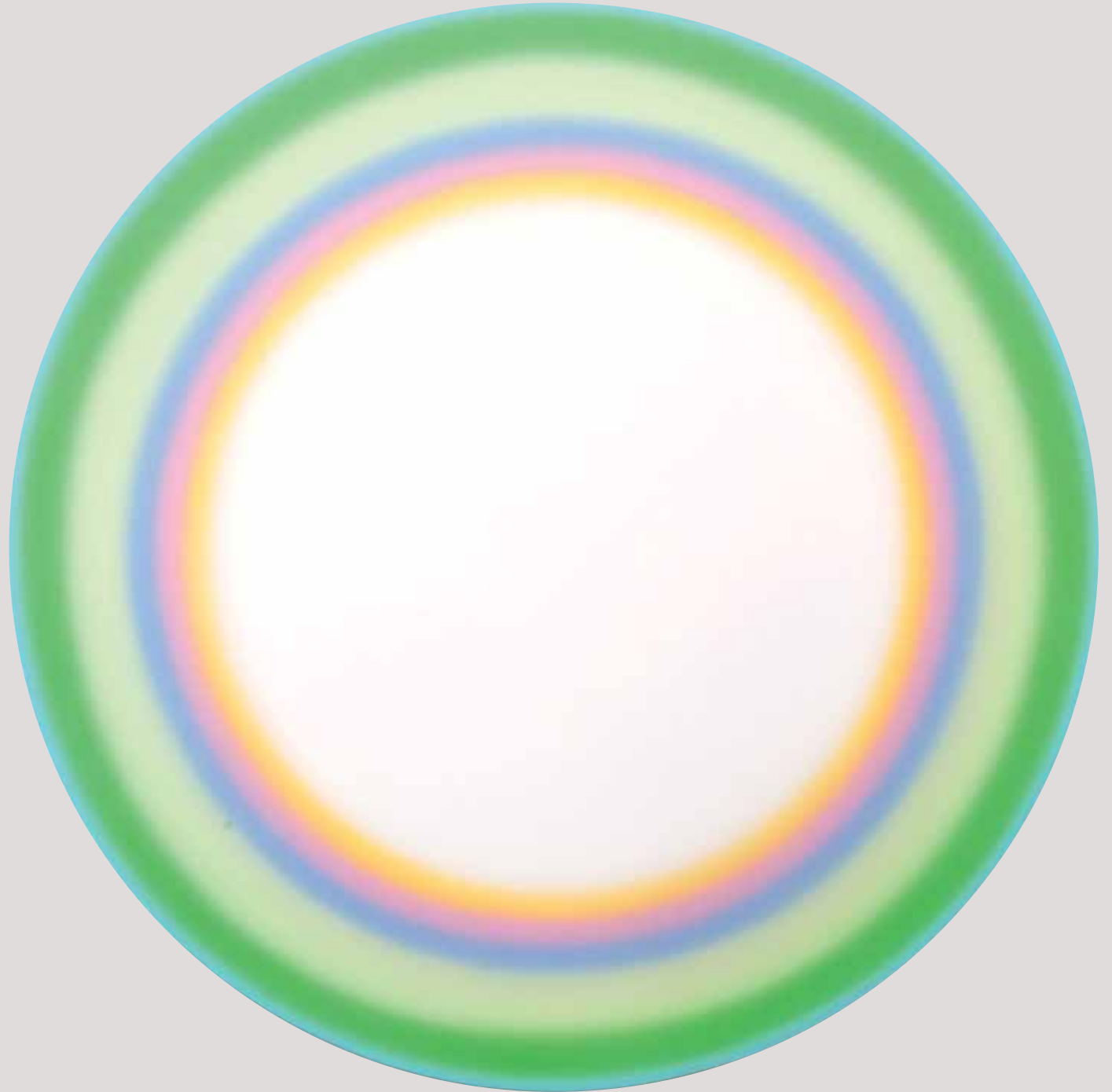

Optical Mix

Australian
Centre for
Contemporary
Art

16 August –
28 September
2014

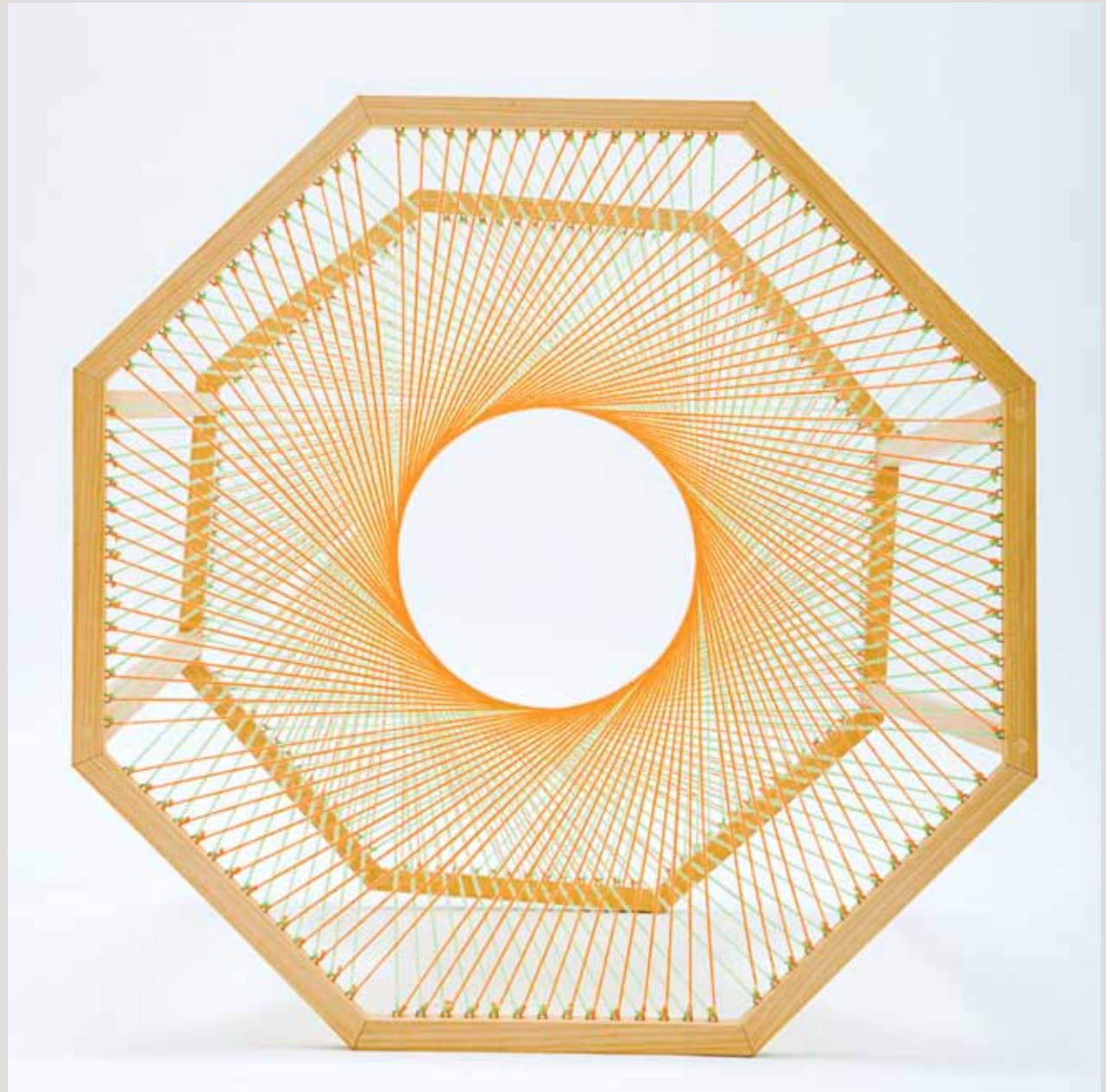


Optical Mix : The Exhibition

ACCA Education

Optical Mix brings together a series of works that use light, kinetics and visual oscillations. Although the exhibition presents various artistic styles, movements (some historical, others contemporary) influences, materials and techniques there is a common thread between the works: they all optically mix elements – be it colour, light, line, shape or pattern – to play with or shift the viewer's visual perception. In *Optical Mix* there is colour mixing, blending and shifting, geometric Op Art operations and kinetic movements.

Optical Mix accompanies the ACCA commissioned exhibition, *SLAVE* showcasing work by Australian artist Christian Capurro. ACCA's Artistic Director, Juliana Engberg curated both exhibitions and although they may appear at first glance quite distinct, they both share similar optical issues and qualities of light, luminescence and movement.



A Spot Of Context And A Dash Of Art History

To support an in-depth exploration of *Optical Mix* it is important to provide context around key art historical and contemporary movements and styles evident in the exhibition, including: Op Art, Neo-Impressionism, Minimalism and Conceptual Art.

OP ART

“OPTICAL ART IS A METHOD OF PAINTING CONCERNING THE INTERACTION BETWEEN ILLUSION AND PICTURE PLANE, BETWEEN UNDERSTANDING AND SEEING.”

(John Lancaster. *Introducing Op Art*, London: BT Batsford Ltd, 1973, p. 28.)

Op Art (or Optical Art) is an art style that refers to painting and sculpture in which precise arrangements of colour, line or shape are used to create illusions of movement (vibration, pulsing, warping, swelling), patterns, light or space.

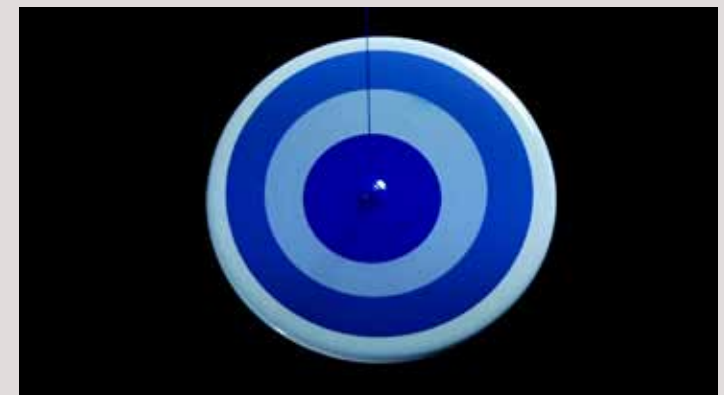
Artists have long been intrigued by the nature of perception and by optical effects and illusions, however it was the Op artists who delved further. Informed by art and science of the past to exploit various phenomena: the after-image

and consecutive movement; line; perspective; colour contrasts and chromatic vibration.

The term Op Art was first coined in a 1964 *Time* magazine article, to describe the new, intense visual art style that was emerging. Op Art came to prominence as a movement after an exhibition *The Responsive Eye* at the Museum of Modern Art (MoMA) New York. Curated by William C. Seitz, the exhibition displayed work by a range of artists exploring perception and senses including Victor Vasarely, Frank Stella, Ellsworth Kelly and Bridget Riley.

