Data as Culture

Contents

The Open Data Institute

'Data as Culture' is reflective of our time. That we received over 80 submissions in 2 weeks from over 20 countries to our call was an amazing display of the emerging global consciousness.

As nations, organisations, and individuals from around the world embrace and release more and more open (addressable, structured, accountable, continuous) data, we can see that we are at the beginning of a new web - much as people asked in the early 90s "why should I have a website?", today's question is "why should I have open data?". The answers are as difficult to enumerate, but no less profound.

In an age of data-driven decision-making, we are led to believe that data represents truth. Simultaneously our collective data shadows are revealing, in real-time, details about our personal lives, social groups, corporate interactions, and civic society.

Combined, these trends open many, many questions: who's data are we trusting? Who wrote the algorithm? Who wrote the code? What are the unexpected consequences of combining different data? If our personal, business, and political decisions are shaped by these data, is there dogma in the code?

Equally, our maker culture is re-emerging, as evidenced not only in events around the world, but in the art commissions themselves: only one of the nine works is screen-based. This concept of the web 'breaking through the glass' and becoming part of our physical world could not be more timely, and significant, to the work of the Open Data Institute: to catalyse the evolution of an open data culture that creates economic, environmental, and social value.

I would like to thank MzTEK for creating and running the commission, all those who submitted, and those who were successful: we will draw inspiration from your work.

Gavin Starks BSc MMus FRSA
CEO, The Open Data Institute
November 2012

Introduction

Data is driving decisions that shape our daily lives: from friends to Governments, we are becoming more reliant on connected statistical data. Global opinion is increasingly communicated through data-driven visuals. Personal well-being, sentiment and influence are continually monitored through data-harvesting devices. Knowledge at all levels and on all topics can be handed to anyone, at any time. Open data is shaping our society.

In curating the collection for the ODI we selected a range of artworks that would not just reflect different data sources, but art which would challenge our understanding of what data is, and how it may affect and reflect our lives. We were privileged in the breadth of content and the quality of the work that was submitted as part of the open call: it allowed for scope to select pieces that could comment on, complement and challenge perceptions of data in a coherent collection. The works range from geomagnetic data visualisations to wall painted cellular automata to tabloid newspapers of search term trend graphs – all tangible interventions into the mass accretion of data around us.

In Phil Archer's work data comes from the depths of time, as symbolic representations of solar eclipses dating from 2137 BCE to 1991 CE are sketched in ultraviolet light. In contrast, 'The SKOR Codex' looks to preserve data for the far off future – the book, conceived and printed by La Société Anonyme, contains encoded binary information that has been carefully fabricated to last for over 1000 years.

The artworks span space as well as time, in '20Hz', geo-magnetic storm measurements are taken from the upper atmosphere of the Earth, while 'Metrography' portrays the London Underground transit map as a spatial reality – data defining specious geography.

In 'Still Lifes and Oscillators 1' the mistreatment of image data by reformatting, reducing, and regenerating, questions the representation of visual data as the ultra-processed image, as the final stable state from a cellular automata cycle is painted back onto the space it was captured from.

Real-time environmental data is embodied in Stanza's life-size sculpture assembled from computer components and acrylic slices of his own physique. In 'Body 01000010011011110110 010001111001' the urban environment provides a dynamic flickering and clicking sentience to the otherwise inert structure, reflecting the personal level of influence data has on an individual, whereas Martin John Callanan's 'Text Trends' reflect our online actions en masse.

Works by Ellie Harrison and Fabio Lattanzi Antinori integrate the current global political environment that is in constant flux, barely noticed on a personal scale, but which potentially have significant consequences for each of us.

As data becomes more accessible to artists, as it opens up for use as a source material, we are seeing more of its assimilation into works that explore environmental socio-political and economic aspects of society. By utilising

data in an experiential way, this collection of works pulls data out of the virtual domain and into our physical world. We hope the artworks provoke discussion around what open data is, how it informs and affects us and how we interpret it in a way that is meaningful.

MzTEK worked with the ODI in the hope that using our networks we could encourage a broad spectrum of applicants, and in the interest of openness we will release the demographic data.

We would like to thank the ODI for the support we have received, and for co-creating this with us.

Finally, we would like to thank all of the artists for their thought provoking and inspiring work, and for their professionalism in the production of this collection.

Julie Freeman & Sophie McDonald
MzTEK
November 2012

The Obelisk (2012)
Fabio Lattanzi Antinori

The Obelisk represents an abstract interpretation of the sacred role that data plays in our contemporary society. It symbolises a metaphorical exploration of the magical side of the world of diagrams and their role of visualising facts as an attempt of objectifying, organising and defining reality.

The kinetic artwork is connected to a series of online news websites, from which it parses xml files in real time, looking for instances of words contained in a custom made database.

Each face of the column forming the core of the sculpture, is covered with a sheet of reactive polymer, which has the property of changing state, ranging from being completely opaque, to transparent; it does that to mimic the dualistic nature of data, which struggles between being an interpretation of reality and at the same time an attempt to objectify it.

The changing of transparency of the surface of the sculpture is dictated by instances of words relating to peace, seen as the necessary condition for all living creatures to prosper on Earth; specifically, The Obelisk reports the amount of references to the four main crimes against peace, as they were stated and codified during the Nuremberg trials and which can be found today in online news.

Such crimes are: genocide, crimes against humanity, crimes of aggression and crimes of war, and they are distributed around the sculpture so that every face of The Obelisk represents the amount of words relating to each one of the four categories.

By referencing the Egyptian obelisks and the Roman celebrative columns, The Obelisk aims to become a living idol, a mysterious object whose meaning is only partially available to the observers; a symbol of the sense of marvel we normally experience when faced with the seducing aesthetics of infographics systems.

Blinking with a rhythm generated over the amount of words gathered, the artwork becomes a beacon which reminds us all of the long, urgent and difficult road to peace.

