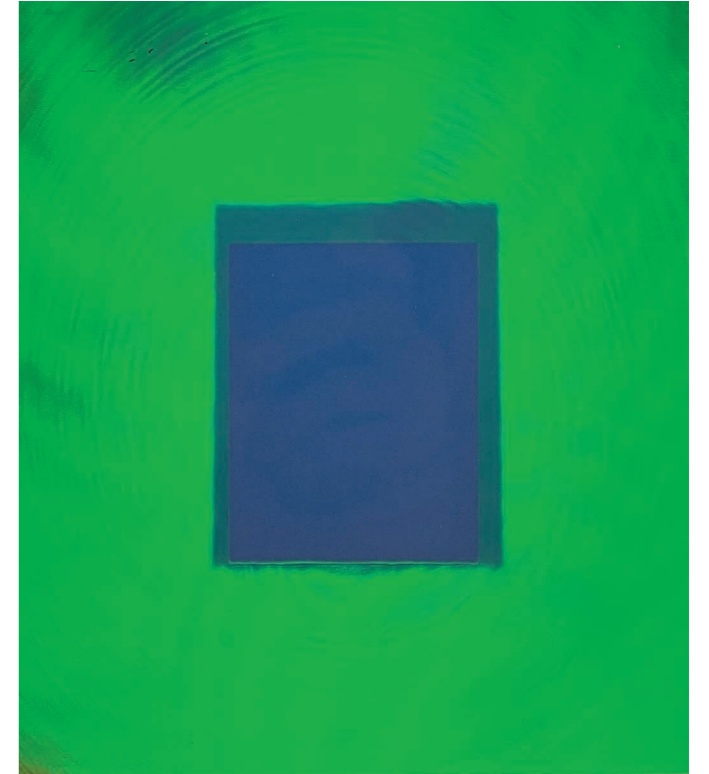
In addition to his work in art and education, Pepper created and has maintained the Jonathan Ross Hologram Collection and Gallery 286 websites. He had a solo show, 'Deep Shadows' at Gallery 286 in 2001 and was Guest Curator of 'The Unsupported Mark' exhibition of holograms at 286 in 2018.

ANDREW PEPPER

Born 1955



'Six Lines Folded' 1989
Reflection hologram on glass
10"x8"



'Square Eclipse' 1989
Reflection hologram on glass
10"x8"



JONATHAN MITTON
Born 1964

"It was in 1989, when I was a student at Liverpool John Moores University, that I started exploring the intriguing world of holograms. While my primary focus at the time was on sculpture, my tutor ran the university's holography department and encouraged me to experiment with this cutting-edge technology.

As part of this exploration, I set up a "colour frequency" experiment using slide projectors, exposing students and tutors to a range of colour frequencies. The goal was to measure the psychological impact of these different frequencies on the viewer. The positive feedback I received made me realise that harnessing holographic technology could allow me to create captivating light sculptures with more precisely tuned colour frequencies. And so, my holographic journey began.

