Figure 1. Patterns drawn on a large canvas by Metaphone

Metaphone: Distinguishing Human and Machine

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Abstract

Through various forms of interaction, the Metaphone[1] project asks important questions about relationship between human and machine (in the fields of interactive arts and Human-Computer Interaction) and how those two may interact creating artistic knowledge. Control issue is raising questions on combinations of chaos and systematic control, while one version of the art installation provides means for creating artworks through participants' emotions and feelings (GSR and HR sensors). However, exploring ways of expression, the notion of authorship (from artistic perspective) is still in question: debating who owns the final artwork, if the machine could own the work and create artistically, is the participant still politically in charge, while finally, live creative process is always left free and open.

Author Keywords

Media Art; Interactive Art; Generative Art; Human-Computer Interaction; Machine aesthetics; Somaesthetics;

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

[1] www.metaphone.net

Figure 2. Participants experiencing the Metaphone

Introduction

The project is rising from convergence of body and machine, mainly questioning the essentials of interaction between human and machine. Taking perspectives from machine aesthetics [3], [4] and somaesthetics [2], the project implies notions of affect and adaptation of emotional world by machines and, vice versa, how monotonic rhythms of the machine affect humans through interaction with them. Sharing empathy between two opposite worlds, the project explores manifold world and creates antagonistic dichotomies and one world within duality of human and machine.

Combining traditional philosophical attitude with modern industrialization and contemporary culture appearances in digital realm we might want to question systematic doctrines of Ancient Greeks through well-known sayings, as "All is flux" and "You cannot step twice into the same river" by Heraclitus of Ephesus (about 535–475 BC). The course of human nature was questioned through meaning of psyche and its constant change. However, the opposite modern understanding of repetitiveness and monotony was derived from mechanical reproduction, industrialization and the machine itself.

How the Metaphone study shows [3] (see Figure 2), the machine and participant interact in a close intertwined way and it is hard to describe who and what affects most. Feeding the machine with biological signals and being strongly affected by machinic interference mixes all those impulses into one evocative experience. Machine run by bio data, loss its own rhythm and gets never repeated the same.

Starting with seeing machine from the period of industrialization we also might want to move towards Internet and digital realm through various approaches of remix culture. According to Broeckmann, the machinic principle is more associated with process and dynamics rather than stability, though it is opposite to bodily flux, it has some relevant connection and similarity [1].

Background

Machine aesthetics and generative art through machine production take place in Tinguely's work and has many other references to similar works, one of them is an early work of kinetic master Theo Jansen - photographic device "Painting Machine", where the drawing with exact dimensions of the object were drawn in distance on the wall.

Inspirations from art history are crucial and involve formalism on the first stage: how formal elements shape the understanding of the artifact. Constructing things in art instead of composing them was a crucial discovery of constructivism, which arrived from Russian revolution in 1917 and similar notions almost at the same time were introduced in Western society as Bauhaus. After the WWI in Germany, politically liberating period from previous regimes opened up a stage for new adaptations of function in new forms and designs. The combination of both the function and form met together in harmony and no distinction. The third art movement influenced creative process of Metaphone is futurism with its fictions and future speculations come along industrialism and burn bridges between nature and culture with establishing new modern aesthetics as noise and chaos. Futurist manifests establish noise as artistic material with its endless variations. Later transformation of noise found failure as important aspect for creativity and it grown into widely used applications with glitch art aesthetics.
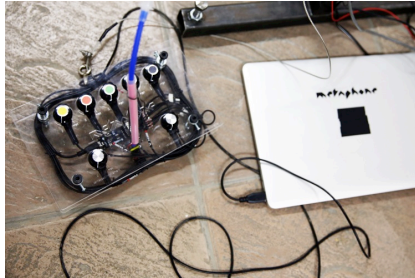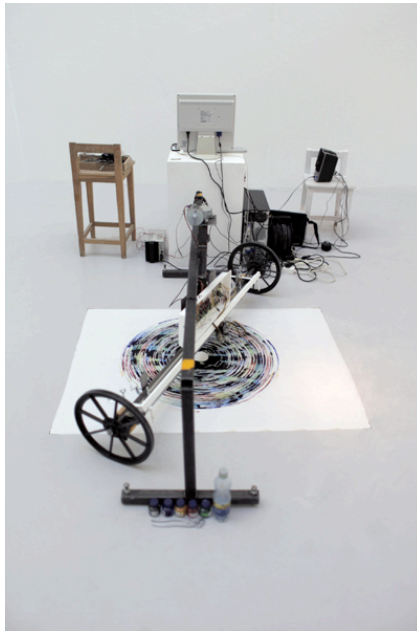
Figure 3. Blowing sensor and control panel

Figure 4. The Metaphone machine

Metaphone Installation

The project Metaphone is an interactive art installation. It consists of electromechanical device (see Figure 4) as actuator and variable sensor parts. It is a machine through the real-time interaction producing visual paintings and soundscapes. Colorful paintings are made on the large aquarelle paper (see Figure 1) underneath the machine and soundscape generated from the mix of the participants' data, machine input and painting's colors and visual patterns translated into sounds.