Fabio Lattanzi Antinori's work is concerned with the individual and the group from a social, historical and cultural perspective focusing around the relationship existing between corporate systems and the language of the interior in the postmodern society. His practice traverses the territory of popular culture in the age of mass information with a specific interest in the sacred role of data, seen as a critical tool to provide an interpretation of reality and an attempt to objectify it.

His language ranges from kinetic sculptures to screen print, photography, video and installations and it has been exhibited internationally in galleries and museums.
fabiolattanziantinori.com

Three flames ate the sun, and big stars were seen (2012)
Phil Archer

The work consists of a canvas coated with pigment that reacts to ultraviolet light, an Arduino-controlled servo motor, and a blue laser. The Arduino is programmed to draw an arc with the laser light on the canvas, causing the pigment to change colour temporarily due to the ultraviolet light emitted in the beam. The pigment then gradually fades back to its original colour. At a certain point on the arc the motor pauses, causing a 'flare' to be produced rather than a focused line. The result is a series of 'painted' images, each different to the last, which appear on the canvas and then disappear.

The parameters of the arc and the flare are determined by data taken from NASA's research into solar eclipses. Data from this resource has been compiled for a number of eclipses throughout history which have been referenced in ancient and historical texts, with a view to connecting historical events with calculated dates of eclipses. The work runs through a condensed timeline from 2137 BC to 1991 AD, using the perceived magnitude of the eclipse and the azimuth of the sun at the time to draw a symbolic representation of the event on the canvas using ultraviolet light.

Historically eclipses and other astronomical phenomena have been regarded as important omens, interpreted in various ways by different cultures. The title of the work, Three flames ate the sun, and big stars were seen, comes from a Chinese record of an eclipse in 1302 BC, and this inscription was later used by astronomers in 1989 to calculate that the length of the day had changed since the date of the record.

The work attempts to draw together these changing interpretations, combining modern technology with pre-scientific ways of thinking to create a poetic representation of the data that retains some of the magic and mystery associated with the natural event.

Eclipse Predictions by Fred Espenak, NASA's GSFC.

Phil completed a PhD in music composition in 2004, creating his own handmade electronic instruments and rewiring existing technologies to see what would happen. Previous works have included modified CD players, electronic music boxes, and the integration of living plants into electronic circuits. These interests soon expanded to include broader artistic issues surrounding technology and nature, while retaining elements from musical practice such as rhythm, physicality, and intangibility. philarcher.net
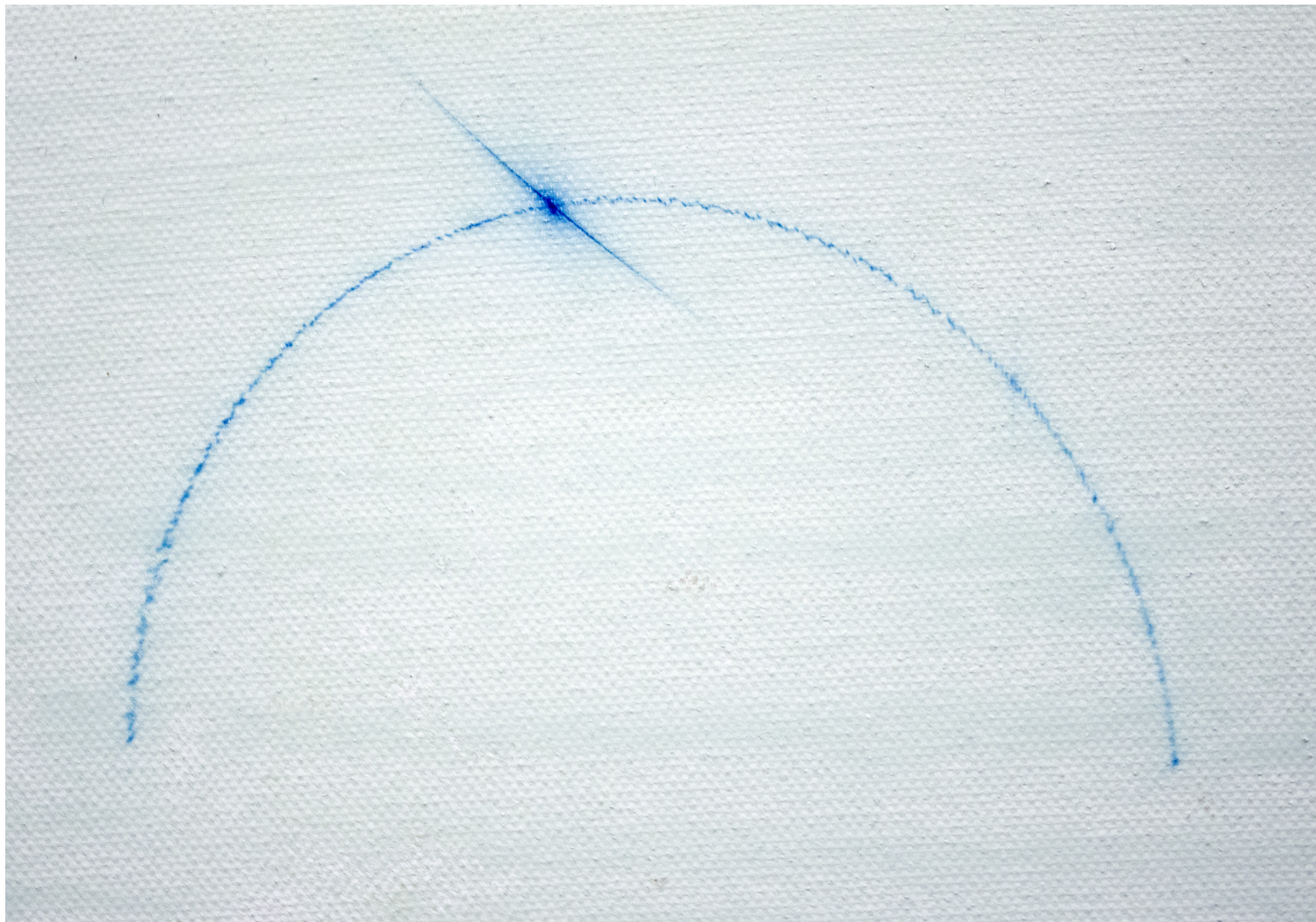
Text Trends (2012)
Martin John Callanan

Text Trends deals with the spectacularization of information. Using Google data it explores the vast search data of its users. Originally an animation, the version for the ODI takes the content generated by search queries and reduces this process to its essential elements: search terms vs. frequency searched for over time, presented as line graphs and published as a series of tabloid newspapers.