Describing Op Art in the exhibition press release, Seitz described them as works that *“exist less as objects to be examined than as generators of perceptual responses in the eye and the mind of the viewer. Using only lines, bands and patterns, flat areas of colour, white, gray or black ... perceptual artists establish a new relationship between the observer and a work of art.”* (MOMA Press release, 1965

https://www.moma.org/momaorg/shared/pdfs/docs/press_archives/3439/releases/MOMA_1965_0015_14.pdf?2010).



“These new kinds of subjective experiences, which result from the simultaneous contrast of colours, after images, illusions and other optical devices are entirely real to the eye even though they do not exist physically in the work itself. Each observer sees and responds somewhat differently.” (Seitz).

These relationships that Seitz identified between the viewer and the artwork still play out today and are present in the works within ACCA’s *Optical Mix*.

Op artists of the 1960s were typically concerned with the behaviour of the eye and perceptions. Their work incorporated and was informed by the study of **optics**, **visual perception**, **Gestalt theory** and **colour theory** being explored from the mid 19th century scientists such as Helmholtz (1821-94) and Chevreul (1786-1889).

When Op Art emerged in the 1960s it was a time of great social and political change: a time of challenging and overturning traditional values with antiwar protests, the civil rights movement

and fight for women’s rights; new developments in science - advances in computing, aerospace, technology and television; explosion of consumerism and mass media.

Finally, although Op Art is generally viewed as an ephemeral art trend it’s processes, influences, aesthetic qualities, and intentions (shifting perceptions) are still present and impacting upon art created today. The influence of Op Art is evident in contemporary art within *Optical Mix* by artists such as Joseph Kosuth, Ugo Rondinone, Nike Savvas, Callum Morton and Daniel von Sturmer, whose work exhibits alongside the ‘mother of Op Art’ Bridget Riley and her Op Art contemporaries.

Glossary

Colour theory: in visual arts is the theories behind colour mixing and the visual effects of specific colour combinations. Including the colour wheel, colour harmonies and contrast.

Gestalt theory: is a psychology term which means “unified whole”. It refers to theories of visual perception developed by German psychologists in the 1920s. These theories attempt to describe how people tend to organise visual elements into groups or unified wholes when certain principles are applied: similarity, continuation, closure, proximity, area and symmetry.

Optics: the scientific study of sight and the behaviour of light, or the properties of transmission and deflection of other forms of radiation.

Visual perception: is the ability to interpret the surrounding environment by processing information that is contained in visible light. This is done while incorporating all the integrated information with other things, such as past experiences, so that we can derive understanding and meaning from what we are experiencing.

A Dash Of Art History continued...

Neo-Impressionism: Colour Theory

Led by Georges Seurat and Paul Signac, the Neo-Impressionists (1886 – 1906) based their practice around scientific studies of colour analysis and visual perception, including the influential research *The Law of Simultaneous Colour Contrast*, 1839, by Eugene Chevreul. Chevreul's study explored colour contrast: the change in the appearance of a colour when surrounded by another colour. Chevreul concluded that if two colour areas are seen close together in space or time, each will shift in hue and value as if the complementary colour of the neighbouring or preceding colour were mixed with it. For example: orange rimmed with blue, red with green and yellow with purple.

Informed by this and the practice of the preceding Impressionists, the Neo-Impressionists started creating landscape paintings using tiny dots of pure colour. Instead of being mixed on the palette, the Neo-Impressionists stippled pure dots of juxtaposed or complementary colour side by side, so the colours fused optically in the eye of

the viewer when seen at the right distance. This separation of colour through individual strokes came to be known as divisionism, while the application of precise dots came to be called Pointillism.

The artistic applications of colour theory and contrast by the Neo-Impressionists influenced many artists, styles and future movements, including the Op Artists, who informed by such art and science, created optical illusions through use of colour contrasts and chromatic vibrations.



Paul Signac,
French 1863–1935
*Juan-les-Pins.
Evening (first version) 1914*
oil on canvas
73.0 x 92.0 cm
Private collection

A Dash Of Art History continued...

Kinetic Art: Movement

Kinetic means relating to motion. Kinetic art emerged during the 1950s as a diverse movement that experimented with both real and apparent movement. The Op Artists created implied movement through the repetition of line, pattern and contrasting colours to create illusions of movement. Some examples of artworks in *Optical Mix* that reference Kinetic Art are Jean-Pierre Yvaral's *Interference with circle 'A'* and Bridget Riley's *Nineteen Greys* and *Aurum*.

Minimalism: Minimal

Minimalism emerged at a similar time (mid 1960s) and context to Op Art. The movement sought to create a pure, geometric, abstract art in which the physical properties of space, scale and materials were explored as ends in themselves, rather than metaphors or extensions for meaning. It was hoped that the process of reduction would result in a unitary experience for the viewer: "all I want to get out of my paintings... is the fact that you can see the whole ideas without any confusion", explained Frank Stella. "What you see is what you see." A similar ex-

pression of 'what you see is what you get' is evident in *Optical Mix* in Joseph Kosuth's work and minimalist sentimentalities in Daniel von Sturmer's practice.



Conceptual Art: The Idea

Conceptual art is artwork that emphasizes the idea or concept instead of the traditional aesthetic or physical concerns of a work. The conceptual art movement borrowed elements from linguistics, sociology, history and philosophy wishing to stand apart from the 'art market' as well as separating itself from the current economic, political, social and cultural establishments of the time. Fundamentally conceptual art values the idea more than the way it is represented. Conceptual art has its roots with the European Dadaists but emerged as a movement in New York in the 1960's. French artist Marcel Duchamp paved the way for the 1960's and 70's conceptualists, with his iconic 'Readymades'.

The idea becomes the machine that makes the art. LeWitt, Sol 1967, "Paragraphs on Conceptual Art," Artforum.

Along with fellow leading conceptual artist Sol Le Witt, *Optical Mix* artist Joseph Kosuth exemplified the conceptualist notion that genuine art is not a unique or valuable physical object created by the physical skill of the artist - like a drawing, painting or sculpture -

but instead is a concept or an idea. Le Witt attached great importance to the primacy of 'the idea' stating, "all of the planning and decisions are made beforehand and the execution is a perfunctory affair." His attitude can be illustrated by the fact that many of his works can be constructed by anyone who follows his written instructions.

In *Optical Mix* there are examples of conceptual practices in works by Martin Creed and Joseph Kosuth.

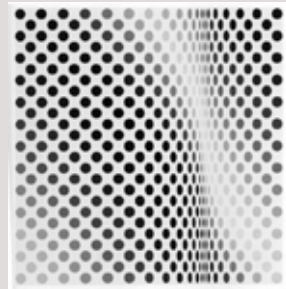
All I make are models. The actual works of art are ideas...All art (after Duchamp) is conceptual (in nature) because art only exists conceptually. Joseph Kosuth

Op Art Aesthetic Qualities

Op and 'optical mixing' artists exploit various phenomena to create their artworks: the after-image and consecutive movement; line interface; the effect of dazzle; ambiguous figures and reversible perspective; successive colour contrasts and chromatic vibration; and in three-dimensional works different viewpoints and the layering of elements in space.

Op artists practicing in the 1960s, such as Bridget Riley, Jean-Pierre Yvaral and Stanislaus Ostoja-Kotkowski, were typically concerned with the behaviour of the eye and perceptions. They created abstract compositions to explore a variety of optical and perceptual phenomena; first experimenting with high contrasting black and white shapes, line and form then later exploring the use of complementary colour, line and shape to suggest space and create contrast.

In *Pause* Riley has created the illusion of a three dimensional warp in the picture plane; she used repeated circles and introduced subtle variations of form and colour to create a visual warp, gradually compressing the black circles into grey ovals, like they are being sucked into the picture.



Black and White Op Art Example:
Bridget Riley, *Pause*, 1964.



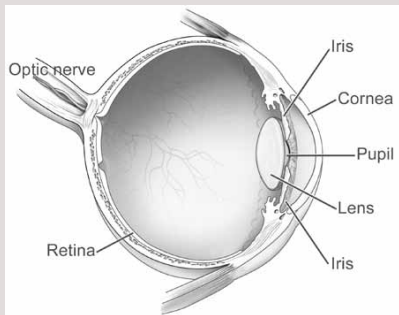
Colour Op Art Example:
Bridget Riley, *To a Summer's Day*, 1964.

In *To a Summer's Day*, Riley added colour to her repeated line work. The use of contrasting, complementary colours painted in these long strips are reminiscent of twisting ribbons. Each wave has three colours at any one point, starting and ending at every crest of trough. The colours used are complementary: light blue and yellow ochre are the basic pair of colours, into which small threads of rose and violet appear to accentuate the warm pulsing, wavering and moving curves of each wave and line.

The exhibition *Optical Mix* reveals to the viewer a range of contemporary artists whose work has been influenced, directly and indirectly, by the Op Art style. They have created artworks that explore or reference the role of optics, the behaviour of our eyes and exploit or play with the basic elements and principles of art: colour, shape, line, pattern and repetition.

The Science Behind Op Art

Op Art plays with the relationship between our eye's retina (the organ that 'sees' pattern) and the brain (the organ that interprets patterns). When visual stimuli (such as colour, light and pattern) causes confusion between these two organs, it creates a perception that in reality does not match the true image (tricks our brains into seeing things which may or may not be real). This results in a shift in our perception or optical illusion.



Visual Perception And The Eye

Perception refers to the interpretation of what we take in through our eyes. The eye is a sophisticated organ that allows us to see as it captures visible light.

Light passes through the cornea, through the iris (and pupil), into

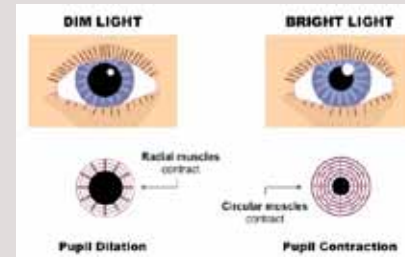
the anterior chamber that is filled with a water based fluid (the aqueous humor), through to the lens, into another water-based fluid (the vitreous humor) and finally onto the retina.

In the centre of the Iris is the eye's aperture – the **Pupil**. This hole allows light to enter the retina. It changes in size depending on the amount of light present, to limit the amount of light that enters through the eye.

Inside the retina at the back of the eye are the cells that respond to (process) light: these are called photoreceptors and there are two types: **RODS** and **CONES**:

- **Rods:** are most sensitive to light and dark changes, shape and movement and contain only one type of light-sensitive pigment.
- **Cones:** are not as sensitive to light as the rods, but the cones are most sensitive to green, red and blue colours. Signals from the cones are sent to the brain which then translates these messages into the perception of colour. Cones only work in bright light and that explains why you cannot see colour very well in dark places.