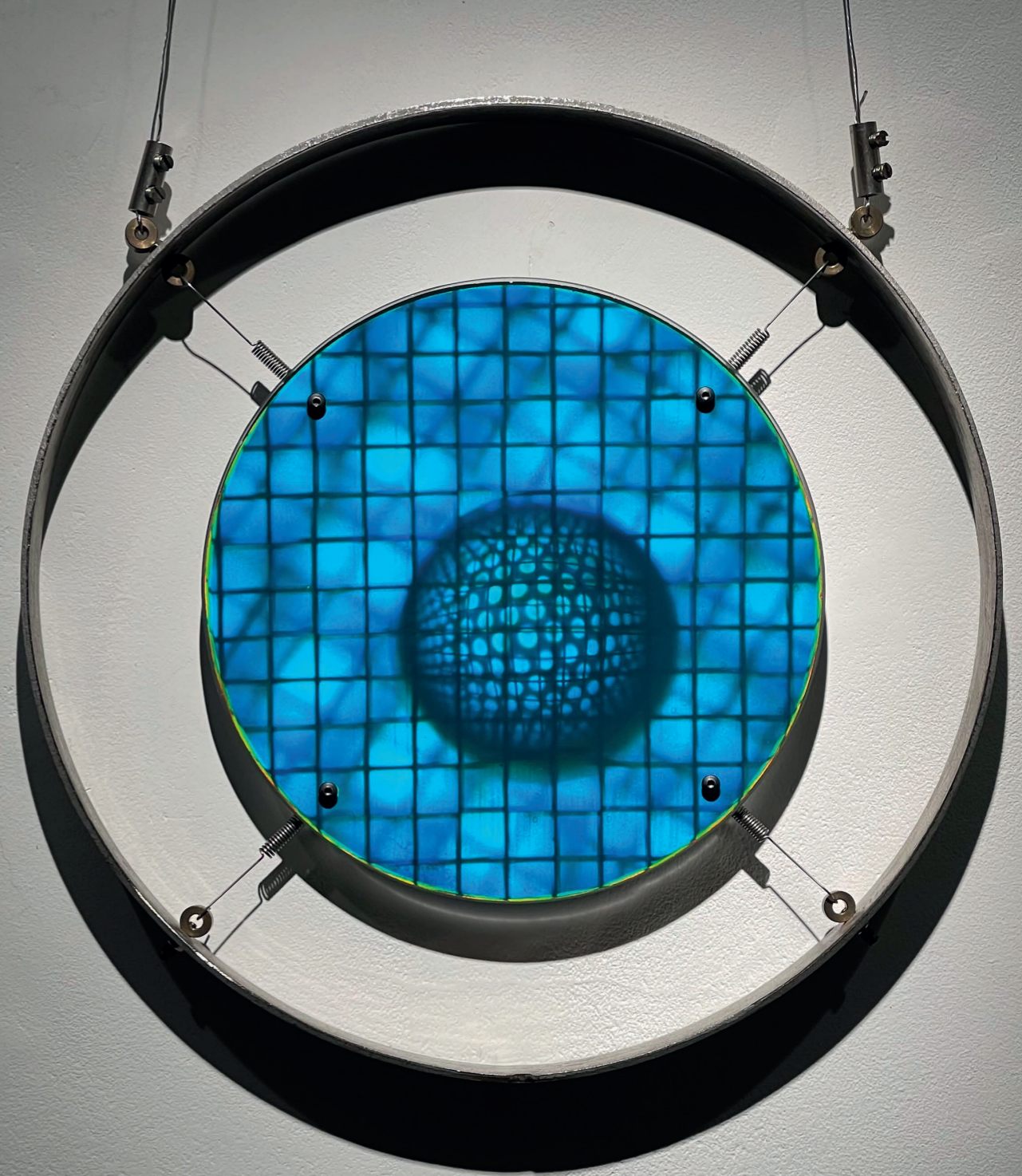
The facilities at John Moores were limited, but I was able to create a few holograms using crystals, glass pyramids and crystal balls as my subject matter. In 1990, I was offered a place at the prestigious Royal College of Art, where I had access to more advanced resources to continue my research. It was there that I produced a series of holograms I call "Orgone Accelerators."

The concept of "orgone energy" was developed by the psychoanalyst and scientist Wilhelm Reich, who believed it to be a universal life force present in all living things. Reich believed that orgone energy could be manipulated and harnessed for various purposes, including enhancing physical and mental well-being. I was entranced by his ideas.

I hypothesized that holograms could offer a purer form of colour transmission, and so I developed Orgone Accelerators -- frequency-controlled light transmitters designed to project specific colour frequencies onto the viewer's face, with closer proximity being most effective. Driven by my passion to create holographic "healing machines," I made a range of Orgone Accelerators tuned from deep red to the violet-blue one showcased here."

Following his time at the RCA, Mitton was a founder member of the Liverpool based arts collective (F) UK and worked extensively with lenticular photography, developing his own lenticular image capture system called the MittonLR1. He is currently engaged in researching the application of AI to his art, see jacksmind.com

*'Orgone Accelerator', 1991
Reflection hologram, silver halide
on glass
8" diameter*





MARTIN WALL
(1948-2010)

People come to holography via all sorts of routes, but Martin Wall's was one of the least expected.

Having been a childhood friend of John Brown (an early promoter of holography in the UK and CEO of Light Impressions Europe, a manufacturer of embossed holograms), Wall, whose main career was in Financial Consultancy, started doing the accounts for Light Impressions and another holography business, Spatial Imaging.

When the Royal College of Art in London started courses in holography in the late 1980s, Wall took the opportunity to explore his creative side and ended up gaining a MA from the RCA. 'Large Circles' was one of his most successful works.

He explained the work as follows:

This piece is made up of two one-step reflection shadowgrams. The 'camera' which was used for the holograms, was devised by Mike Medora and I learnt of it at a talk that he gave at the Royal Photographic Society in April 1991.

I started experimenting with this camera at the end of my first year at the Royal Collage of Art and built up a controllable range of colours using progressive amounts of triethanolamine, [a chemical] which swells the emulsion on the holographic plates. At the same time I used basic forms, the circle, the square and the triangle as subjects for holograms.

