

Where art meets science

TWO artists, Susan Gamble and Michael Wenyon, designed the hologram on the cover of this issue. In April last year they were appointed artists in residence at the Royal Greenwich Observatory (RGO) at Herstmonceux Castle in Sussex, along with the composer Ron Geesin. Funded jointly by the observatory and South East Arts, the artists were charged to make and exhibit work inspired by the activities of the observatory. Commercial sponsorship has come in the form of a 30-channel electronic theatrical lighting desk from Ceico—which allows the artists to record an animated lighting programme synchronised with music—and a supply of the latest low-voltage halogen spotlights from Marlin Lighting.

Wenyon and Gamble began to collaborate on art works in 1983 while teaching holography at the workshop that they had set up at Goldsmith's College in London three years earlier. Susan Gamble is a graduate of the fine art course at the college, and Michael Wenyon studied at Imperial College, London, where he obtained an MSc in optics.

During their stay at Herstmonceux, they became interested in the optical experiments of Sir Isaac Newton. The cover hologram is taken from a small ivory bust after the sculpted portrait of Newton by the 18th century artist Roubiliac, both owned by the RGO. Wenyon and Gamble wanted to make a work that would concentrate less on Newton the man and more on his work. Michael Wenyon explains: "It occurred to us that the only way that artists living during Newton's lifetime could express their admiration for him was to paint or sculpt a portrait. No one had the conceptual apparatus to realise that the natural phenomena such as Newton's rings were worthy of reproduction as beautiful things."

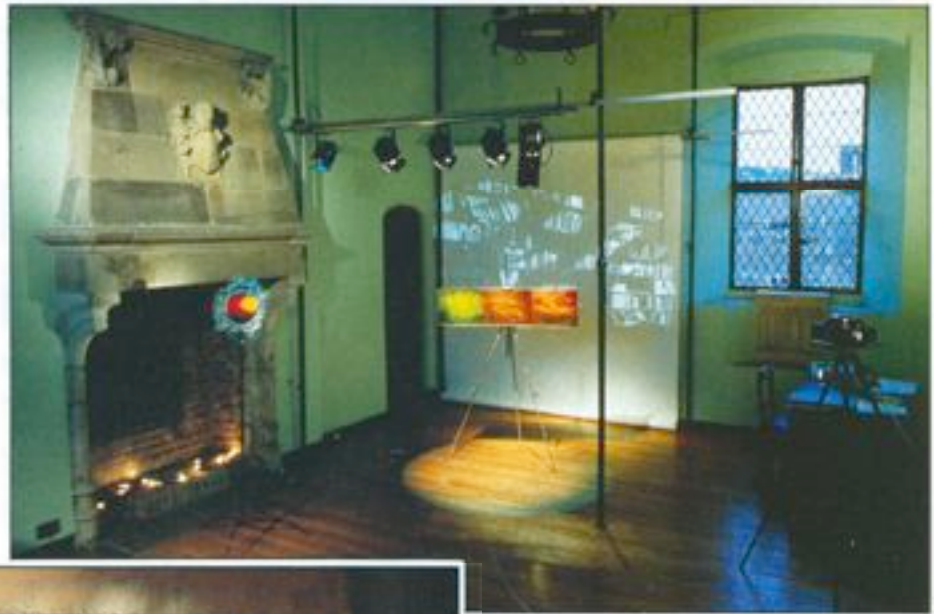
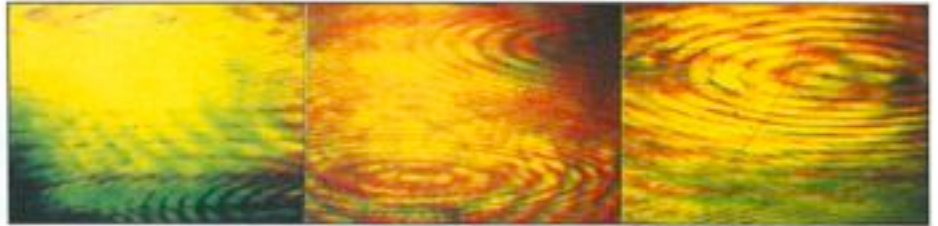
Using laser light, Wenyon and Gamble decided to repeat some of the experiments set out in Newton's *Opticks*. One such experiment was that concerning diffraction, where Newton uses knife blades to

create interference fringes. Using cutlery in this way has obvious connections with their earlier work, which impart an aura of mystery and poetry to otherwise familiar objects. But here the objects themselves produce the lighting effects that supply them with poetry. Another hologram made at RGO, called *Newton's Rings*, is faithful to the phenomenon itself, and it is also a metaphor for the orbits of the bodies acting under gravity, which Newton described in the *Principia*.

Other works made at Herstmonceux include a set of comets. These were inspired by the recent apparition of Halley's Comet and also by the volumes of early cometary

studies contained within the collections of the RGO library. The holograms are framed in engraved perspex that mimics the early scientific illustrations of comet tails found in Helvelius's *Cometographia*, published in 1668.

By the standards of the day, these illustrations were thought to be accurate. Yet to modern eyes they seem reminiscent of things common to earthly experience: swords, plants, perhaps even banners or hair blowing in the wind. These early pictures remind us that our own observations are not absolute, and it is this fundamental point that interested Wenyon and Gamble.



As artists in residence at the Royal Greenwich Observatory, Mike Wenyon and Susan Gamble (left) have produced holograms of comets, inspired by early scientific illustrations of the 17th century. They have also used laser light to recreate some of Newton's experiments. One of their holograms, Newton's Rings (top), makes a physical phenomenon beautiful. It reveals the interference fringes described by Newton. At one time, the representation of a natural phenomenon would not have been considered art. But contemporary art circles now acknowledge the importance of an artist's imaginative act of selection.