Light And The Eye



As seen in the diagram, the iris dilates or contracts in response to light, as it attempts to regulate the amount of light entering the eye. When it expands or contracts, the muscles in the iris also cause the size of the pupil to increase or decrease in size.

- In dim light the iris contracts and the pupil is large
- In strong light the iris expands and the pupil is small.

This process is called **ADAPTATION**, and refers to our ability to adjust the sensitivity of the receptor cells in the retina (cones and rods) in response to the general level of illumination. An everyday example of this is: on going out of a darkened room into a bright light space, we may at first see little or nothing, but as the sensitivity of our eye's receptor cells slowly

adjust upwards, we begin to see more and more detail.

Colour And The Eye

As the Neo-Impressionists explored, colours appear to change depending on their proximity to other others. For example a red shape on a white background appears much lighter than the same red shape on a black background. Complementary colours placed next to each other also create different intensities than when placed some distance apart. This manipulation of colours and perception of colours informed the coloured work of Op artists. Some colours placed next to neutral gray's appear to create new colours, an echo of a colour, an after image.

More information about colour contrast and visual colour adaptation can be found online:

- <http://www.loveofgraphics.com/graphicdesign/color/colorcontrast/>
- http://www.scifun.ed.ac.uk/pages/about_us/shows_adaptation.html

Optical Mix Artists And Artworks

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Joseph Kosuth

Martin Creed

Ken Jacobs

Jean-Pierre Yvaral

Cake Industries

Ugo Rondinone

Daniel von Sturmer

Bridget Riley

Stanislaus Ostoja-Kotkowski

Nike Savvas

Callum Morton

Joseph Kosuth

#1149. (On Color/ Multi #3), 1991
neon, transformer and certificate
of authenticity
14 x 400 cm Collection Anna and
Morry Schwartz

The artist and their practice

Joseph Kosuth, a pioneer of American conceptual and installation art, was born in Toledo Ohio in 1945 and currently resides between New York and Rome. As a student he attended Toledo Museum School of Design from 1955-62 before enrolling at the Cleveland Art Institute in 1963. Since the 1960's Joseph's artwork has focused on the connections between language and representation and is considered one of the originators of the conceptual art movement.

Renowned for his groundbreaking work *One and Three Chairs* (1965), featuring a chair, a photograph of that chair, and a text of a dictionary definition of the word 'chair', Kosuth's art practice came to prominence in the 1960's creating works that explored the very nature of art itself. Kosuth's practice has continued a dialogue with

the ideas of many leading artists, writers and philosophers including: James Joyce, Samuel Beckett, Franz Kafka and Ludwig Wittgenstein and, although minimal in character his art is intensely rich in subject matter.

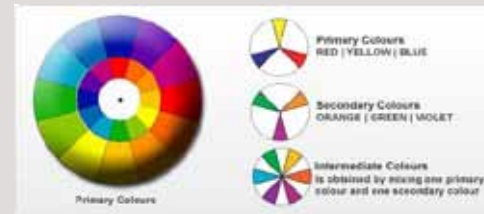
Key ideas

Kosuth's installations often use text of a monumental size, quoting from literature, philosophy, anthropology and at times his own thought to form a forty-year enquiry into the relationship between language and art. Kosuth heralded the way for the use of text in art and was one of the first to give words such a central role in artwork.

Kosuth's work is considered to be groundbreaking in the demonstration of art, object and idea. Exploring the relationship between language and meaning, his earliest works are seen as the beginnings of the conceptual art movement. Key concepts to think about when approaching Kosuth's work revolve around context, significance, perception and consciousness.

For Joseph Kosuth art is about making meaning. He asks of himself 'What is the nature of making

art? If it is not simply about fashioning forms and colours, then it has to do with the production of meaning. My practice is based on that assumption. If you begin there you realise that potentially everything is material for art, because at some point it has to have an aspect of concretion and must be framed in relation to people's lives. It does not need to illustrate or work with that, but it does need to have a connection to the community which produced it.'



The artwork

#1149. (On Color/ Multi #3), continues Kosuth's conceptual investigations into language and neon, an interest since 1965. The work consists of seven glowing, illuminated and differently coloured words and numbers, spelling the phrase: *1149. The coloured intermediary between two colours.* The statement is an exact description of what this work displays: two intermediate colours,

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sandwiched between their respective two colours: Yellow Orange, made by mixing it's corresponding colours, Yellow and Orange; and Blue Purple, made by mixing it's corresponding colours green and blue.

Presented on a warm grey wall, the work illuminates the space and introduces the exhibition and it's themes to the viewer. The words replace images and objects to provoke thought around the idea and concept, rather than the art object itself.

Further research

Joesph Kosuth, Biography, Guggenheim Museum: <http://www.guggenheim.org/new-york/collections/collection-online/artists/bios/1070>

Joesph Kosuth, *One and Three Chairs*, MoMA: http://www.moma.org/learn/moma_learning/joseph-kosuth-one-and-three-chairs-1965

Joesph Kosuth, (*Waiting for -*)*Texts for Nothing*, ACCA Archive: <https://www.accaonline.org.au/exhibition/joseph-kosuth-waiting-texts-nothing-samuel-beckett-play>

Joesph Kosuth interview: <http://vimeo.com/60644959>



Martin Creed

Work No. 312

A lamp going on and off, 2003, Materials and dimensions variable; 1 second on / 1 second off
© Martin Creed courtesy the artist and Hauser & Wirth Photo: Stefan Altenberger Photography, Zurich

The artist and their practice

Martin Creed is an English sculptor, installation and conceptual artist, born in 1968. He graduated from the Slade School of Fine Art in 1990 and was awarded the Turner Prize in 2001 for *Work No. 227: The lights going on and off*, which was an empty room in which the lights went on and off at 5 second intervals.

Key ideas

Martin Creed uses materials which are light and playful; ordinary, yet evocative. Creed creates 'situational projects' which make use of the particularities of space and circumstance. Creed's work can also be characterised as witty and minimalist, focusing on anti-materialism and defying commodification. Believing there is enough "stuff" in the world, Creed says his work is about the qualities of 'nothing'

Creed uses the central theme of nature of art itself and the relationship between art and reality, art and life. *"I don't believe that my work is conceptual art. The Lights Off is a visual rather than conceptual work. While it sits within conceptual art making, it is like a painting. And while it has different elements, it is compositionally similar to painting, only using light and shade"* (Martin Creed, 5 October 2005).

The artwork

Similar to the ideas within his Turner Prize winning work, *Work No.312* makes us, the audience, think immediately about the action occurring – the light flickering on and off. It is an everyday, commonplace action, made using everyday, commonplace materials. Yet in using such ordinary materials and action it, as Maurizio Cattelan writes, "has the ability to compress happiness and anxiety within one single gesture. Lights go on, lights go off – sunshine and rain, and then back to the beginning to repeat endlessly." (Martin Creed website)

The work also plays with the pupil dilation and adaptation of visitors to the exhibition. The light flickers on causing the iris to expand, making the pupil small. Then suddenly, just as our eyes have adjusted, the light flickers off, causing our iris to contract, making the pupil large. It is relentless and it doesn't stop. After a while, as our eyes become more fatigued, one can see new colours forming from the light being reflected on the grey walls surrounding the artwork: hints of a yellow, golden, red, blue sunset on the horizon appears.

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Further research

Martin Creed website: <http://www.martincreed.com>

Work No 227: (<http://www.martincreed.com/site/words/work-no-227-the-lights-going-on-and-off>)

Martin Creed, *The Lights Off*, ACCA Archive: <https://www.accaonline.org.au/exhibition/martin-creed-lights-0>

Martin Creed, *What's the point of it?* Hayward Gallery, The Guardian review, Feb 2014: <http://www.theguardian.com/artanddesign/2014/feb/02/martin-creed-whats-the-point-hayward-review>

Martin Creed interview: https://www.youtube.com/watch?v=BH_YDixizCA



Ken Jacobs

Brain Operations, 2009 22:08 mins, black and white, silent, HD video
Image and text courtesy Electronic Arts Mix, New York

The artist and their practice

Ken Jacobs is a pioneer of the American film avant-garde of the 1960s and 70s. Jacobs has been practicing in experimental film making (both digital and analogue) since the late 1950s. Born in Brooklyn, New York 1933, he currently lives and works in New York City.

Key ideas

Jacobs is most interested in investigating the cinematic experience, particularly the act of viewing. As he describes, "my work is experiential, not conceptual. I want to work with experiences all the time." (EAI website). Jacob sees cinema as a "development of mind" and is interested in the way the viewer interacts with his moving image works and is intrigued by the nature of human vision and perception.

The artwork

Ken Jacobs's homage to op art, *Brain Operations*, was inspired by an optical illusion produced by chequered tiles on the artist's bathroom floor. '*When editing 16 mm film, I had reached for a strand and closed my hand around nothing,*' Jacobs explains. '*I had visually coupled similar- appearing frames, popping them forward in space. It was a life- changing moment ... I'm staring down and the tiles come up almost to my nose.*' (EAI website)