There are three pieces that relate to the same theme as this one. The first, a four by five inch hologram, shows the space of one circle echoed by another in the pseudoscopic (a negative space). In the following two larger pieces (of which this is one) one holographic plate additionally echoes the other.

The colours in this hologram are intended to be strident and seek to balance some perceptions of the circle, such as those of Kandinsky, who viewed it as "the cosmic, absorbing, feminine soft form".

The space occupied by the circles is paradoxical as the depths of the circles appear to rise out of the plates and there is no definable place for them to meet.

It is hoped that there is a sense of mystery attached to the piece, not simply just as an optical illusion, but in a way that one can look at shapes and colours – react to them and not immediately wish to find a scientific explanation to the process of their emanation.



'Large Circles' 1992
2 reflection holograms on glass
each 10"x8"



JEFFREY ROBB
Born 1965

In 1993, while still a student at the Royal College of Art, Jeffrey Robb had a solo exhibition at Smith's Gallery in Covent Garden, called 'Landscapes and Metamorphoses', organised by Jonathan Ross, who explained in his press release for the show that "During the last few years Jeff has explored a wide variety of holographic techniques through which the theme of landscape has persistently recurred. Painting, collage and photography are employed or referred to in his working methods, but the resulting images have qualities that are uniquely holographic. Intense, luminous creations that ripple with spectral colour; subtle colour mixing to render pastels that possess a vibrancy impossible to achieve with pigments".

Chris Titterington, then a curator at the V&A Museum, wrote; "Amongst the best holograms I have seen...are those by the young British artist Jeffrey Robb... His holograms of abstract landscapes are to my eye perfectly judged aesthetic objects. They display beautiful colour composition (which nevertheless looks effortless) with excellent management of spatial effects."

Robb now works primarily with lenticular photography and sculpture, which he exhibits internationally.



'Landscape 3' 1992
Multiple exposure white light transmission hologram on film
32 x 43 cm with etched glass surround



DAN SCHWEITZER
(1946 -2001)

This hologram was acquired after the artist's death, but the placing of the work in a rock was suggested by a slide sent to Jonathan Ross in the 90s and reconstructed for the touring exhibition 'Holography, the first 60 years' in 2008.

Founder of New York Holographic Laboratories in 1977, with fellow holographer Sam Moree, Dan Schweitzer later went on to be co-director, with Ana Maria Nicholson, of the Center for the Holographic Arts from 1998 until his death. At both establishments he was responsible for introducing scores of initiates into the mysteries of holography and inspiring many others with his personal work. And personal it certainly was – 'Thendara', the first hologram of his that I acquired, shows a figure, surely Schweitzer himself, seated in a chair gazing out through a window frame into the darkness beyond. Both figure and window are sculpted models, but the composition manages to engage you in the same way that Caspar David Friedrich's 'Wanderer above the Sea of Fog' does. Much of Dan's work was autobiographical so I assume that the reclining profile in 'The Sleeper' is his.

"Light seems the stuff that dreams are made of. So where does that light come from?" (D.Dark, circa 1974)

In dreams and thought, 'the seeing' is clear, lucid, and lacks the texture, grain and convention of corporeal external vision. Using light to investigate so many unanswered questions seems a more direct tool, and enhances the complexity of imagination itself.

In the end the goal is to simplify all this; to distil it, make it concrete, and go on dreaming."

Dan Schweitzer Art in Holography 2 conference publication, 1996.

'The Sleeper' 1994
White light transmission hologram
30x40cm





SUSAN COWLES
Born 1962

The Seed Makers, 1991:

“Two figures are weaving a boat which is constructed of giant seed pods. The seeds are the substance of their recreation. It is imperative that they finish their work for their own survival. They are the seed makers who have the esoteric knowledge of eternal creation. Without them nothing will reproduce or have the information necessary to reproduce.”

The painted line inside the holographic space forms their image. They are solid, contained, fixed in space. Because their work is an archetype of humanity they are constant in my consciousness and in everyone’s consciousness. The seed makers are divine workers in the hermetic order of the universe.”

The Juggler, 1991:

“A masculine figure with a baton in his hands and a table before him which contains a dish and a bowl. The image symbolizes the masculine aspect of the psyche, about to start out in a new venture of union with the feminine. The Juggler has all the elements necessary to start his “show”. The vertical baton connects him to heaven and earth where he can draw divine power for his earthly duties. The dish represents the void and connects with his hat, which is the symbol of infinity. The hat also represents math and order, two disciplines which he has at his fingertips. The ball is “wholeness” – the symbol of ever striving for perfection. These “abilities” are before him. The penis

is limp, telling the viewer that his magic has not been activated yet, only an interaction with the objects of his performance will produce the desired results”

Text reproduced from the ‘3x8+1’ exhibition catalogue, 1994.