The ebb and flow of a series of search terms generated over the last eight years by internet users around the world. Pairs of words such as 'now and later', 'summer and winter' play out matter-of-factly, with all the passion of a market index. Instead of the hyper-interactivity of emerging news aggregators and information readers, Text Trends explores our perception of words through topics like time and politics. The work is an investigation into data use, encouraging criticism on how the data is generated; prompting the question what does the data actually represent?

Martin John Callanan is an artist researching an individual's place within systems.
greyisgood.eu

summer winter

2005   2006   2007   2008   2009   2010   2011   2012
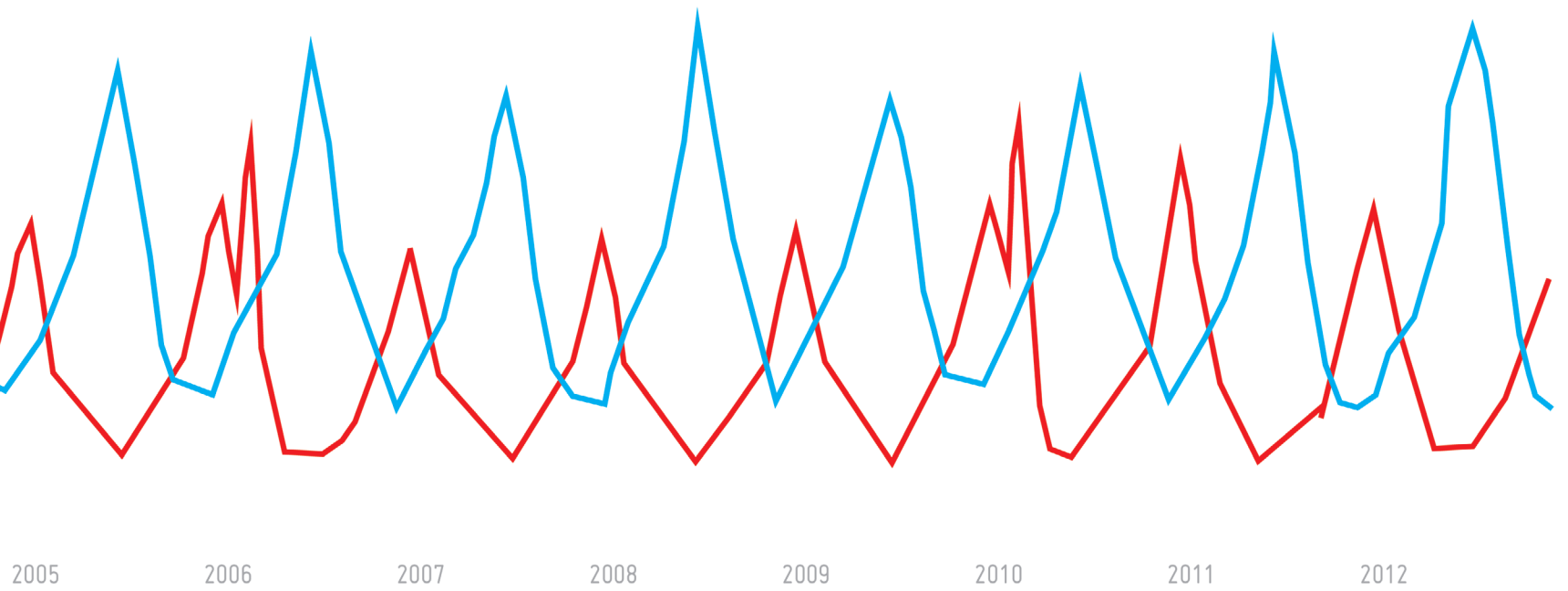
Still Lifes and Oscillators 1 (2012)
Ben Garrod

Via a convoluted process of compression, conversion and transmission; information documenting the site of the painting is broken down to data and decohered, mistranslated and finally planted in John Conway's Game of Life. The fruits of this post-efficient process, the still lifes and oscillators, are sampled and painted onto the floor, ceiling, walls and furniture from a projected image so that when re-photographed from the point of view of the original shot it is flattened to 2D, bringing the plane of the screen across the space of verifiable reality.

A space within the ODI offices is recorded as a digital photograph in JPEG format. The photograph is resized to 320 by 240 pixels, in this format, stretched through the vertical and excised of its finer detail the photograph will now fit nicely on the screen of a Blackberry. Anachronistically – and importantly for this exercise – it will now fit into the transmit window of a slow scan TV programs' window set to AVT90 (the language of the Commodore Amiga's modem).

The digital image is converted to analogue sound, the levels are tweaked by playing it back with a VF sound gradient mixed in from an android tone generator app. The resulting bitmap is resized so that the raw data when copied from a text editor will be small enough (about 5 - 6 thousand characters) to be generated as a plain text QR code (of around 21 thousand squares). This QR code – too big to read – is dropped into Conway's Game of Life.

What's left – after the aberrant data has reacted under the rules of the cellular automaton, and the code has fizzed off into extra dimensions and the gliders have started their diagonal journeys into the void – is sampled and painted back onto the site of the photograph. The cells are coloured after corresponding coordinates of the jpeg after slow scan transmission.

Working around and through and away-from technology's relationship with humanity Ben Garrod has an old computer, some water colours, a mobile telephone, some effects pedals, lots of Greg Egan and Philip K. Dick novels, several tumblr accounts, and an OHP. With these he has made perspectival trompe l'oeil wall paintings intended to collapse virtual and verifiable spaces through design-duration-documentation. Born in Bedford in 1981 he received a BA in Fine Art; painting, from Bath Spa University in 2005 or 2006, and is currently studying for an MFA in Fine Art Media at the Slade. He often works collaboratively with Lee Stone and Adam Burton. Recent work includes experiments with naïve digital image/sound processing, and QR codes that address the viewer-phone as a posthuman consumer.