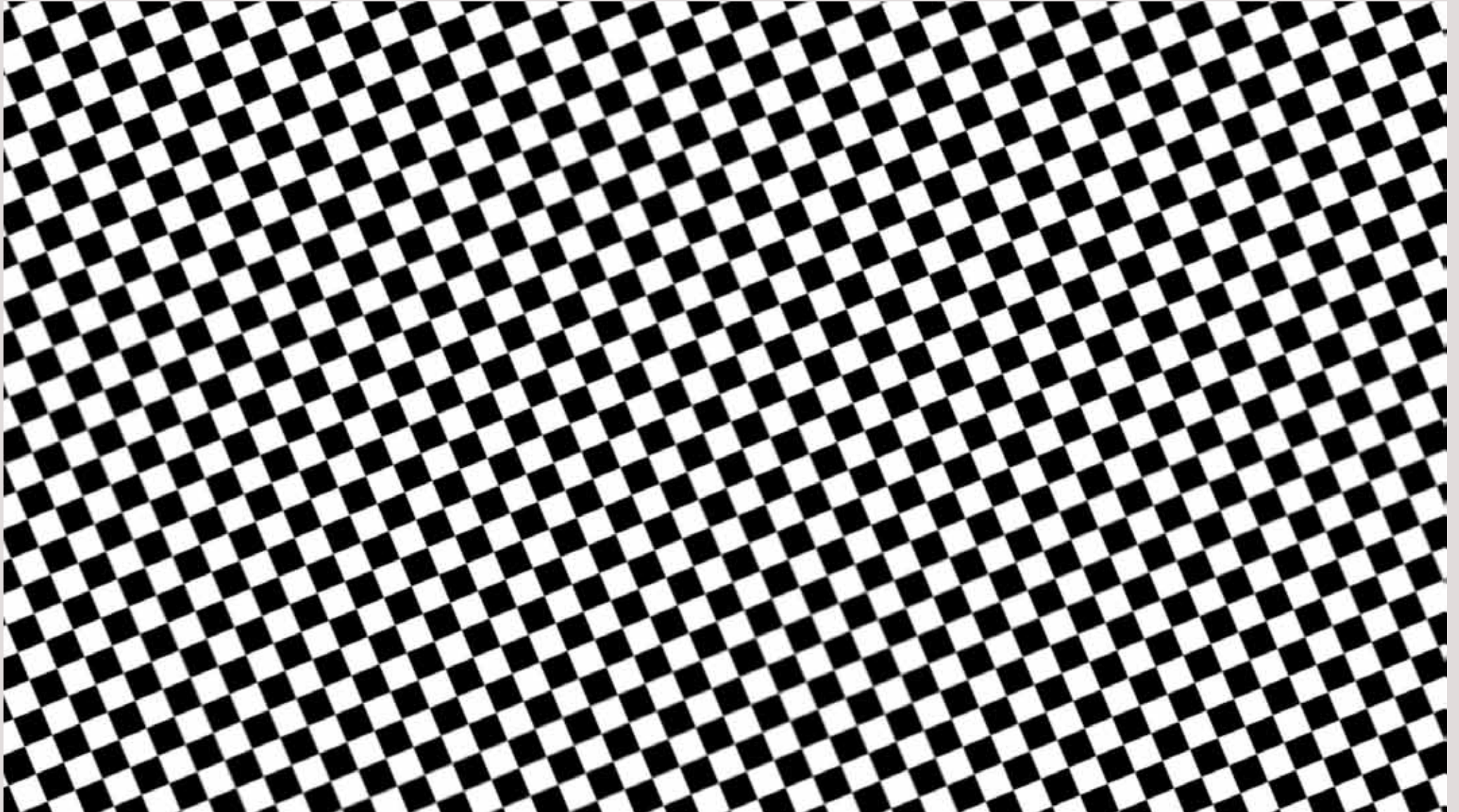
In this work, we see squares and diamonds, or 'tilted squares' shifting and optically mixing. The pattern of the tilted squares changes according to the size of the pattern (eg, large squares, small squares) and the speed of the frame (or image) changes. The title of the artwork refers to the viewer's mental activities watching this film work. It is dazzling but confronting and unpredictable.

At times the shifts between images are slow, allowing the viewer to look intently into the pattern. Then suddenly it shifts, speeds up so fast that the change of scale only flashes before you, and then another change, this time the squares appear to be rotating around, then it goes to black, then it starts again; all in all creating an aggravating visual experience. New optical illusions are created in the process; a bulging geometric circle appears to pulse in the middle of the screen as the footage shifts from large to small tilted squares and smaller circles and repeated circular patterns appear as the tilted squares rotate at great speed around the screen.

Further research

Ken Jacobs website: <http://www.stars-pangledtodeath.com>

EAI, (Electronic Arts Intermix): <http://www.eai.org/artistBio.htm?id=6877>



Jean-Pierre Yvaral

Interference avec le cercle 'A' (Interference with circle 'A'), 1966 rubber and synthetic polymer string, brass tacks, synthetic polymer paint and wood 62 x 62 x 21.5 cm
J W Power Collection, University of Sydney, managed by Museum of Contemporary Art, purchased 1967 © Jean-Pierre Yvaral/ ADAGP. Licensed by Viscopy, 2014.

The artist and their practice

Jean-Pierre Yvaral, was born in 1934 and died in 2002. He was a French optical/kinetic painter. He studied graphic art and publicity at the Ecole des Arts Appliqués in Paris and first experimented with geometrical abstract art in 1954.

Key ideas

In the early 1950s, Yvaral began experimenting with geometrical abstract art and founded, with other like-minded optical artists, a movement called the *Groupe de Recherche d'Art Visuel* or the Research Group of Visual Art. The artists wanted to form a new language of visual effects that

included *moiré* patterns, kinetics and an altering of the two-dimensional plane, in an effort to mess with viewers' experience. Yvaral's works in the mid-1970s were composed using computer-programming algorithms, and he coined the term 'Numerical Art' to describe a new kind of digital visual language.

From 1968 Yvaral started to create many paintings, reliefs and screenprints with vigorous colour interactions and geometrical compositions suggesting movement, projection and recession.

The artwork

This artwork plays with your mind and opens up new optical surprises as you shift your stance and distance to the work. As the title *Interference with Circle A* suggests, there is a visual interference occurring between the black and white lines.

The white lines appear to be radiating from the centre. As you move from side to side you can see a black triangular shadow-like form that moves around the circle. You also notice thin radiating circles pulsing and thumping out of the

circle's midpoint. As you get closer and closer to the work you begin to notice the radiating circles in more detail. Because it is a circle all the lines, white painted lines and black string lead up into the middle, to the centre three-dimensional support. Yvaral has used the basics of Moiré line pattern to create this illusion: where the black string overlaps with the white lines it creates an illusion of a circle. The illusions shift and change depending on where you are standing and how far away you are from the work

Further research

Jean-Pierre Yvaral biography, TATE: <http://www.tate.org.uk/art/artists/jean-pierre-yvaral-2182>

Interface: <http://www.physicsclassroom.com/class/waves/Lesson-3/Interference-of-Waves>

Moiré patterns: <https://www.questacon.edu.au/visiting/galleries/wonder-works/exhibits/moire-patterns>

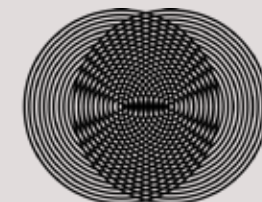
Glossary

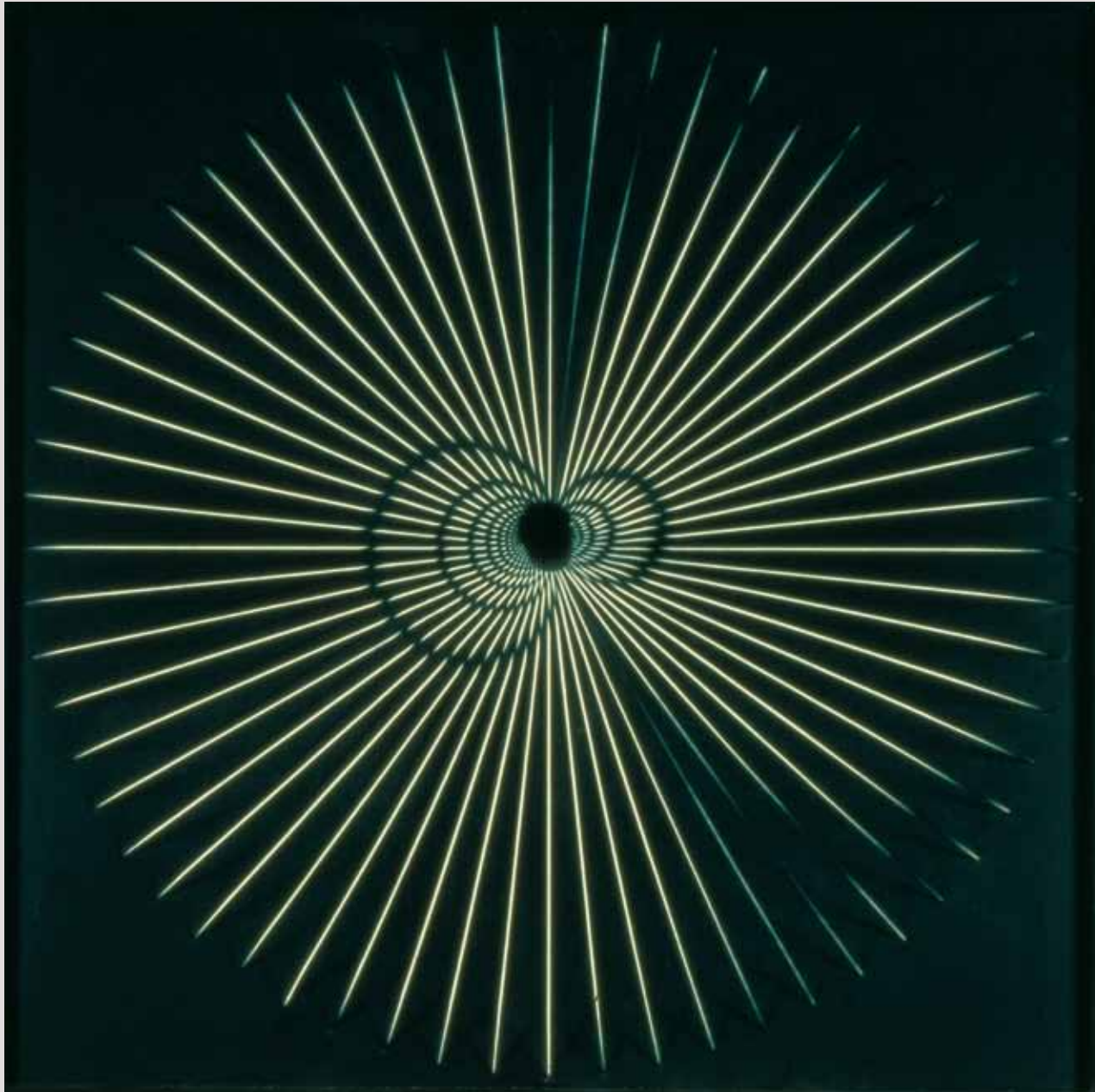
In Physics an **interference** is the combination of two or more electromagnetic waves that move on intersecting paths or mediums. The interference of waves causes the medium to take on a shape that results from the net effect of the two individual waves upon the particles of the medium.

Eg. when two stones are dropped in a pool of water, waves spread out from each source and interference occurs where they overlap.

Moiré pattern: In mathematics, physics, and art, a moiré pattern is a secondary and visually evident superimposed pattern created, for example, when two identical patterns (usually transparent) on a flat or curved surface are overlaid while displaced or rotated a small amount from one another. The combination of the layers creates an alias pattern

Moiré Circles image example:





Cake Industries

ACCA Education

[everything], 2014 MDF, ply, plastics, LEDs, microcontrollers, ducting, wire, speakers
courtesy the artists

The artists and their practice

Melbourne based Media Artists Jesse Stevens & Dean Petersen have worked under the collaborative pseudonym of Cake Industries since 2006. They are artists, tinkers and futuristic dreamers.