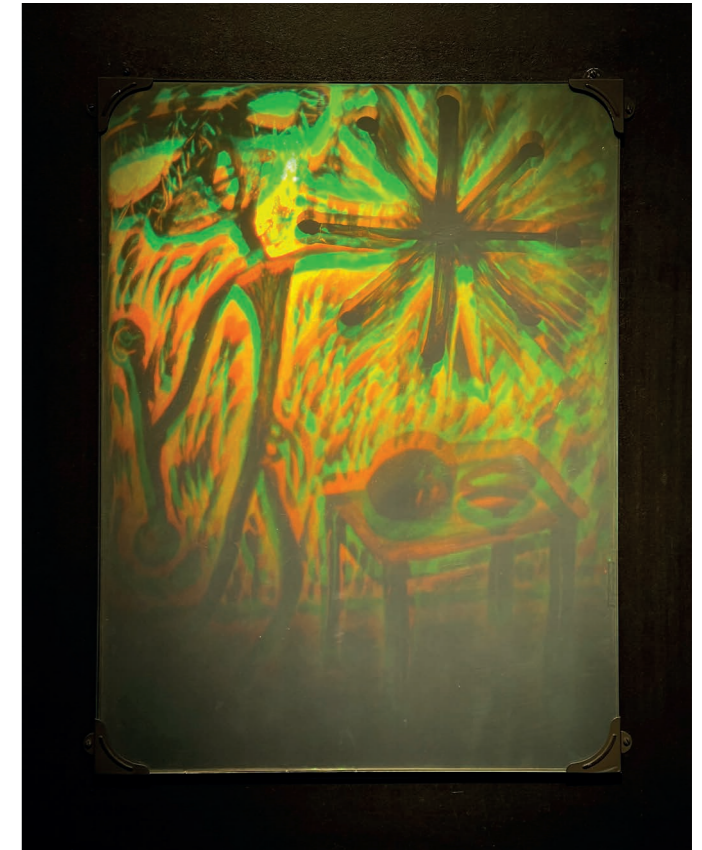
Cowles commented recently that “My intention was always to draw the viewer into a constructed virtual space in my work I used drawing and sculpture props to generate my images and record them holographically.

The creation of the holographic space was controlled by the artist but how the space was perceived was controlled by the viewer. I often took archetypes and inspiration from the Tarot, (for example) ‘The Juggler’. ‘The Seedmakers’ just came out of my imagination. Obviously, there is a sexually charged element in that piece. The idea of a light pattern remaining like a virtual piece of one’s imagination was constant in my work. It also was a trace of a feeling and an emotion. It became virtually tangible in holographic space like no other art form, not even painting took us that close to the mind/body connection.

I also wanted to convey that holograms could have an animistic quality acting like talismans for the viewer.”



‘The Seed Makers’ 1991
Reflection hologram, silver halide on film
40x30cm



‘The Juggler’ 1991
Pseudo-colour reflection hologram, silver halide on film
40x30cm



MARTIN RICHARDSON
Born 1958

This hologram dates from a time when Richardson's work in holography was liberated by the acquisition of a pulse laser by the Royal College of Art, enabling him to work with human subjects. Conventional lasers require a subject to be completely motionless when a hologram is being recorded, whereas exposure times for a pulse laser are so brief as to be almost instantaneous. It is part of a series of holograms featuring a model called Nicky and, Richardson acknowledges, is inspired by the works of the Surrealist photographer Man Ray.