Metrography (2012)
Benedikt Groß &
Bertrand Clerc

"I measured the distance with my fingers: the map suggested I could walk the distance, a stroll, really. But in the end it took me more than an hour. That day I discovered that maps can lie." (London commuter)

Humans have created various sets of instruments to help them find their way around the landscape: maps, signage, satellite navigation, etc. Maps are abstracted projections of the real world's spatial arrangement, and whether intentional or incidental, they are loose artefacts of reality. For instance the geographical structure of transportation networks are often reshaped to provide users with more understandable transit maps. These distortions have a major influence on peoples' perception of a city's geography, to the point they get stored mentally and become the collective representation of the real world's geography.

One of the greatest examples of this is the famous London Underground transit map. 'Metrography' attempts to explore the mental distortions that the Underground map creates for London commuters. To some extent, it represents the actual geography of London.


Benedikt is a speculative and interaction designer working across disciplines. He is fascinated by the relationships between people, their data and environments. This study has led to his belief that design, driven by an understanding of those relationships, can improve people's lives. He is co-author of Generative Gestaltung which is one of the standard books for computational design and information visualization in German-language with translations to English and French. benedikt-gross.de

Bertrand is a multidisciplinary designer based in London, UK. He is interested in ideological differentials, cultural negatives, the spaces between fiction, history, hyperreality, and the depiction of their prospective implications for the real. In parallel, Bertrand also works a design consultant to help companies create compelling products and experiences for the global market. bertrandclerc.com

Benedikt Groß (German, born 1980) and Bertrand Clerc (French, born 1981) are both currently studying Design Interactions at the Royal College of Art. Their first collaborative project together, Metrography showcases both their skills and interests, producing a complex yet accessible work that critically investigates the implications of technology.
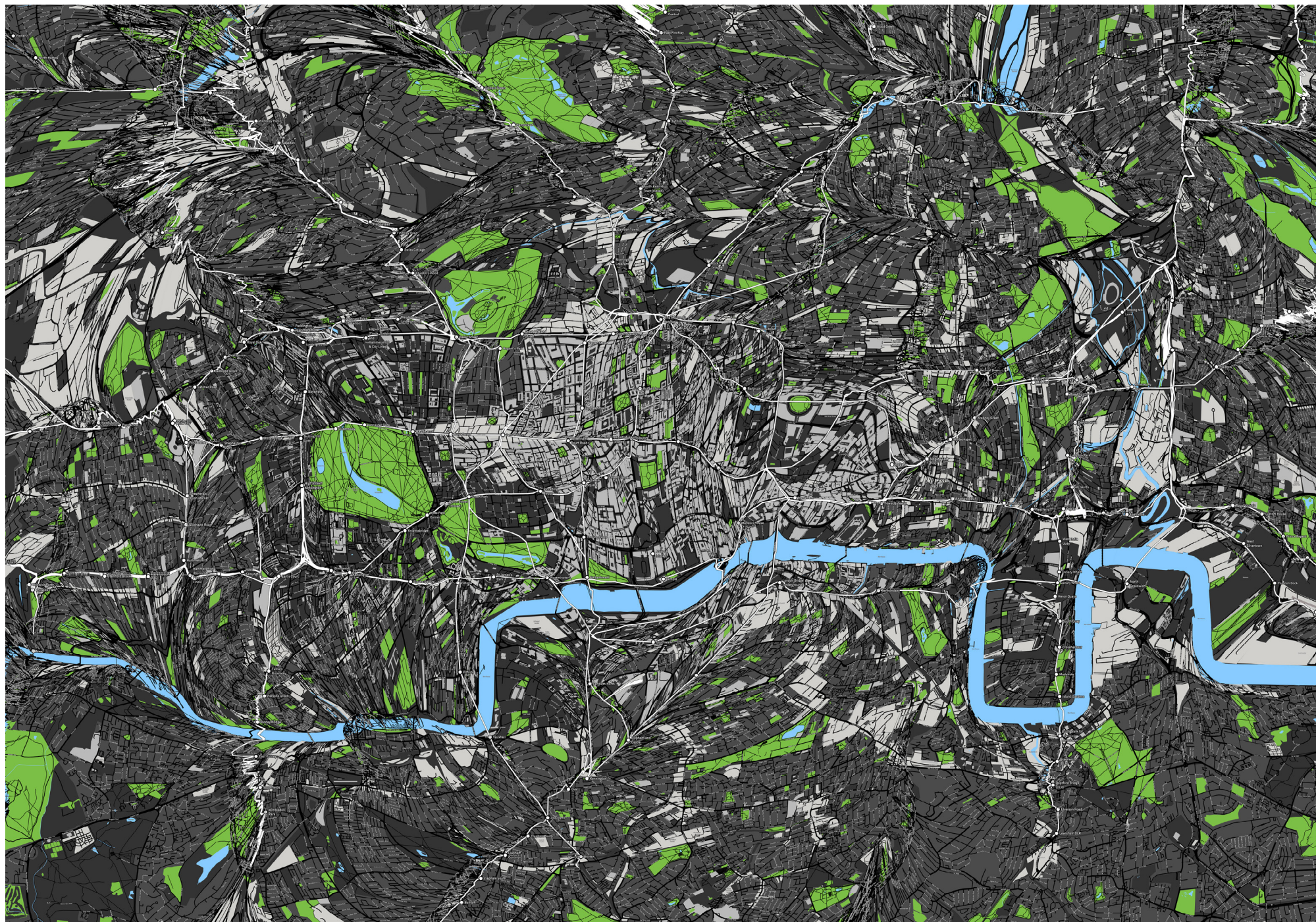
Vending Machine (2009)
Ellie Harrison

Vending Machine was created in 2009 in response to the beginning of the global financial crisis, whilst Ellie Harrison was artist-in-residence at Plymouth College of Art.