Key ideas

Their practice concentrates on electromechanics, handmade electronics, lighting, and robotics to create anthropomorphic, autonomous, self regulating objects to investigate ideas of reality, future, and culture. Heavily influenced by 1950s science fiction dystopia, their work blends old world sensibilities with new world perspective to present an anachronistic representation of society.

(from: <http://www.cake.net.au/about/>)

The artwork

The work was commissioned by ACCA for the exhibition and it presents the pixel as an icon in a choreographed (sequenced) optical mix of colour and form. Cake Industries have used a range of different technologies, circuits and programming to deconstruct the screen and create what they call a 'beautiful mess' to celebrate the pixel.

'We are a world locked in a co-dependent relationship with the screen. From homes to workplaces, mobile devices to billboards, the screen is a constant. It provides our entertainment, information and communication needs 24 hours' a day. The screen is a ubiquitous tool with which we interact with our world. Manifesting as a shrine to the screen, [everything] is a call to a new world order in which technology becomes our doctrine. The building blocks making up the screen — the pixel — are presented as monumental sculptures, worthy of independent worship. It is through deconstruction of the screen as a whole and amplification of scale that we expose the beauty and intricate nature of the individual pixel.'

Inspired by the ancient port gateways that were monuments to industry and symbolised power and importance, Cake Industries have created their own contemporary gateway. The two columns, covered in geometric pixels stand tall installed in the middle of the gallery, taking the form of a "future relic" to be worshipped, explored and walked through.

There is a dull humming sound emitted constantly from the large column structures, this sound although created by Cake Industries through a digital synthesizer, references the hums that AC (alternating current) power emits – heard most clearly in old electricity transformers in some of our local streets.

The pixel content in both towers is not unified, they run separately to each other. The footage runs on a loop so you never see the same imagery, pattern or colour twice. Cake Industries don't want the audience to see or read this work as or like a screen. They want to break apart the screen and focus on the core elements that make up a screen – it's pixels.

Pixels were once more easily identifiable. In the early ages of digital technology, one could see them visibly on the screen, as dots, forming together to make an image. Ten years back, one could see pixels if they put their eye right to the screen. But today our digital technology is so refined, with high quality retina displays, that the pixel has become so small and unrecognizable to the naked eye, it has almost disappeared from our conscious. By creating this kinetic monument, Cake Industries want to remind us of the beautiful, muddled aesthetic and importance of the pixel in our daily lives, culture and society.

The moving and flickering colour or 'content' for each pixel was sourced and digitally programmed by Cake Industries inspired by television artefacts such as static, bad TV cable or VHS mess. Although static, (a concept the younger generation will have to Google!) appeared like a black and white mess, it is actually, close up, a full spectrum of coloured pixels – including blue, grey, white, cream tones. In this work the viewer can see this monument to static and the other iconic remnants of pre-digital technology, as the pixel

Cake Industries

content wavers, flashes, dances and illuminates the space.

All the aspects of technology in [*everything*] have been magnified: the pixels are supersized geometric forms. The electrical cables powering the pixels grow out of the structure, wrapped in thick plastic tubes. The humming sound is magnified so it fills the space with a warm electronic feel. The back of the work reveals the utility of the technology – it is a like a large-scale version of the back of our TV cabinet or Computer desk.



Further research

Cake industries website: <http://www.cake.net.au>

Cake Industries Youtube: <https://www.youtube.com/user/cakeindustries>

Cake Industries *Anachron*: <http://www.fedsquare.com/events/anachron/>

Ugo Rondinone

No. 243 ZWEIUNDZWANZIGS-TERMAERZZWEITAUSENDUNDEI, 2001

Acrylic on canvas

On loan from the collection of Naomi Milgrom AO Photo: John Brash

The artist and their practice

Rondinone is a swiss born (b1964) artist living and working in New York. The stylistic and technical range in his art practice is so broad that his work gives the impression that it could have been made by several artists. As Juliana Engberg, ACCA's Artistic Director explains in the ACCA catalogue *Clockwork for Oracle*, "Rondinone's visual culture converses with many sources... His homage to artists includes everyone from, as Warhol would put it, A to B and back again." There are however, specific themes and symbols that are common in his practice: confectionary colour, pop culture references, stimulating senses, playful, but melancholic. Rondinone often creates hypotic works or spaces that either play with your senses or are difficult to make sense of.

Key ideas

Rondinone's *Zweiundzwanzig*.... is a part of his *Target* painting series. In image reproductions Rondinone's *target* paintings appear to be reminiscent of American Pop (Jasper Jones, *Target*) or colour-field abstraction (Kenneth Noland) but in reality they are more than that. They are vibrating, electric canvases that play with your perception. The arrangement of the candy coloured concentric circles appear to glow, creating the illusion of a concave plane. Rondinone's *target* series, despite being two dimensional, create and evoke the dimensionality of three-dimensional works.



Jasper Jones, *Target with four faces*, 1955
© 2014 Jasper Johns / Licensed by VAGA, New York, NY

As Juliana Engberg, curator of *Optical Mix* describes: "**Rondinone's dazzling, hypnotic target paintings lure us into a momentary state of ecstatic suspension. We are pulled, like synthesiacs towards their licorice swirls to savour the sensation of candy thick colours that disperse and dissolve like fairy floss. Yet there is something of the placebo about these delectable visual bonbons. They excite yet deflect reflection: they satisfy because they humour our desire for diversion and visual entertainment. And yet they are solipsistic in their structure. A round, around and round they go.**"



Kenneth Noland, Installation shot, Pace Gallery, New York, 2014.

ACCA Education

The artwork

This painting, in the tradition of optical art, has a hypnotic effect on the viewer. Hanging on the back wall of the gallery, you can see it peeping through the narrow door frames, enticing you, drawing you into the gallery space. The thick candy coloured concentric bands have been applied so precisely out of a spray can, creating illuminatingly soft edges. It is absorbing, consuming, always changing and pulsing depending on the movement and position of the viewer. As you move closer towards the white centre your eye focuses in the white middle, playing with your pupil as it dilates and contracts. It appears like the coloured rings are expanding outwards, pulsing, as if you are being sucked in to the middle white light void, surrounded by dazzlingly soft candy rings.

Ugo Rondinone

ACCA Education

Further research

Ugo Rondinone, *Clockwork for Oracle*,
ACCA Archive: <https://www.accaonline.org.au/exhibition/ugo-rondinone-clockwork-oracle>

Ugo Rondinone, AGNSW Featured
Artist: <http://www.artgallery.nsw.gov.au/exhibitions/new-contemporary-galleries/featured-artists-and-works/ugo-rondinone/>

Ugo Rondinone, Gladstone Gallery:
<http://www.gladstonegallery.com/artist/ugo-rondinone/work#&panel1-1>

Ugo Rondinone, Kaldor Art Projects:
<http://kaldorartprojects.org.au/project-archive/ugo-rondinone-2003>

Ugo Rondinone, Wikipedia: http://en.wikipedia.org/wiki/Ugo_Rondinone



[Painted Video \(Sequence 1\), 2009 Single-channel High Definition digital video 16:9, colour, silent, 2:46 mins](#)

[Painted Video \(Sequence 2\), 2009 Single-channel High Definition digital video 16:9, colour, silent, 2:55 mins](#)

[Painted Video \(Sequence 3\), 2009 Single-channel High Definition digital video 16:9, colour, silent, 2:38 mins](#)

[courtesy the artist and Anna Schwartz Gallery](#)

The artist and their practice

Daniel von Sturmer was born in 1972, Auckland, New Zealand. He completed a MA in Fine Arts at RMIT in 1999 and in 2001 was awarded a Samstag Scholarship. Daniel von Sturmer works in a range of media to explore the relationship between pictorial and real space, expectation and perception. He explores how we see and what we see. His works play with fundamental laws governing perception and the inertia or kinetic nature of objects.

Key ideas

Von Sturmer's visual experiments often involve simple, everyday materials which explore perception, space and time. They relate to the history of painting, sculptural space, kinetics and the moving image, referencing and replaying aspects of modernism, minimalism and abstraction, in a playful and intimate way. Von Sturmer is interested in how objects and materials can take on new meanings, depending on their context.

Von Sturmer delights in converting the banal object into a thing of curiosity. His use of the video camera, with its capacity to zoom in and out, pan, track, enlarge and diminish as need be, allows him to make common things behave in strange ways, drawing attention to their innate, physical potential. In an age when special effects and digital manipulation are commonly incorporated into photography and video work, he retains a strong sense of truth and refrains from utilising any visual digital enhancements.

The artworks

Daniel von Sturmer's optical shapes in *Painted Video* were created by studio experiments testing the **viscosity** of paint surfaces and colours during a free pour. Charlotte Day, writing in 2009 for von Sturmer's exhibition at the Anna Schwartz Gallery, says that an 'integral aspect of von Sturmer's practice is that the footage is not edited or manipulated. There are no "special effects" — this is how paint behaves.'

Von Sturmer's work continues the art-history trajectory by pushing 'abstract painting into the territory of video and process-based work'. The title of these screen works, *Painted Video*, leaves no mystery to the viewer — they are 'both painting and video'.

Each sequence is dedicated to a specific colour and tone, *Sequence 1* red and dark/light red tones; *Sequence 2*, green and dark/light green tones; and *Sequence 3*, blue and dark/light blue tones. The videos capture the pouring of shiny, wet, coloured paint onto a black surface. As paint is poured the circle stays intact, but grows in size. Adding to the base co-

lour, von Sturmer pours another tone into the middle of the circle. Instead of blending, the colour forms a new circle and pushes the first layer out. The process is repeated, with yet another tone, creating concentric paint rings and a target of colour.

The camera captures the action from a birds eye angle, hovering over each coloured circle. This enables the viewer to see the steady flow of paint dripping from the top of the frame, into the middle of the frame and circle's bullseye. Each sequence plays independently of one another - there is no sync between them. Each sequence is on a loop, so it finishes with a fully expanded colourful target then starts again to the beginning, with just a dot of colour. It is a mesmerising work to watch, the slow speed and glossy nature of the paint and shiny colours grabs your attention and sucks you into the sequence.