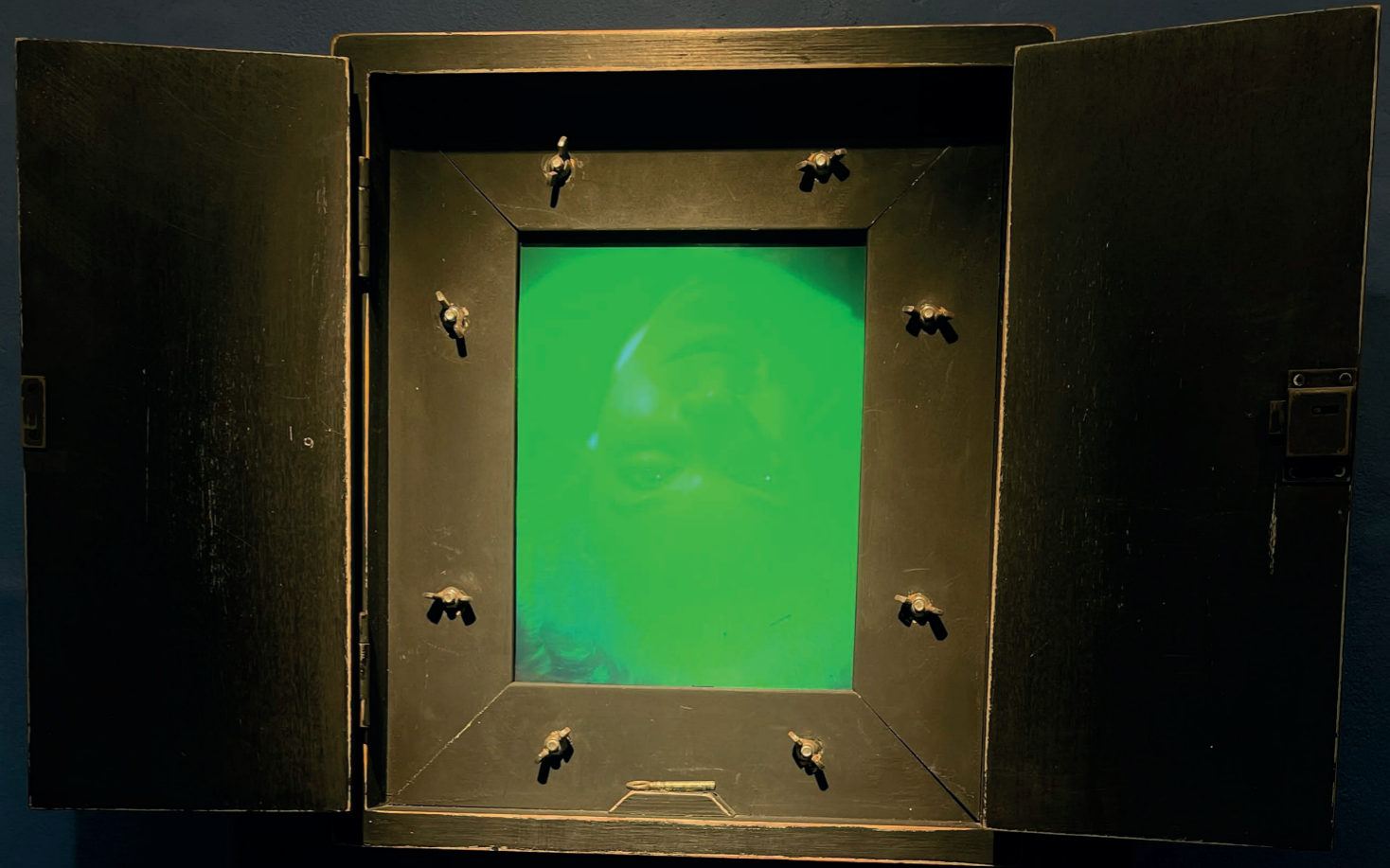
I recall seeing it in his degree show at the RCA, (where he was the first to gain a PhD) and enjoying the frisson as you unlocked the doors concealing the hologram and being confronted by the upside-down gaze of a beautiful girl. You see her, but she does not see you, as she twists and turns in her dreamlike state.

Richardson ran an independent holography studio in the 1980s before entering academia.

His portraits of celebrities include film directors Martin Scorsese and Alan Parker, artist Sir Peter Blake, writers Will Self and Auberon Waugh. He also worked with David Bowie.

He was Professor of Modern Holography at De Montfort University until 2022.

'Young Girl in a Dreamlike State' 1988
Multi-channel pulsed laser reflection hologram
10"x8" + mixed media





There is also a display of 3D and animated lenticular prints in the Red Gallery, including work by:

David Burder, Peter Blake, Patrick Boyd, Tim Bret Day, Richard Hamilton, Anthony Hopkins, Chris Levine, Jeffrey Robb, Martin Richardson and Elizabeth Sandford Richardson.

Scan the QR code to read 'Lenticulars, A Personal History' on the Jonathan Ross Hologram Collection website.



Jonathan Ross photographed in 1994



Sydney Koke photographed in 2024

Most of the photographs of holographers date from the period when their works were made and were taken by Jonathan Ross, apart from the ones of Caroline Palmer and Martin Wall.

Catalogue design by IDprojects.org

Analogue Virtual Worlds

DISPLAY HOLOGRAPHY AT THE DAWN OF CYBERSPACE

