

ANAMORPHIC ART at the London Knowledge Lab and the National Gallery, December 12 & 13 2008

PROGRAMME (version of 30 November)

(for latest details, see the website: www.lkl.ac.uk/events/maths-art)

Holbein's famous painting *The Ambassadors* in the Gallery contains an anamorphic (distorted perspective) picture of a human skull. This is the starting point for a seminar on anamorphic art and a Study Day at the National Gallery entitled **Curious Perspective: Anamorphosis in Art**.

The following are the programmes for the two days:

ANAMORPHIC ART: A TECHNICAL & DEMONSTRATIONS SEMINAR

Friday 12 December, 2.30–5.00pm
London Knowledge Lab, WC1N 3QS

This is an informal seminar moving from demonstrations of anamorphic art, including some new ideas to the technical aspects of resolving images in the computer and the mathematics of creating new anamorphoses.

Programme:

1. Hands on (or maybe more correctly eyes-on) demonstrations of anamorphic art
2. **Phillip Kent:** demonstration and discussion of *Anamorph Me!* software for creating anamorphic art.
3. **István Orosz:** the Hungarian artist talking about his work
4. **James Hunt:** analytical methods for resolving anamorphic images
5. **John Sharp:** using Povray and Google Sketchup to understand anamorphic images
6. **Andrew Crompton:** *Self Anamorphic Images*, creating images which are identical after reflection in a conical mirror
7. **John Sharp and James Hunt:** a “conical” mirror which allows easy construction of anamorphic images

Demonstrations:

The afternoon will open with a set of demonstrations and viewing of anamorphic images from a variety of sources.

Phillip Kent: *Anamorph Me!*

Phillip Kent is a Senior Research Officer at the London Knowledge Lab.

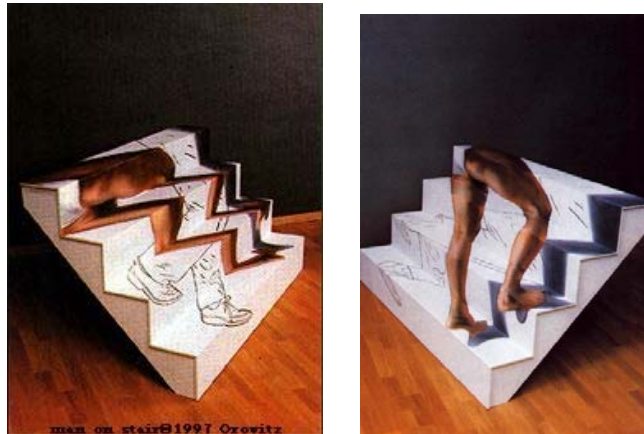


Anamorph Me! is free software for creating anamorphic art available on the web at www.anamorphosis.com. Following a demonstration of how the software can be used to

convert images into anamorphic art (plane, conical or cylindrical mirror) I will discuss some of the techniques used.

István Orosz: My Anamorphic art

We are very pleased to have a talk by the Hungarian artist and graphic designer, talking about his work.

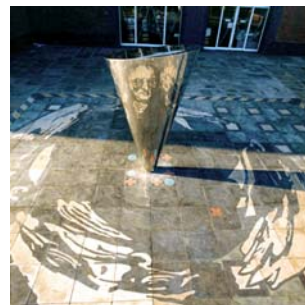


Anamorphic pictures are usually described as distorted, amorph images that only get their meanings if you look at it from the right angle, or if you put on them a special mirror-object. Within my lecture, I'd like to present those anamorphoses of mine that are "meaningful" pictures in themselves, but if you look at them form a special angle, or if you put on them a cylindrical mirror, for example, another new meaning reveals which is independent from the first one.

More of his work can be seen at
http://en.wikipedia.org/wiki/Istv%C3%A1n_Orosz
<http://www.geocities.com/SoHo/Museum/8716/>

Andrew Crompton Self Anamorphic Images

Andrew Crompton is an architect, with a background in physics, working at the Manchester School of Architecture. He is a very experienced creator of anamorphic art and tessellations, and his inverted conical mirror anamorphosis has been a significant presence outside the Museum of Science & Industry in Manchester for many years.



