

Daniel Canogar: Fluctuations

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“Change is now our only constant, a global institution.” Gene Youngblood¹

Technological changes of recent decades, the rapid development and expansion of digital information systems and communication networks brought about a profound transformation of society and radically changed our world. Already in the 1990s, the Spanish sociologist Manuel Castells referred to the global network as the dominant cultural logic of our time². Mobile telephony and the internet as the ubiquitous network are the backbone of our networked society – they are the metamedium combining it all. For the American sociologist and theoretician Benjamin Bratton, the different computer technologies jointly form the body of an “accidental megastructure”³. At any time and virtually everywhere, they offer connection and access to a worldwide digital network of data and information which is superimposed on our reality like a second skin. Our world is ruled by data. In recent years, the generation, distribution as well as storage of data has reached gigantic dimensions, and the worldwide data volume increases faster than ever before. Objects have become “smart”, transformed into hubs of the internet of things. Data is not just digital material but also has a major impact on society by shaping the material conditions in which we find ourselves.

The exhibition *Fluctuations* shows works by the Spanish artist Daniel Canogar, exploring the paradigm of our data society and reflecting a world of changing media. Canogar investigates the interfaces and transitions between virtual and real worlds. In expansive, large-scale installations and generative video animations, the artist is dealing with the impact of media technologies on society; he vividly presents the transition from electromechanical to digital systems and is searching for the individual person’s impact and position in the technologically networked world. *Fluctuations* stands for a world in flux – a world of transient, fleeting memories, shifting media and continuously increasing data streams.

Programmatically placed at the entry of the exhibition is a work which provides a poetic symbol of today’s connectivity by showing, in a sensory way, the worldwide data network as the determinative force of our times. A display case built into the exhibition architecture presents a tangle of cables through which energy is apparently still flowing. The work from the *Pneuma* series, begun in 2009, presents scrapped and discarded telephone cables as vital channels of our networked world. The cables manifest the immaterial network which today is no longer tied to material carriers alone but, through wireless transmissions, obtains ubiquitous access to the data sphere. “*Pneuma*”, the Greek word for breath, explores in a metaphorical sense the pulsating data flow as an underlying force of the information society. Cables render the global energy flow possible, comparable with blood vessels in the human body which transport vital oxygen into our cells.

Fluctuating memories

*“When it was announced that the Library contained all books, the first reaction was unbounded joy. All men felt themselves the possessors of an intact and secret treasure.”*⁴ Jorge Luis Borges

Canogar found the cables for his *Pneuma* series at junkyards and landfills for electronic scrap. In addition to the huge mounds of cables, he became inspired by the great variety of discarded electronic devices. Collecting obsolete electronics became his passion and at the same time a driving force for many of his works. These devices and electronic tools present one important aspect of our dealing with media technologies.

1. Gene Youngblood, *Expanded Cinema*, P. Dutton & Co., Inc. New York 1970, p. 50.

2. Manuel Castells, *The Rise of the Network Society*, Blackwell Publishing Ltd., Oxford 1996.

3. Benjamin Bratton, *The Black Stack*, in: *e-flux journal*. *The Internet Does Not Exist*, Sternberg Press 2015, p. 280: „Instead of seeing the various species of contemporary computational technologies as so many different genres of machines, spinning out on their own, we should instead see them as forming the body of an accidental megastructure.“

4. Jorge Luis Borges, *Fictions*, Penguin Books, London 2000, p. 69.

Although mindlessly discarded, they are nonetheless our interface with electromechanical and digital systems to which we entrust our data. Thus, personal memories are connected to them, and their loss also means that a part of one's personal history is forgotten. Canogar himself describes his work with obsolete technologies as being comparable to that of an archeologist. In his installations, he reconstructs the functionality of these old devices by means of perfect video mapping and thereby breathes new life into them.

An impressive example in this respect is Canogar's series *Small Data* from 2014 which will be shown completely for the first time in this exhibition. *Small Data* consists of 12 installations, each dedicated to different discarded electronic devices – from VHS tapes, DVDs and Game-Boy, all the way to mobile phones, hard disks and scanners. Each tableau presents a quasi-animated still life that reveals the use of these devices and the creativity they inspired in their users. Canogar makes personal and collective memories come alive in *Small Data* – memories of a time when the devices were still fully functional and were used as tools. As *memento mori*, *Small Data* researches the life and death of consumer electronics. Canogar organizes the findings as fragile relics of a bygone era, a strategy that allows him to examine issues of our cultural memory. *Small Data* may also be understood as a critique of our consumer society and an industrial system which relies on ever new updates and versions as replacements of existing, still fully functional equipment.