Creation Process

Building the machine and experimenting with different contexts (see the list of exhibitions below, and Figures 4 and 5) and contents. The first choice was to start working with sound as input (microphone sensor), second part was sensing with an EEG (electroencephalography) by collecting participants' brain signals and, finally, bio-sensing technologies (GSR and HR) mediating between human and machine. The final version of the Metaphone was produced for ISEA2014 and it was working through blowing sensor and control panel (see Figure 3) providing participants with more subtle interaction and conscious control features.

Artist profile

Mr. Vygandas "Vegas" Šimbelis is an artist and researcher combining various approaches in his artistic practice and research. Interdisciplinary is an overarching approach for his art practice and it implies various significant artistic, scientific and technological resources. By projecting subjective and critical view on nowadays' actual issues the artist focuses on strategic topics of the art-world as well as reflects upon common broader aspects of societal, political, and cultural discourses.

Mr. Šimbelis' work is grounded within visual, conceptual and media art paradigms, recently strongly focusing on technological aspect of new media. He is also combining many traditional media art techniques such as photography, video and film into complex art installations and screenings. In his work, both artistic and media stances are interrelated and stand for open dialogue and critical engagement. The topic of interaction is one of the main fields in his recent creative and research processes. The important topic of authorship, that graduates from arts into other disciplines of Mr. Šimbelis practice and research, has recently been explored from various perspectives, e.g. from art theory or design methods.

List of the Metaphone project's expositions:
2014- ISEA, The 20th International Symposium on Electronic Art, Dubai, United Arab Emirates;
2013- Artist Talk, PIVÔ art space, São Paulo, Brazil;
- Art Talks, Jönköpings Museum, Jönköping, Sweden;
- Research Night, Debaser Medis, Stockholm, Sweden;
- AlbaNova University Center, Stockholm, Sweden;
- Dktus art project space, Stockholm, Sweden;
- Machine Aesthetics, Den Frie art centre, Copenhagen;
- Changing Perspectives, CHI Interactivity, Palais de Congrès de Paris, Paris, France;
- European Media Art Festival, Osnabrueck, Germany;
- Bio-tones, Digital Art Center, Kista, Sweden;
2012- Dual Identity, Konstnarshuset, Stockholm;
- Parawise, Mellanrummet, Stockholm, Sweden;
2011- Remix, Arka gallery, Vilnius, Lithuania;

Figure 5. The Metaphone machine in various contexts and exhibitions

- Open Studios, Royal Institute of Art, Stockholm, Sweden;

Other recent exhibitions:
2015- Art Cinema, Trailer gallery, Gävle, Gravendal, and Malmö, Sweden;
- Dktus art space, Stockholm, Sweden;
- R1 Reactor Hall, Sweden;
- Crossings, CHI Interactivity, COEX, Seoul, Korea;
2014- ISEA 2014, 20th International Symposium on Electronic Art, Dubai, the United Arab Emirates;
-Memory Migration, Now&After International Video Art Festival, The State Museum of the History of GULAG, Moscow, Russia;
2013- Southern Panoramas, 18th International Contemporary Art Festival SESC_Videobrasil, Cine_SESC and SESC_Pompéia, São Paulo, Brazil;
2012- Dual Identity, Konstnarshuset, Stockholm;
-Space and Spectacle, Husby Art Hall, Stockholm;
- Propaganda, Kulturhuset, Stockholm, Sweden;
2011- Media Inclusus, St. Bernardine Church and Monastery, Vilnius, Lithuania;
- Being Background, Mejan gallery, Stockholm;
- Being Background, interventions in Modern Art Museum, National Museum, Magasin3, Liljevalchs and Fotografiska Museum, Stockholm, Sweden;
- Site Sensitive Acts, Mejan gallery, Stockholm;
- Open Studios, Black Box and White Balcony, Royal Institute of Art, Stockholm, Sweden;
- Urban Tools, Mellanrummet, Stockholm, Sweden;
- For Love Not Money, 15th Tallinn Print Triennial, Kumu Art Museum, Tallinn, Estonia;
…
Exhibitions started from 1996.

Collaboration

The Metaphone project is a collaborative work of artist Vygandas Šimbelis with other practitioners and researchers from design and engineering disciplines. Acknowledging a few: Anders Lundström as sound producer and engineer designer, Jordi Solsona – engineer designer, Tore Nilsson – physical computing, etc.

Conclusion

The change in our lives comes through understanding how and in which ways technology affects our lives and what change it makes. The notion of control, which might seem a common approach, could be questionable from its basics and provide insights of opposite. The machines may control our lives and we might be just players without actual control. Machines become authors in artistic processes and produce evocative results and experiences, which, however, otherwise would never be possible to create.

References

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