Daniel von Sturmer

Further research

Daniel von Sturmer website: <http://www.danielvonsturmer.com/Blog/>

Daniel von Sturmer interview (artistic process): <https://www.youtube.com/watch?v=aNbnerVB-b4>

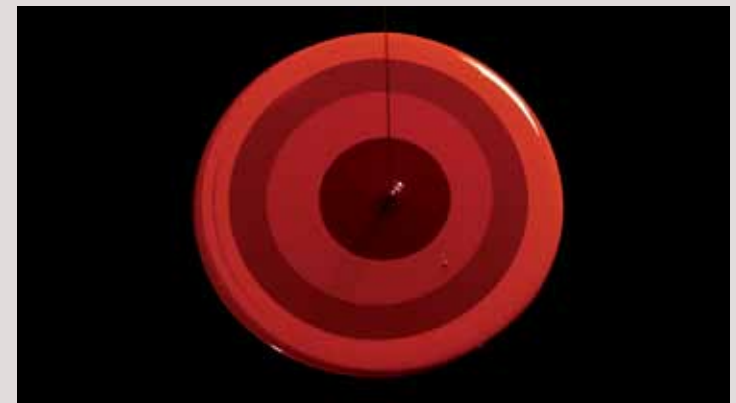
Daniel von Sturmer interview https://www.youtube.com/watch?v=i3lfZ7rew_c

Daniel von Sturmer interview with Lesley Guy: <https://www.youtube.com/watch?v=x2z6AvUXq2E>

Daniel von Sturmer, Anna Schwartz Gallery: <http://www.annaschwartzgallery.com/works/works?artist=16>

Glossary

Viscosity is a measurement of how resistant a fluid is to attempts to move through it. A fluid with a low viscosity is said to be “thin,” while a high viscosity fluid is said to be “thick.” It is easier to move through a low viscosity fluid (like water) than a high viscosity fluid (like honey).



Bridget Riley

Aurum 1976 synthetic polymer paint on canvas 105.5 x 272 x 4.5 cm Purchased 1976 Photo: AGNSW courtesy Art Gallery of New South Wales
© Bridget Riley 2014. All rights reserved, courtesy Karsten Schubert, London

The artist and their practice

Bridget Riley, born 1931 in England, is often referred to as the 'mother of op-art' because of the key role she played in the rise of optical art during the 1960s and '70s. The style concentrated on abstract perception, illusions in visuality and things that blur. Riley was born in London, and she worked as a teacher and in advertising before concentrating on her art practice.

Key ideas

Since the 1960s she has been creating paintings and prints that explore visual sensation and experience.

Between 1961 and 1964 she worked in purely black and white acrylic paints as she was interested in the vibrations and energy that was created between the two tones when combined with line, geometric shape or pattern. From 1964 Riley started to introduce and play with colour in her practice, as seen in *Aurum*. Deeply influenced by the style of painters like Seurat and the Neo-Impressionists and inspired by colourful Egyptian hieroglyphics, Riley began to create works that explored the interaction and contrasts between colours, shape, line and pattern, creating pulsing rhythmic compositions.

'Colour is the proper means for what I want to do because it is prone to inflections and inductions existing only through relationship; malleable, yet tough and resilient.'
Bridget Riley from *The Pleasures of Sight*, 1984

Describing the development of her own Op art style, Bridget Riley has said:

"I couldn't get near what I wanted through seeing, recognizing and recreating, so I stood the problem on its head. I started studying squares, rectangles, triangles and the sensations they give rise to... It is untrue that my work depends on any literary impulse or has any illustrative intention. The marks on the canvas are sole and essential agents in a series of relationships which form the structure of the painting." (Bridget Riley on Op Art website)

The artwork

Aurum is seen on approach to the *Optical Mix* exhibition. It hangs on the first gallery wall, appearing to glow against the deep and warm grey wall. It's soft green, light grey, baby blue, pastel pink and gold strips create a wavering pattern that warmly welcomes the visitor in. 'Aurum' is Latin for 'gold', and this colour is threaded throughout this work, creating what has been referred to as sound waves. The kinetic effect of this patterning creates an illusion of visual and auditory vibrations.

Bridget Riley

ACCA Education



Bridget Riley

Nineteen greys from the portfolio
Nineteen greys 1968 screenprint
on acetate with alternative white
or grey ground card 75.9 x 76 cm
acetate
Purchased 1976 Photo: AGNSW
courtesy Art Gallery of New South
Wales
© Bridget Riley 2014. All rights
reserved, courtesy Karsten
Schubert, London

The artwork

Bridget Riley named this series *Nineteen greys* because of the works are printed in 19 tones of grey. Riley said the 'tonal structure provided both a contrast in terms of light and dark and, where contrast is reduced or absent, [there is] a release of colour — emphasis upon sheer hue.' Gene Baro, the curator of their first showing in 1968 said: 'Nineteen greys is based upon the idea and sensation of denial. It involves certain visual juxtapositions and confrontations where the elements or their activities neutralise one another, cancel one another out. The central subject of the prints is the result of this neutralisation or cancellation.' (<http://www.tate.org.uk/art/artworks/riley-b-p07113/text-catalogue-entry>)

Unlike her painted works (such as *Aurum*) these works were screen-printed. Using the screenprint medium for these works has enabled Riley to create luminous, subtle tonal variations within each shape whilst keeping their sharp crisp edges and flat appearance.

In *Nineteen greys* Riley manipulates the circular shapes and tonal contrasts to generate complex visual sensations. She provides the viewer with clues into the organizational structure and processes behind the work (and also reveals her meticulous, mathematical planning) in a framed instructional drawing:

The grid: there are two types of grid that form the basis for each pattern:

- Diagonal grid in opposition to the horizontal and vertical axial movements
- Vertical / horizontal grid, opposed by diagonal axial movements

The colour: There are two types of grey:

- Warm opposes cold. The tonal variations in the grey creates the sense of movement (fast or slow).
- In each print, the directional flow of the tones is at variance with movement of the angles and the structure of the grid.

Further research:

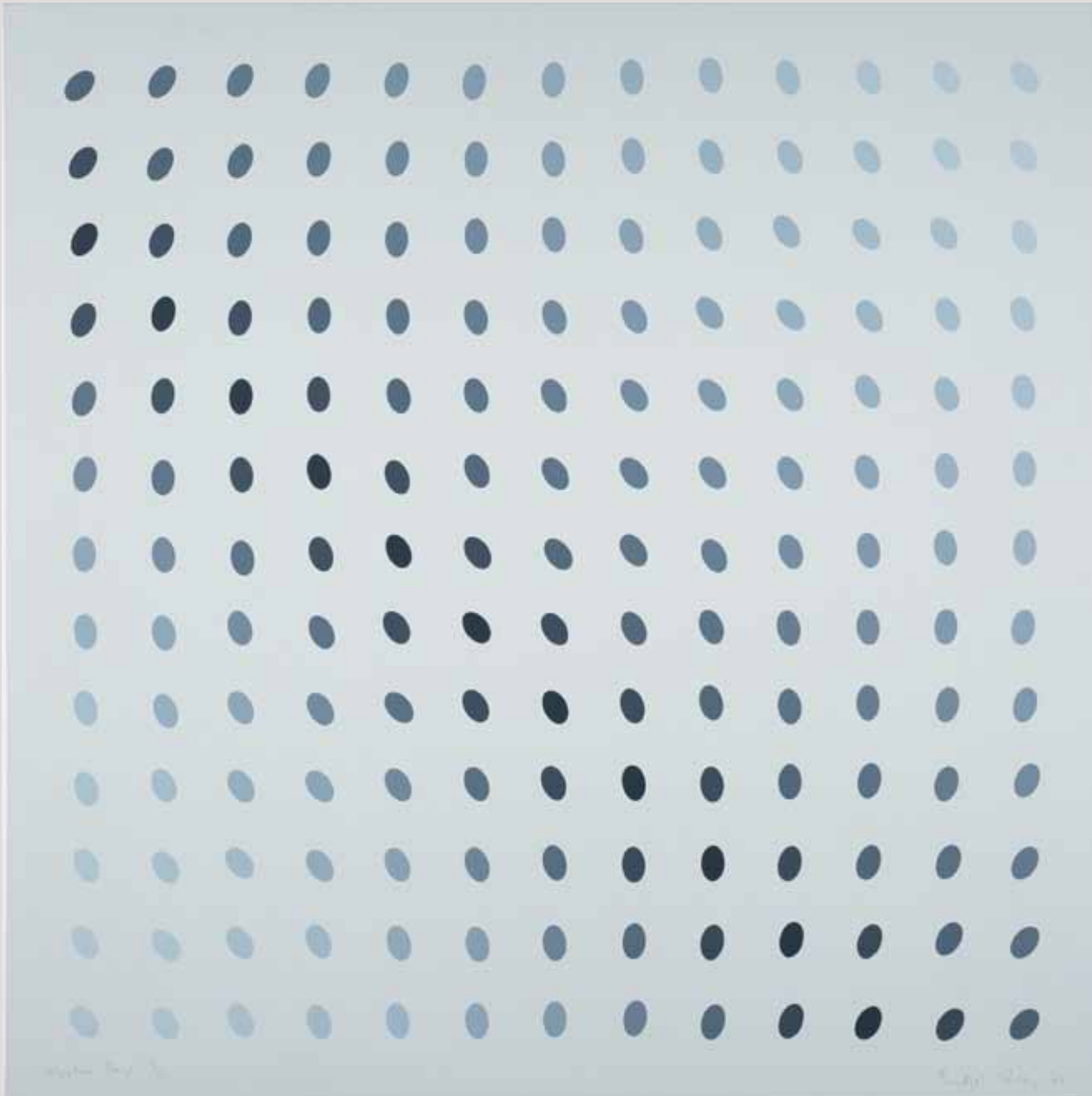
Tate Gallery, *Nineteen Greys*, catalogue entry: <http://www.tate.org.uk/art/artworks/riley-b-p07113/text-catalogue-entry>

Bridget Riley, Artist Biography, TATE: <http://www.tate.org.uk/art/artists/bridget-riley-1845>

Bridget Riley interview: <https://www.youtube.com/watch?v=G9eGzxOq2U>

Bridget Riley, Pace Gallery: <http://www.pacegallery.com/artists/392/bridget-riley>

Bridget Riley, Op Art Biography, Op Art: <http://www.op-art.co.uk/bridget-riley/>



Stanislaus Ostoja- Kotkowski

Sunrise (circa 1965) collage and synthetic polymer paint on aluminium 119.5 x 119.5cm Purchased 1977 Photo: AGNSW courtesy the Estate of J S Ostoja- Kotkowski and the Art Gallery of New South Wales

The artist and their practice

Stanislaus Ostoja-Kotkowski was born in Poland and migrated to Australia in 1949. He studied at the National Gallery School in Melbourne, and later spent one year working in the central South Australian coalfields. He has reflected on how his time there influenced his artistic direction. 'In the centre of Australia,' he says, 'I was struck by the iridescence of the colour ... Not only did colour seem to be vibrating with intensity, but at the same time it gave the impression of being something solid ... The surroundings were drowned in an exciting light that had a life of its own.'

Key ideas

Throughout his career, Ostoja-Kotkowski was influenced by light and kinetics, and pioneered innovative techniques using laser.

The artwork

The colour and pattern is most striking in this work. As the title, *Sunrise* suggests, it is suggestive of a blurry sunrise on a hot desert day. It is reminiscent of the Australian outback and radiates warmth.