It features an old vending machine which has been reprogrammed to release free crisps only when search terms relating to the recession make the headlines on the BBC News RSS feed (see the full list of search terms below). Visitors are welcome to take the snacks as-and-when this happens.

Whilst seemingly an act of generosity – gifting free food at moments when further doom-and-gloom is reported – the Vending Machine also hints towards a time in the future when our access to food may literally be determined by wider political or environmental events. We may not be able to access what we want, when we want, at the touch of a button.

Vending Machine was programmed by Ben Dembroski in PureData and Python with production assistance by Jason Mills.

From 2009 - 2012 the Vending Machine toured to eight exhibition venues across England, Scotland, Wales and Ireland (see full exhibition history below) and twice appeared on national TV – on BBC Two's The Bubble and on the BBC Four series The Beauty of Diagrams.

Search terms:
'administration', 'administrators', 'bailout', 'bail-out', 'bank', 'bankruptcy', 'banks', 'barclays', 'bill', 'bills', 'bn', 'bonus', 'bonuses', 'boost', 'borrowed', 'borrowing', 'borrows', 'budget', 'budgeting', 'budgets', 'business', 'businesses', 'capital', 'capitalism', 'cash', 'chancellor', 'citigroup', 'city', 'close', 'closes', 'closures', 'contract', 'contracts', 'costs', 'credit', 'crises', 'crisis', 'crunch', 'cut', 'cuts', 'debt', 'debts', 'decline', 'declines', 'deflation', 'dollar', 'dollars', 'dow', 'downturn', 'earn', 'earnings', 'economic', 'economics', 'economies', 'economise', 'economy', 'employed', 'employees', 'employers', 'employment', 'equities', 'equity', 'euro', 'eurozone', 'exchange', 'exchanges', 'exchequer', 'expenses', 'export', 'exports', 'figures', 'finance', 'finances', 'financial', 'firm', 'firms', 'fiscal', 'fiscus', 'forecast', 'forecasts', 'ftse', 'fund', 'funding', 'funds', 'gbp', 'gdp', 'globalisation', 'gloom', 'growth', 'hbos', 'hm treasury', 'house', 'houses', 'housing', 'hsbc', 'hyperinflation', 'hyper-inflation', 'imf', 'import', 'imports', 'income', 'inflation', 'insurers', 'interest', 'investment', 'investments', 'investor', 'investors', 'job', 'jobless', 'jobs', 'labour', 'lending', 'liquidated', 'liquidation', 'loan', 'loaned', 'loans', 'loss', 'losses', 'managers', 'manufacturer', 'manufacturers', 'manufacturing', 'market', 'markets', 'meltdown', 'money', 'mortgage', 'mortgages', 'nasdaq', 'nationalisation', 'nationalised', 'natwest', 'negative', 'neoliberal', 'neoliberalism', 'osborne', 'output', 'outputs', 'pay', 'payday', 'payment', 'payments', 'pension', 'pensions', 'pinch', 'pound', 'pounds', 'poverty', 'price', 'prices', 'privatisation', 'privatised', 'profit', 'profits', 'properties', 'property', 'rate', 'rates', 'rbs', 'recession', 'recessions', 'recoveries', 'recovery', 'repossessed', 'repossession', 'repossessions', 'retail', 'risk', 'risks', 'sale', 'sales', 'saving', 'savings', 'share', 'shares', 'shoppers', 'shopping', 'slowdown', 'slump', 'slumps', 'spending', 'squeeze', 'sterling', 'stimulate', 'stimuli', 'stimulus', 'stock', 'stocks', 'store', 'stores', 'struggle', 'struggles', 'struggling', 'subsidies', 'subsidy', 'tax', 'taxes', 'trade', 'traded', 'trades', 'trading', 'treasury', 'unemployed', 'unemployment', 'union', 'unions', 'usd', 'wage', 'wages', 'worker', 'workers', 'workforce', 'wto', 'yen' [213 total]

Ellie Harrison was born in London in 1979 and now lives and works in Glasgow, where she sees herself as a 'political refugee' escaped from the Tory strongholds of Southern England.

She describes her practice as emerging from an ongoing attempt to strike-a-balance between the roles of 'artist', 'activist' and 'administrator'.

As well as making playful, politically engaged works for gallery contexts, she is also the coordinator of the national Bring Back British Rail campaign, which strives to popularise the idea of renationalising of our public transport system, and is the agent for The Artists' Bond - a long-term speculative funding scheme for artists.
www.ellieharrison.com

VENDING MACHINE

20Hz (2011)
Semiconductor

20Hz observes a geo-magnetic storm occurring in the Earth's upper atmosphere. Working with data collected from the CARISMA radio array and interpreted as audio, we hear tweeting and rumbles caused by incoming solar wind, captured at the frequency of 20 Hertz. Generated directly by the sound, tangible and sculptural forms emerge suggestive of scientific visualisations. As different frequencies interact both visually and aurally, complex patterns emerge to create interference phenomena.

20Hz is a moving image work generated directly from scientific data made audible. We wanted to create a visual interpretation that used the sound to directly create and control it, and which suggested observation of natural phenomena through scientific endeavour and process.

The data has been collected by a large magnetometer network, CARISMA (Canadian Array for Real-time Investigations of Magnetic Activity) which covers a large region of North America. It collects data from the Earth's magnetosphere, where interactions occur between particles, magnetic fields and the solar wind: this is what we can hear. To access and process the data we worked with one of the project scientists.

The magnetometers are comprised of a coil of wire wrapped around a high-magnetic core which acts as a 'pick-up' for small fluctuations in the magnetic field, and generates a voltage in the coils that can be measured. The signal acquired from the coils is collected at 100Hz and is down-sampled to 20Hz, as this represents one of the frequency ranges of interest in space physics. When the measured signal is played at a suitably high sampling rate (44.1kHz) it becomes audible.

It is thought that some of the sounds can be attributed to specific interactions occurring in the Earth's upper atmosphere; the tweeting noises are a form of magnetic pulsation generated by various instabilities, and the deep rumbles are from the high-speed solar wind flowing over the Earth's magnetic field boundary and causing ripples to form.