Small Data is Canogar's nostalgic view towards our digital tools which have increasingly become carriers of our memories. Today, digital technologies ubiquitously and simultaneously provide all of the knowledge and know-how which formerly had been stored in libraries and needed to be painstakingly acquired. Yet the new archives and libraries of our knowledge are fragile and broken. We entrust to digital infrastructures all our knowledge and memories., and we set our hopes on all of it being secure in the "cloud". But it is now already suspected that little will remain of our time. The works of the *Small Data* series reveal a fear of the "digital dark age" – the loss of all data and thus of our collective knowledge. These processes of disintegration and breaks in the cultural memory are fundamentally important for Canogar's oeuvre because without our memories we are living in what he describes as an "amnesiac present, textureless and flat, lacking the perspective of time" ⁵.

Fluctuating media

Memories of a medium whose days are definitely numbered are evoked in the impressive installation *Sikka Ingentium*, which stands in the center of the exhibition. Canogar had already used the DVD as a reference medium in a number of his works from the past. As a storage medium for the global distribution of movies and films, the DVD has been the market leader for many years. Yet in our times, where films are increasingly being watched via streaming technologies – it will soon be just as obsolete as the analog storage media preceding it. The installation *Sikka Ingentium*, created in 2017, is an impressive example of Canogar's critical approach to this constant technological change. Canogar reviewed a total of 2,400 DVDs for this oeuvre and extracted film material from them which he then re-projected, via complex video mapping, onto the shiny surfaces of the DVDs. By overlaying them in different levels, the sculptural aspect of the installation is emphasized. *Sikka Ingentium*'s shape is reminiscent of a cloud, a reference to the fact that DVDs had their day as data carriers and are now superseded by the data cloud.

Excerpts from original movies are categorized and accordingly arranged either by color, shape, movement or subject matter – such as car chases, close-ups of faces, kissing scenes or street settings. Their fragmentary character provides memory flashes of familiar scenes of a global pop culture memory. The original cinematographic experience is broken down into a pictorial structure which is more reminiscent of a database:

different subject matters are arranged according to formal criteria and, simultaneously presented side by side. This overwhelming deluge of images is superimposed with a layer of soundtrack snippets from the selected movie excerpts. The Canadian musician and composer Alexander MacSween – with whom Canogar collaborated for *Sikka Ingentium* – condensed these soundtrack snippets to create an impressive composition. The overall result presents an audiovisual mosaic whose details will divulge, in a closeup, the pictorial material used and whose original narrative contents are transformed into abstract patterns reflected into the exhibition space via the shiny surfaces of the DVDs. Thus *Sikka Ingentium* tells us about a medium whose content diversity – virtually a “repository of the memories of a generation”⁶ – will soon expire in abstract memory fragments.

Again, Canogar had found the DVDs in waste dumps, or purchased remaining stock from video rental businesses going out of business due to the declining demand. The material represents the global movie industry and comprises films from all over the world – from productions in America’s Hollywood all the way to India’s filmmakers in Bollywood or the African Nollywood motion picture industry in Nigeria. On a wall nearby, the cases for all DVDs used in the artwork are made accessible as an archive, thus affording viewers an insight into the material used.

The wealth of data which Canogar edited and reviewed for *Sikka Ingentium* is truly impressive. One part of the installation’s title is derived from the Latin “ingentis” which means enormous and unfathomably vast, thus making reference to the incredible wealth of material. In turn, “sikka” is a historic reference to the Babylonians’ gold coins sewn onto clothing to show off their owners’ wealth. Today, sparkling sequins continue this decorative application tradition, but without references to wealth and riches. In the context of the installation, “sikka” relates to the sparkling surfaces of the DVDs and their reference to Hollywood’s world of illusions and glamour “where image is converted to a kind of currency”,⁷ as Canogar writes.

Fluctuating materiality

“I like to break away from the confines of the flat screen and create three-dimensional installations that conceptualize media as sculpture.” Daniel Canogar⁸

Time and again, Canogar finds poignant new representational formats which allows viewers to physically experience the artwork and the materiality of the media. He talks about leaving the flat screen’s limitations behind and thus follows the tradition of the “expanded cinema” – a movement of artists and filmmakers who “expanded” the term and practice of the cinematic in the 1960s and 1970s. With multiple projections, light-shows and multimedia actions, they broke up the classical format of projecting onto one big screen.

Early on, Canogar explored the physical possibilities of different media in the exhibition space. In 1998, for example, he used for *Alien Memory* fiber optic cables with optical projection extensions which he had developed in collaboration with Philips. These extensions housed a photographic slide and two lenses which projected the image onto the wall of the exhibition space.