Inspired by the illusions created using line moiré pattern, the shapes appear like open shutters, revealing colours and shapes lying underneath. Line moiré pattern is the visual effect of two lines overlapping each other and the resultant movement and shape created from the blending. In this case, the blending has created sun-like circles; a shape we see repeated through *Optical Mix*.

Further research:

Wikipedia, Stanislaus Ostoja- Kotkowski: http://en.wikipedia.org/wiki/Joseph_Stanislaus_Ostoja-Kotkowski

AGNSW Stanislaus Ostoja- Kotkowski: http://www.artgallery.nsw.gov.au/collection/works/?artist_id=ostoja-kotkowski-stanislaus

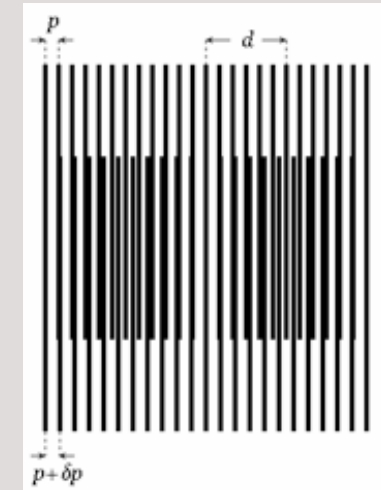
Abstract Australis, Stanislaus Ostoja-Kotkowski: <http://www.abstractaustralis.com.au/artists/artist.cfm?id=1076>

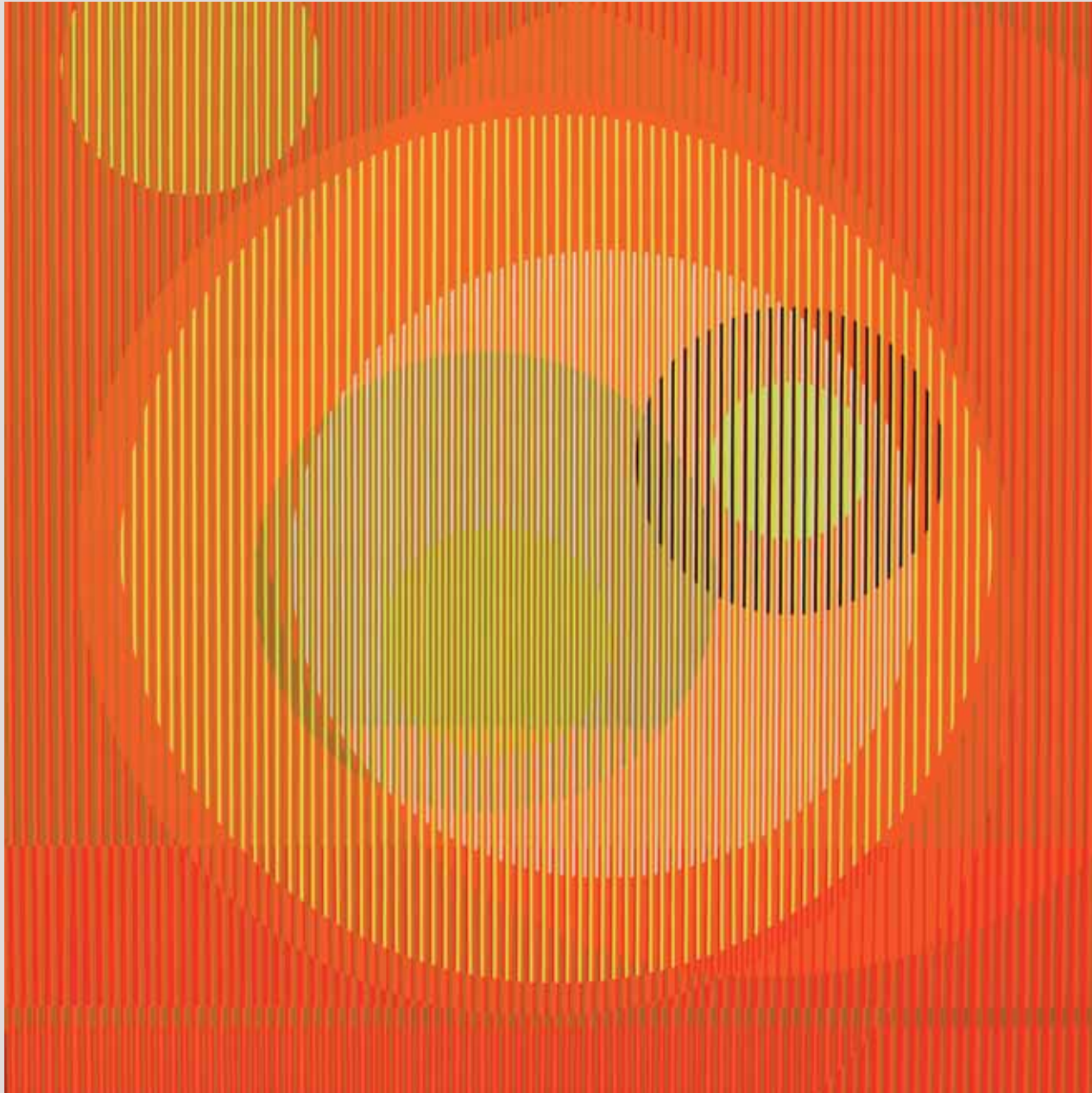
Line Moire: http://en.wikipedia.org/wiki/Line_moiré

Glossary:

Line moiré pattern

Created when the superposed layers comprise of straight or curved lines.





Sliding Ladder: Octagonal Prism 2010 , #1 wood, wool, stainless steel courtesy Kon Gouriotis
Sliding Ladder: Octagonal Prism #2, 2014
Sliding Ladder: Octagonal Prism #3, 2014
wood, wool, stainless steel
courtesy the artist, Arc One Gallery Melbourne and The Apartment Athens

The artist and their practice

Nike Savvas is a Sydney based artist, born 1964, renowned for her physically immersive and optically dazzling installations. Originally trained as a painter, Savvas works seamlessly across sculpture, installation, kinetic and light-based media.

Key ideas

Nike Savvas's work explores abstract, coded (mathematical) and formalist methodologies. She also creates her work with historical and allegorical references, such as her Greek and migrant heritage or the exploration of colour and gestalt theory.

Savvas wants her work to exist on many different levels and platforms. The titles of her artworks provide the viewer with clues for interpretation, but she believes that they shouldn't be seen as a singular or linear meaning. Rather, they have a 'nebular impact', and provide a starting point or suggestion for interpretation, as her work is more about the unique experience that every person has when interacting with her work.

Colour is a constant and core element of Nike Savvas' practice and is visible in the works exhibited in *Optical Mix*. "The way I use colour in different series of works varies. On the whole, though, I like the way colour can transport the viewer to a metaphysical weightless state." (Nike Savvas, Vogue Living)

The artwork

The three works presented in *Optical Mix* were part of an exhibition titled, *Sliding Ladder* at Breenspace in 2010. The series was inspired by mathematical formula, pattern and haptic learning. As Nike Savvas, speaking about the evolution of the series, explained: 'My introduction to algebra in pri-

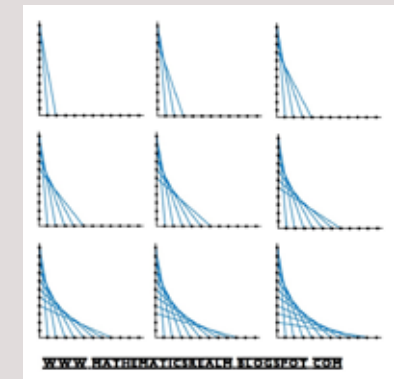
mary school involved making the Sliding Ladder curve with string wound around an L-shaped row of nails hammered into a velvet covered wooden board ... I think we've all made one at some point'. Savvas's school education was prior to the advent of ipads and ipods, a time when mathematic principles were taught through an experiential approach — learning by doing.

"Sliding Ladder is named after an algebraic equation ($x^2/3 + y^2/3 = L^2/3$) that gave rise to string art in the 1960s and 1970s. In this I reference optical art (eg Riley) and, in a broader sense, use this as a means to address different perceptual modalities." (Nike Savvas in Interview, Art Collector)

Savvas has used a very DIY aesthetic to create the works – raw wood and knitting wool. Savvas likes the idea of using materials from the 'real world' and turning them into 'high art', blurring the boundaries and distinctions between what is art and what is not. The use of coloured wool is reminiscent of 1970s string art, a graphic art form with its roots in Mary Everest Boole's 'curve-stitching.' The basis of all string art, as

seen in Savvas' *Sliding Ladder* works is one of the main ideas in mathematical calculus: the use of straight lines to represent curves.

In *Sliding Ladder* Savvas uses the wool as the colour palette as well as the form generator. The process of weaving colourful lines around the octagonal prism creates the hourglass form that floats inside the sturdy geometric frame. The octagonal frames have been designed and crafted according to a meticulously worked mathematical formula (Savvas collaborated with mathematicians to work out the equation).



Parabolic curve created with straight lines on right angle.

Further research

AGNSW Interview with Tom Tilley,
March 2014: <http://www.artgallery.nsw.gov.au/exhibitions/nike-savvas/>

Nike Savvas: Art One Gallery: <http://arcone.com.au/index.php?navi=Artists&navj=Profile&aid=52&navk=NIKE%20SAVVAS>

String Art and Parabolic lines: <http://thelinedesigners.blogspot.com.au>

Sliding Ladder at BREENSPACE: http://www.breenspace.com/exhibitions/nike-savvas-sliding-ladder/001.nike_savvas_bs10.jpg.php

Art Collector, Interview with Nike Savvas, 18 May 2010: <http://www.artcollector.net.au/ArtistInterviewNikeSavvas>

Nike Savvas, Vogue Living, 5 March 2014: <http://www.vogue.com.au/vogue+living/arts/galleries/the+sublime+optical+art+of+nike+savvas,29341>



Callum Morton

Screen #30: Zig and Zag, 2014 wood, synthetic polymer paint courtesy the artist, Anna Schwartz Gallery and Roslyn Oxley9 gallery

The artist and their practice

Callum Morton is a Melbourne based artist who was born in 1965 in Montreal, Canada. He studied architecture and Urban Planning at the Royal Melbourne Institute of Technology (RMIT) before completing a BA in Fine Art at Victoria College, Melbourne in 1988 and MA in sculpture at RMIT in 1999.

Callum Morton has represented Australia at the Venice Biennale in 2007, undertaken major public commissions for the Australian Centre for Contemporary Art, Eastlink Freeway, Monash University Museum of Art, and designed a café/pavilion for Fundament Foundation, The Netherlands.