Working with the sound as a waveform, we applied unique custom programming and 3-D manipulation techniques to realise sculptural forms that are born directly from, and animated by the sound. You see the data as a physical material. We wanted to represent waveforms in a way that was unfamiliar, and the result was a technique that reveals them as three-dimensional and tangible looking objects, which appear as quivering waveforms that interact to create interference patterns in varying detail. Aesthetically we wanted to produce something which created a sense of awe.

We used familiar devices akin to scientific documentation to suggest scientific techniques and technology, to produce a kind of 'technological sublime' where you feel like you are witnessing some kind of natural phenomena. We employed a shallow depth of field to convey observation through a scientific instrument, and black and white to steer towards the simple imagery often employed in scientific visualisations, similar to images obtained by

electron microscopy. These techniques are also used to imply the presence of a human observer witnessing or documenting these events.

20Hz was originally co-commissioned by Arts Santa Monica & Lighthouse. Supported by the British Council. Audio Data courtesy of CARISMA, operated by the University of Alberta, funded by the Canadian Space Agency.

Semiconductor is UK artist duo Ruth Jarman and Joe Gerhardt. Through moving image works they explore the material nature of our world and how we experience it, questioning our place in the physical universe. Their unique approach has won them many awards and prestigious fellowships, most recently the Samsung Art + Prize 2012 for new media, the Golden Gate Award for New Visions at San Francisco International Film Festival USA 2012 and the Art and Science Award at Ann Arbor Film Festival USA. www.semiconductorfilms.com

The SKOR Codex (2012)
La Société Anonyme

On the chance that someone will be out there, La Société Anonyme has approved the placement of 8 books on 8 locations on Earth. The book, called The SKOR Codex was placed on Thursday (July 12, 2012) aboard the first of eight locations to host the portrait of the diversity of life and culture at the Foundation for Art and Public Domain (SKOR). The 1156 gram book contains greetings from the SKOR staff in four languages, samples of artworks from different artists and eras, and field recordings of the SKOR premises. The Codex contains binary information that an advanced technological civilization could convert into diagrams, pictures and sounds, including a message from SKOR managing director Tati Freeke-Suwarganda.

Messages in the record were designed to enable possible decoding by future civilizations who might encounter the book in hundreds of years, hence the integration of some pictures of 21st century SKOR. "The book will be encountered and decoded only if there are advanced civilizations on earth," said La Société Anonyme. "But, as the beautiful message from managing director Tati Freeke-Suwarganda and web curator Annet Dekker indicate," Société Anonyme added, "the launching of this 'bottle' into the cosmic 'ocean' says something very hopeful about art."

La Société Anonyme chose the medium of book as a way of preserving the portrait because it can carry much more information in the same space than for example an engraved stone. Each book is made of acid-free paper, sewn onto bands of rameh, reinforced with Japanese paper and wrapped in an acid-free protective cover. It contains, in symbolic language, information on how the book is to be decoded. The book begins with photographs and diagrams in binary form, depicting the SKOR buildings, surroundings, artifacts, objects, office spaces, and some hint of the richness of SKOR's civilization.

Included are schematics about SKOR, its location in Amsterdam, the Netherlands, photographs of Ruysdaelkade 2, bicycles, a large fax machine and desks. This is followed by spoken greetings in four human languages, including a spoken message by Annet Dekker, web curator of SKOR. The SKOR Codex next includes field recordings made at Ruysdaelkade 2. The artwork selection represents the cultural diversity of SKOR. The entire book counts 304 pages.

The book is likely to survive more than a thousand years, representing a message into the future, a point referred to in managing director Tati Freeke-Suwarganda's message. The book was hand bound by the Wilgenkamp bindery. The book was commissioned by SKOR, and produced by La Société Anonyme.