In large-scale installations such as *Flicker* or *Frequency*, both from 2012, he reflected on the materiality of film and television, the leading media of their times; released from their film reels and original context of use, he repurposes them as light screens visualized in haptic form. For *Flicker* the artist projected an animation on 35 mm film presented in a criss-crossed fashion in the exhibition space. *Frequency*, on the other hand, projects white noise and test charts on an arrangement of 33 metal screens extracted from old analog TV sets.

⁶ Javier Ortiz-Echagüe in the exhibition flyer Daniel Canogar: *Sikka Ingentium*, Museo Universidad de Navarra, March 22 to October 15, 2017, p. 6.

⁷ <http://www.danielcanogar.com/work/sikka-ingentium>

⁸ Daniel Canogar in his artist statement: <http://www.danielcanogar.com/statement>

In *Sikka Ingentium*, the original storage medium takes on a sculptural presence in a multi-channel projection. The shiny backs of DVDs are used as projection surfaces that reveal the digital contents of the medium as if they were “caged ghosts”,

The recycled DVDs “free the energy stored within the electronic material and thereby awaken the memories of their past.”⁹ The reflections in the exhibition space makes it a part of the visual experience.

For his series of works titled *Echo*, 2016, Canogar transmits to the exhibition space real-time data of various natural phenomena via special LED screens developed with flexible, rubber-coated circuit boards. This material allows him to bend the screens in any desired form, transforming them into a membrane which can be wrapped, like a skin, around objects and structures. The screens themselves become sculptural objects which illuminate and activate the surrounding space. The surface becomes the place of contact as Giuliana Bruno, scholar in cultural studies, describes in her book *Surface*¹⁰. For her, materiality is a question not of the materials themselves but of the substance of material relationships. Bruno speaks about the fabrics of the visual whose structural quality or texture may manifest itself just as well on a facade, on a canvas or on a screen. Canogar’s *Echo* works render the fluid data streams of the information society haptically perceptible. As live data streams, they bring the conditions and motions of our physical world into the exhibition space. In this respect, Canogar shows quite deliberately the technical construction of the screens when he exposes their cables and wires. Boundaries between digital and real space have become permeable or, respectively, the texture of the digital matter is transmitted into the physical space¹¹.

Fluctuating data

“Culture has become data.” Lev Manovich¹².

In his generative video installations of the *Echo* series, Canogar opens up his works to the data streams of the world wide web. His sources are websites providing current data of rain, temperature or wind but also of air pollution or seismic activity around the world. This information is processed by an algorithm developed by the artist’s team and is then transformed to abstract animations. Their dynamic fluid patterns are based on complex mathematical descriptions of natural processes. The live data will influence, in turn, various qualities of the generative animations – such as speed, rotation and color.

The works’ viewers will experience our planet’s motions and stirrings in the rhythmic pulsations of colors and forms. Current environmental data and continuous changes are perceptible by means of visual fluctuations.

The term Anthropocene has increasingly gained importance and has become a buzzword in recent years; it makes reference to the fact that in our times, humans are forming nature. Human presence on the planet has an ecological impact – transforming landscapes due to quarrying, mining, deforestation, and in its most extreme form, climate change. Current ongoing research regarding complex Anthropocene issues seeks to do justice to other players within the ecosystem in this period so dominated by humans. The French sociologist and philosopher Bruno Latour talks about the necessity of understanding the ecosystem as a place of assembly where many groups have a voice, not only humans. Latour calls for giving a voice to all representatives of this complex ecological environment and making all of them heard¹³.

⁹ Daniel Canogar quoted according to Javier Ortiz-Echagüe in the exhibition flyer Daniel Canogar: *Sikka Ingentium*, Museo Universidad de Navarra, March 22 to October 15, 2017, p. 6.

¹⁰ Giuliana Bruno, *Surface. Matters of Aesthetics, Materiality, and Media*, The University of Chicago Press, Chicago 2014.

¹¹ Canogar’s just completed installation *Tendril* for Tampa International Airport is an example of how the texture of the digital interlocks with the physical architecture. In this respect, Canogar deliberately ties in with contemporary developments where large-format media facades of buildings became virtual screens or interactive, kinetic facades visualize data streams or analyze and visually present visitor behavior.

¹² Lev Manovich, *Visualizing Social Media: ‚Selficity’ and ‚On Broadway’*, in: Sabine Himmelsbach and Claudia Mareis (Publ.), *Poetics and Politics of Data. The Ambivalence of Life in a Data-driven Society*, Christoph Merian Verlag, Basel 2015, p. 187-206.

¹³ Bruno Latour, *Von der Realpolitik zur Dingpolitik*, Merve Verlag, Berlin 2005.

In *Echo*, Canogar provides a visual connection to the ecosystem; however, he is less concerned with data visualization reflecting the data one to one; instead, he explores the esthetic transformation of the source information.