A curve is called self-anamorphic if it is the same shape as its reflection in a curved mirror except for rotation and rescaling. We show here that self-anamorphic curves exist for images seen in conical mirrors viewed from above. This is perhaps surprising because reflections seen in cones are typically so deformed that they have been used in the past to reveal images concealed in anamorphic art. Fourier analysis is used to find a general solution for self-anamorphic curves and four examples are illustrated. One of them is the familiar heart shape. Its unexpected appearance where it seems not to belong is reminiscent

of the unexpected appearance of lifelike forms in the style of design known to art historians as the Grotesque.

More of his work can be seen at www.crompt.com/tess/home.html

James Hunt: *Analytical methods for resolving anamorphic images*

James Hunt is Emeritus Professor of Physics at the University of Guelph in Canada. His paper in the American Journal of Physics is quoted as the standard one on the mathematics of anamorphosis. He has been creating anamorphoses and working with artists to produce public art.

Coming from a physics background, I will show how analysis of images analytically (including the connection between anamorphosis and the Circle of Apollonius) can be used to resolve anamorphic images, particularly the Scots Edward VI in the National Portrait Gallery. I will also describe the use of optical calculations for resolving refractive and mirror anamorphoses.

John Sharp *Understanding anamorphic images with Google Sketchup and Povray*

John Sharp is Visiting Fellow at the London Knowledge Lab. He is well known for geometrical art, particularly *Sliceforms* paper sculpture.

Looking at anamorphic images is not easy and studying the resolved images can yield information about the history of anamorphic art and raise questions about how we look and see images generally. I will show how the use of the free software Google Sketchup and the ray tracer Povray combined with some geometry can be used to learn more about methods used by artists.

John Sharp and James Hunt: *a “conical” mirror which allows easy construction of anamorphic images*

A conical mirror is easy to make. The transformation of an image to view in such a mirror is not easy. We will conclude the afternoon with a demonstration of a special conical mirror which allows the images to be drawn easily.

Curious Perspective: Anamorphosis in Art

Saturday 13 December, 10.30 – 4.00pm

National Gallery study day, Sainsbury Wing Theatre (£20/£17 Concessions)

Speakers and the lectures covered in the day are as follows:

Unpicking *The Ambassadors*: Anamorphosis in Context

Dr Louise Govier, National Gallery

Hans Holbein's portrait of *The Ambassadors* is an iconic painting, full of symbolism and references to the troubled religious and political context within which it was made. Hovering in its foreground is one of the world's most famous anamorphic images, a skull which becomes recognisable when the viewer stands in the correct position at the side of the picture. Govier will introduce the day's discussions by exploring how this complex painting communicates ideas, hiding and revealing meaning. The anamorphic skull is just the beginning.

Perspective and anamorphosis in Piero della Francesca and Leonardo da Vinci

Dr J V Field, Honorary Visiting Research Fellow, School of History of Art, Film and Visual Media, Birkbeck, University of London; author of *The Invention of Infinity* (1997) and *Piero della Francesca: A mathematician's art* (2005)

Piero not only painted perspective pictures, including an example of trompe l'oeil, but wrote about how it was done. His treatise formed the basis for all later writings, though his mathematical methods seem to have been found impractical by later painters, who were generally considerably less competent at mathematics than he was. Leonardo shows some machines that provide a shortcut.

How to create an anamorphosis - and how not to

John Sharp, Visiting Fellow London Knowledge Lab

There are many types of anamorphosis and many explanations for their constructions. Sharp will try to show what you can and cannot do to create the images.

Jean-Francois Niceron – an almost forgotten mathematical and artistic genius.

James Hunt, Emeritus Professor of Physics at the University of Guelph, Canada

A tragically curtailed life probably denied us many interesting and important works; he wrote a book *La Perspective curieuse*, however, that has defined anamorphic art for the last 450 years.

Anamorphosis in Holland in the 17th Century: Van Hoogstraten, Fabritius and Vermeer

Philip Steadman, Professor of Urban and Built Form Studies, University College London; author of *Vermeer's Camera* (2001)

Anamorphosis had a revival in the seventeenth century with the study of optics and vision. The National Gallery's has two prime examples, a peepshow box and an unusual view of Delft.

Patrick Hughes on his pictures in reverspective

Patrick Hughes, artist

Hughes has been making art in reverse perspective since 1963/4. An accessible example is his painting *Paradoxymoron* (1996) in the basement of the British Library in Kings Cross. His last exhibition was at Flowers East, Kingsland Road, E2 in October 2008. *Left to Write*, his collected writings, has been published recently.