The first book has been archived at the Gerrit Rietveld Academie in Amsterdam. The second book is located at the National library of the Netherlands in The Hague. The Open Data Institute in London is taking care of the third book. The last five remaining copies will be sent to other locations on the planet.
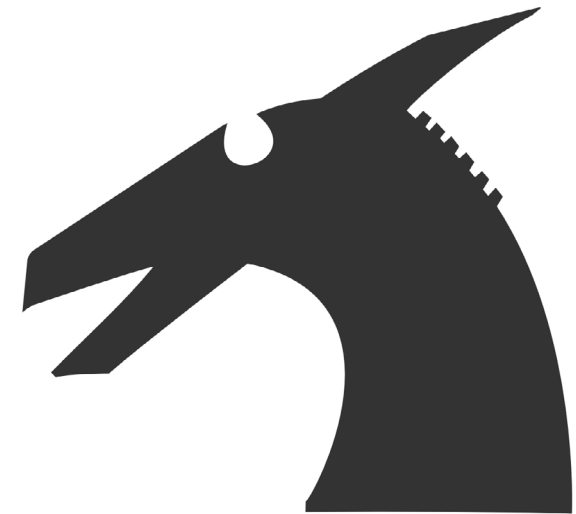
La Société Anonyme is an artist's collective born from the ashes of the Dutch 2013 funding cuts to the arts. An avant-garde art collective with a corporate twist après la lettre, La Société Anonyme launches its first product in July 2012: The SKOR Codex, a book preserving the legacy of one of the Netherlands' perishing art organisations for the distant future. Adopting an experimental model of artistic corporation, La Société Anonyme responds to the commodification of culture by searching for alternative ways to make, promote and sustain art. La Société Anonyme is represented by Dušan Barok, Danny van der Kleij, Aymeric Mansoux, and Marloes de Valk. societeanonyme.la
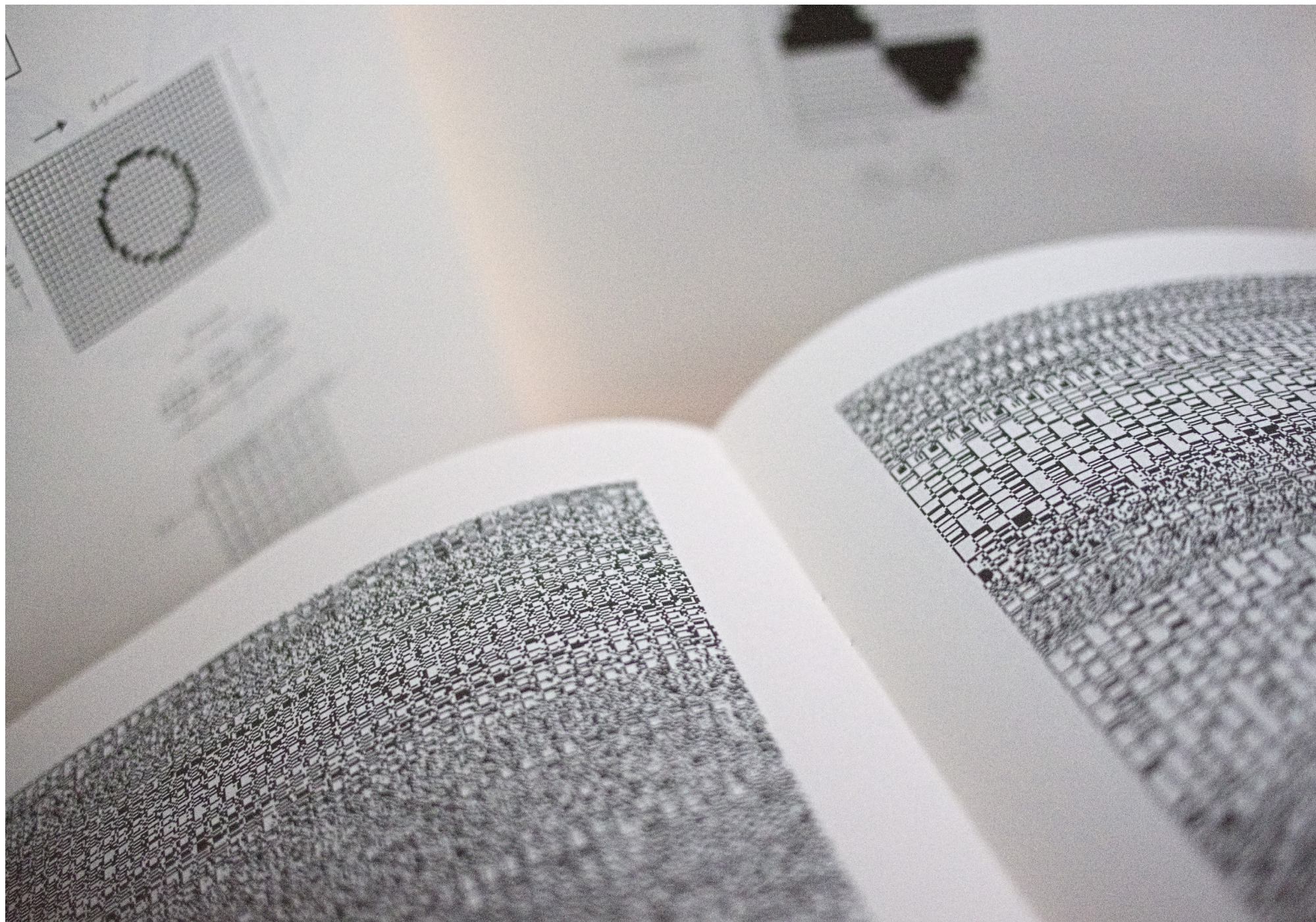
Body 01000010011011110110010001111001 (2012)
Stanza

This new sculpture, commissioned by the ODI, captures real-time changes in the city and represents the changing life and complexity of urban space as an emergent artwork – the art of gathering environmental data.

Body is made of thousands of computer parts, leds, motors, wires and custom made electronics all responding to changes in temperature, light, pressure, noise, and the sound of the city recorded by the artist's sensor network in South London, UK. The form is based on a 3D scan of the artist's body (the body in the data space).

Software gathers data from the sensor network via a custom made java proxy server and the mote reader software (programmed in visual basic) sends events to the sculpture. The manipulation of data powers all the events, actions and processes seen in the sculpture. What you witness are thousands of parts that come alive as the data changes and evolves. It is a hybrid work powered by live events.

Body goes beyond single user interaction to monitor and survey in real time the whole city and entirely represent the complexities of the real time city as a shifting morphing complex system. The interactions of all the data are re-formed and re-contextualised in this real-time artwork.

The artwork explores new ways of thinking about life, emergence and interaction within public space and how this affects the socialization of it.

Using environmental monitoring technologies and security-based technologies Body questions the audience's experience of real time events and creates physical visualizations of life as it unfolds.
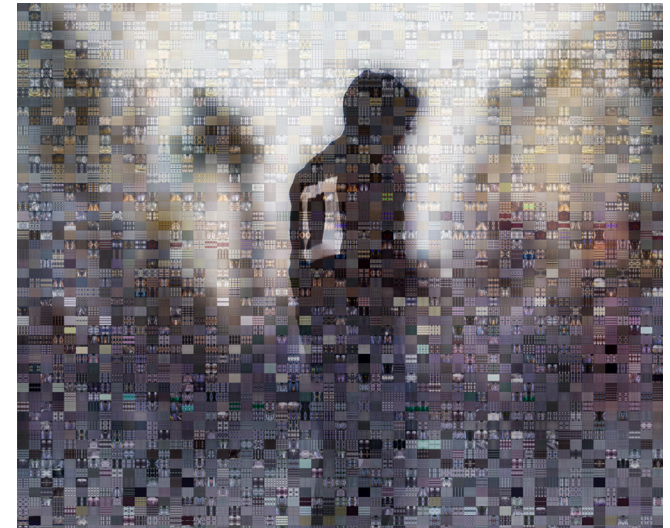
Stanza is an internationally recognized artist, who has exhibited worldwide since 1984. His artworks have won prestigious painting prizes and ten first prize art awards including: Vidalife 6.0, SeNef Grand Prix, and Videobrasil. Stanza's art has also been rewarded with a prestigious NESTA Dreamtime Award, an Arts Humanities Creative Fellowship and a Clarks bursary award.