While *Echo* is about natural phenomena imperceptible to most people, such as erupting volcanoes or seismic activities around the globe, *Xylem* features a generative video animation created in 2017 that uses the digital data streams of the globalized financial market.

The video animation based on live data of traded stock market funds, vividly presents in an esthetic form the continuous fluctuations of currencies and precious metals.

If in earlier works, such as in the *Small Data* series, Canogar created narratives that evoked memories of how we handled different technologies and equipment, the rising and falling color sequences in *Xylem* tell us about the data streams in a globalized world. Today, business dealings in the global economy are carried out by algorithms which complete financial transactions within fractions of a second. *Xylem* feeds on the real-time data of 383 global index funds. The financial streams keeping the global economy running are presented in *Xylem* not only as data flows but also as energy flows. The term “Xylem” is used in biology and refers to the vascular tissue of plants which transports water and nutrients. Just like with plant’s circulatory system, incessant trading also keeps the global economy alive as financial data interminably circulates through the arteries of our global digital network. In Canogar’s animation, financial streams are reflected in vertical movements. Every ten seconds, an update of the rising or falling prices of daily trading quotes are downloaded and displayed. The colors of the graphic display closely follow major international currencies or precious metals, such as gold or silver. In an unusual way, *Xylem* vividly presents the global economy’s continuous flow of data and shows the complex network of financial transactions as an impenetrable abstract pattern over which humans have apparently lost control.

The role of the individual in our media age and its digital reproduction or fragmentation has been intriguingly illustrated in the video animation *Plexus* from 2016. A hand has been multiplied a thousandfold; its gestures are rendered in undulating movements. This multiplication results in an abstraction, the fluidity of which makes reference to the digital rhythms of our age. With *Plexus*, Canogar takes up once again older photographic works, such as *Palpitaciones* of 1998 and *Horror Vacui* of 1999, which also show a variety of intertwined hands.

In his book *Thumbelina* [Petite Poucette in the French original], the French philosopher Michel Serres raves about the young networked generation and fondly calls the youngsters “thumbings” since their nimble fingers incessantly and ubiquitously operate their smartphones and other digital devices¹⁴. *Plexus* seems to raise the question as to whether – in the age of big data and artificial intelligence – the individual is still responsible for the creative process or whether it has long been taken over by computers.

In coming years, the global data pool will reach unfathomable dimensions. Today, we are already dependent upon information and communications technologies in order to manage and analyze vast amounts of data. In his generative video animations, Canogar examines the esthetic potential of our digital environment. He uses digital data streams but abstracts them to bring to the fore both the esthetic qualities of connectivity and how individuals are overwhelmed by the immense volume of data.

In *Ripple*, Canogar does it by means of online videos of the CNN news portal. As videos are uploaded to this webpage, they appear in the generative artwork passing over the screen from top to bottom and leaving behind disintegrating abstract moving lines. Global news provides the work with its form, while it is permanently mutating and never repeating itself. The work’s visual quality is reminiscent of analog weaving

14 Michel Serres, *Thumbelina. The Culture and Technology of Millennials*, Rowman & Littlefield, Lanham, Maryland 2014.

techniques and, at the same time, is a metaphor for the rhizomatically interwoven structure of the internet itself. In this work, Canogar uses abstraction as a method of capturing the social fabric created by the never-ending flow of electronic news – comparable to a woven texture.

Cannula is a work dedicated to the digital traces humans leave in the global network. Every single minute, about 400 hours worth of material is uploaded onto the online video platform YouTube – an unimaginably huge amount of data. In such a vast data archive, due to the quantity of possibilities, a lot remains unseen. By using an algorithm, Cannula is making random queries for different search terms and themes¹⁵. The software then searches for corresponding YouTube material, shows it briefly in the original and slowly breaks it up into abstract forms. On the basis of this starting material, the palette of colors and the rhythm of abstraction will vary. In its fluid forms, the material seems to virtually liquefy. As in his other works using live data from the internet, Canogar is able to create, with Cannula, a poetic reference to the increasing flood of data, the immense wealth of which far exceeds the possibility of perception by humans.

In the exhibition's works, Daniel Canogar vividly presents the complexity of today's digital world. As a chronicler of technological changes, he renders their impact on us – and on society as a whole – by way of stunning visualizations and configurations. In light of this, his works are also political. Yet they formulate criticism in an artistic form, which puts a focus on issues of perception. Media are used as tools for a novel esthetic practice. In his works, Canogar examines the esthetic dialog with digital environments.

Fluctuations makes reference to the change of systems, as well as to the continuous changes which technology will continue to bring with it. The old antagonisms of analog and digital, of body and media have disintegrated and, instead, they form cooperating units of one system.

¹⁵ The piece also exists as an interactive version, where visitors are invited to make their own selections from the gigantic reservoir of online video material by tapping a search term on a keyboard.