Key ideas

Morton works with architecture, modernism and the emotional and social impact of architecture and our built environment. Morton's connections to architecture stem from early childhood; his father was an architect and surrounded him with images of the great structures of the modernist movement from an early age. These iconic structures, such as Le Corbusier's Palace of Assembly, left a profound impression on Morton, and a desire to re-evaluate the failure of architecture to both satisfy its creator's idealism and its inhabitants' expectations.

Morton's singular works or installations sit somewhere between architecture and sculpture. They have been shown in a variety of sites including: artist run spaces, private homes, shopfronts, cinemas, gardens, museums, public and commercial galleries. They explore our interaction and relationship with the built environment, and how we encounter, perceive or experience personal and communal space, often unconsciously.

Morton's work will often take the form of scaled-down architectural

models of existing or previously existing buildings, such as his Screen series of mode-scaled drive-in movie screens, as seen in *Optical Mix* with *Screen #30*. For curator Juliana Engberg, writing in *Cinema Paradiso*, Morton's screen works are 'fabulous reinventions and manoeuvres of cinematic op art from Duchamp's rotary discs to Hitchcock's *Psycho* and *Vertigo*, to Jane Campion's surreal interventions in *Portrait of a Lady*, to Austin Power's morph-cuts. Morton makes reference to the history of optics, art and special effects employed in the cinema.'

The artwork

Screen #30 is a miniature version of a drive-in cinema screen which has been painted with repeated black and white zig zags. It is a tribute to Op Art and fondly relates to the historical works of Bridget Riley within *Optical Mix*. The constant zig zag draws the eye in and causes visual confusion. The triangular form of the zig zags is repeated in the wooden frame that crosses in diagonals to support the screen, visible at the front, side and back of the sculpture.

ACCA Education

Drive-in cinemas are now virtually redundant, and this is a nostalgic reminder of the heyday of Hollywood. The first drive-ins were built in the 1930s and they reached their peak of popularity in the 1950s and 60s. However the invention, proliferation and mass consumption of television in the 1960s and social changes led to the decline in Drive-in movie attendance and eventual decline of the drive-in experience.

By covering his miniature drive-in screen with an optical pattern *Screen #30: Zig and Zag* also reaffirms the basis of film making: which in its infancy was all about creating moving images through use of optical and visual effects.



Vehicles fill a drive-in theater while people on the screen stand near a new car, 1950s. (New York Times Co./Hulton Archive/Getty Images)



Curriculum links and Activities

Curriculum Links within the exhibition include:
VISUAL ARTS, DESIGN, VCD, MATHEMATICS, SCIENCE, PHYSICS, PSH-COLOGY

VCE STUDIO ARTS

Unit 2, Area of Study 2

Select two artworks in *Optical Mix* and analyse the ways in which art elements and principles have been used to create aesthetic qualities, communicate ideas and develop style.

Compare and contrast Bridget Riley's *Aurum* and Callum Morton's *Screen #30*. In your analysis discuss the similarities and differences in the use of art elements and principles and materials and techniques.

Research the Op Art style and choose two contemporary artworks from *Optical Mix* to describe how these works demonstrate the influence of this style. In your analysis include discussion of the key aesthetic qualities of Op Art with artwork examples.

Unlike traditional art forms, contemporary artworks can be made from a variety of mediums, materials and techniques. This is particularly evi-

dent in *Optical Mix* in *Work No. 312* by Martin Creed. For this work ACCA sourced the light bulb, light stand and timer. With reference to research around conceptual art, discuss how this impacts on your reading of the work and the meaning and ideas being explored.

Compare and contrast the work of Martin Creed *Work No. 312* and Joseph Kosuth *#1149*. Include in your analysis discussion around the artwork titles, the materials, techniques, processes and the ideas and meaning being explored.

Unit 4, Area of Study 3

Visit *Optical Mix* and then explore *SLAVE* by Christian Capurro. Identify and describe similar themes and ideas within the exhibitions, using select artwork examples to support your discussion.

Write a review of your experience viewing *Optical Mix*, including detail about the exhibition design, curation (placement of artworks) and personal feelings/experiences felt viewing the works.

VCE ART

Unit 2, Area of Study 1

Investigate Cake Industries work [*everything*] and analyse, using the formal and cultural frameworks the ways in which it reflects and communicates the values, beliefs and traditions of the societies for and in which it is created.

Study Callum Morton's *Screen* series, including *Screen#30*. Analyse how these artworks have used Modernist architecture and Drive-in cinema screen to comment on the values, beliefs and traditions of contemporary Western culture.

Using the Formal Framework, compare and contrast the coloured targets (concentric circles) in Ugo Rondinone's *Zweiund.....* and Daniel von Sturmer *Painted Video*.

Describe how Nike Savvas has used of coloured wool to create form.

Informed by Bridget Riley's instructional diagram for *Nineteen Greys* analyse her use of art elements and principles to create optical effects and style.

Unit 2, Area of Study 2

Experiment with video, drawing/painting and sculpture to create optical artworks that shift, play or impact on a viewer's visual perception. Identify which artwork has the biggest impact on you as a viewer and describe why and how with reference to the Formal Framework.

Unit 4

Investigate Martin Creed's *Work No. 312* and Joseph Kosuth's *#1149*. How does the presentation of subject matter, materials, techniques and ideas reflect or challenge artistic traditions?

Compare and contrast the work of Ken Jacobs *Brain Operations* and Bridget Riley *Nineteen Greys*. In your analysis discuss how the medium (digital video compared to screen-print) impacts on your viewing and interpretation.

Choose two artworks from *Optical Mix* to analyse in relation to the Analytical Frameworks.

Select two contemporary (post 1970) artworks from *Optical Mix* and analyse their use of art elements and principles in relation to the Op Art style.

SECONDARY AusVELS

Years 9 – 10 Exploring and Responding

Compare and contrast the concentric circles, colours, materials and viewing experience of Ugo Rondinone's *Zweiund....* and Daniel von Sturmer's *Painted Video*.

Analyse the use of art elements and principles in Cake Industries [*everything*]. Why do you think Cake Industries have created an artwork to celebrate the pixel? Discuss.

Select one artwork from *Optical Mix* that impacted on you the most or that you liked best. Analyse the use of art elements and principles in this artwork. Discuss how it made you feel and why it impacted you the most.

Research Op Art as an art style. Describe how mathematics (Sliding Ladder equation) and science (colour theory and visual perception) influenced the development of the style.

Years 9 – 10 Creating and Making

Create two artworks, of the same scale, inspired by the style and use of repetitive line in Bridget Riley, Callum Morton and Stanislaus Ostojak-Kotkowski's work. Create the first work using repeated line in black and white. Create the second work using two opposite/complementary colours. Compare the optical effects, visual intensity and emotional impact of your own two works. Identify which style you prefer and describe why.

Inspired by Daniel von Sturmer's *Painted Video Sequences* work in pairs to create film works capturing the movement and diffusion of coloured food dye into water. Record all your process and planning in your visual diary. Aspects to consider in production and planning include lighting, background drop/colour and camera angles. You may also experiment with adding glycerin to the water to create a greater viscosity.

Years 7-8 Exploring and Responding

Explore Callum Morton's work *Screen #30*. Do you think it a sculpture or a painting, or both? Explain your reasoning.

Explore Cake Industries [*everything*]. Everything in the work has been magnified (and made louder). How does the work make you feel when you are exploring it in the gallery? How does the humming noise, size of the work, colour and movement impact on your viewing and your feelings looking at the work?

What was your favourite work in *Optical Mix*? Describe your reasons why in a written reflection.

Years 7 – 8 Creating and Making

Inspired by the Sliding Ladder equation shown in Nike Savvas's work *Sliding Ladder: Octagonal Prism* create your own parabolic curve and form inside a polygon using string/wool on a board with nails as central points.

More inspiration ideas for sliding ladders and string art can be found here:

<http://mathcraft.wonderhowto.com/how-to/create-parabolic-curves-using-straight-lines-0131301/>

<http://www.stringartfun.com/section.php/3/1/how-to-use-nails-and-wood>

Create a line moire pattern using hand drawn patterns and transparencies. Draw a simple line (horizontal or vertical) or concentric circle pattern using black and white or two colours on A4 paper. Photocopy the line pattern onto two transparent sheets. On a white background (or an overhead projector) layer the two transparencies on top of one another. Notice the movement occurring when one layer is shifted. Record some of the different line patterns created by photographing a range of the illusions. Display the Moire line patterns as a class and discuss the science behind it – how does it work? (More info: <http://www.exploratorium.edu/snacks/moire-patterns/>)

PRIMARY AusVELS

Levels 4 – 6 Exploring and Responding

Explore Martin Creed's *Work No. 312* and Joesph Kosuth's *#1149*. Do these artworks challenge your ideas of what art is? Write two or three reasons why and then share your responses with the class. Reflect on the range of responses from the class and identify whether there are similarities and common reasons amongst the group.

What was your favourite work in *Optical Mix*? Write down three reasons why, including how it made you feel.

What was your least favourite work in *Optical Mix*? Write down three reasons why, including how it made you feel.

Levels 4 – 6 Creating and Making

Inspired by Joesph Kosuth's *#1149* and colour theory (colour wheel) create two paintings of "the coloured intermediary between two colours." The first painting should include the intermediate colours Orange-Yellow and Green-Blue. The second painting should include the intermediate colours Green-Yellow and Purple-Red.

Inspired by colour theory and the optical illusions in *Optical Mix* create a spinning top colour wheel. By spinning the colour wheel it will blend all the different colours into white. This activity is a simple way of demonstrating that white light is made of different colours of light mixed together. The process and materials are listed here: www.amnh.org/content/download/49771/756809/.../du_u02_white.pdf

Inspired by the Sliding Ladder equation shown in Nike Savvas's work *Sliding Ladder: Octagonal Prism* create your own parabolic curve using either:

Pencil/pen, ruler and graph paper

String/wool, board with nails as central points, scissors

More inspiration ideas for sliding ladders and string art can be found here:

<http://mathcraft.wonderhowto.com/how-to/create-parabolic-curves-using-straight-lines-0131301/>

<http://www.stringartfun.com/section.php/3/1/how-to-use-nails-and-wood>

Levels 1 – 3 Creating and Making

Inspired by Nike Savvas' String works and other study into weaving from various cultures, explore weaving using a weaving template and coloured wool to create shapes and pattern.

Inspired by colour theory seen in *Optical Mix* create a colour wheel with the primary, secondary and intermediate colours.

Identify and discuss complementary colours. Inspired by the colour contrasts used by Op artists and the works of Daniel von Sturmer, Bridget Riley and Ugo Rondinone create a concentric circle target using complementary / contrasting colours (yellow and purple, blue and orange, green and red).

Use repeated line to create an optical illusion.

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Bookings and Enquiries

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