His artworks have been exhibited globally with over fifty exhibitions in the last five years including: Venice Biennale, Tate Britain, Madrid, Novorsibirsk, Sydney, Mexico, London, Sao Paulo

His mediums include painting, video, prints, generative artworks and installations. Stanza is an expert in arts technology, CCTV, online networks, touch screens, environmental sensors, and interactive art. Recurring themes throughout his career include, the urban landscape, surveillance culture and alienation in the city. stanza.co.uk
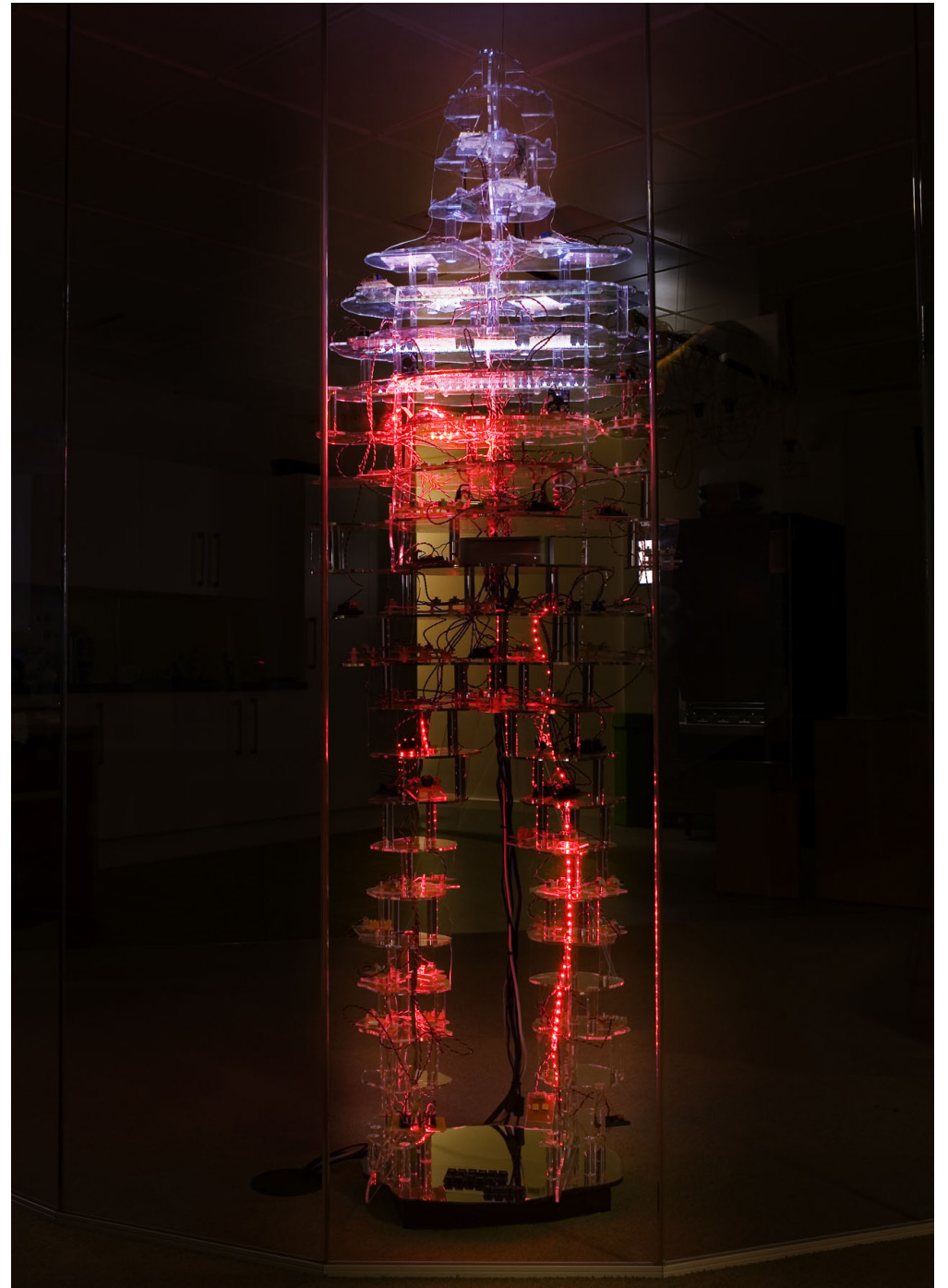
Data as Culture

The Open Data Institute is catalysing the evolution of open data culture to create economic, environmental, and social value. It will unlock supply, generate demand, create and disseminate knowledge to address local and global issues.

theodi.org
@ukodi

MzTEK is a non-profit art organisation with the aim of addressing the imbalance of women artists working in the fields of new media, computer arts, and creative technology.

mztek.org
@mztek

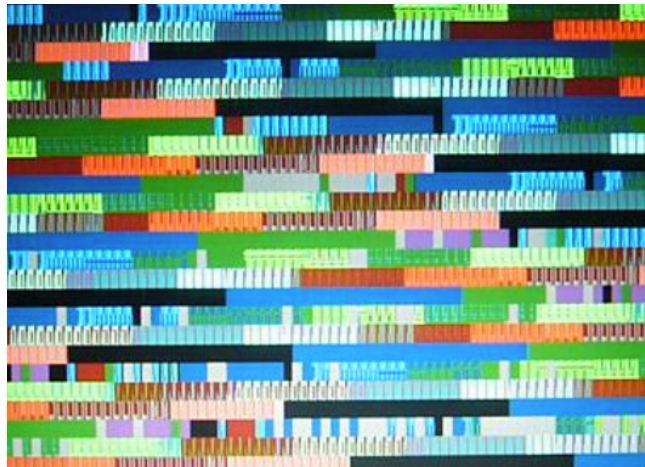Julie Freeman is an artist and researcher exploring the role of data as an art material and beyond.

translatingnature.org
@misslake

Image: Laptop Dying (2004) Julie Freeman