

# MUSEUM OF SYNTHETIC HISTORY

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## Abstract

This talk examines the ongoing series under the title of *Content Aware Studies*, a project split into multiple ongoing iterations. CAS I and CAS II both interact with concepts of history as outcomes of machine-learning intervention. History here is proposed as data whilst data itself is seen as a crude material.

This talk explores shifting understandings of truth through the act of *truth-production*. How are historical objects viewed, how is their authenticity determined or undermined when observed through the lens of machine vision? Can applications of such technology allow us to uncover deeper and sharply unsuspected new knowledge or do they mask unacknowledged biases? As such, *CAS* and the *Museum of Synthetic Histories* seek to establish investigative methods through artistic practice.

## CAS I

CAS I, spans computational, sculptural, screen-based and textual works focused on the Hellenistic time period. In collaboration with data scientists at Strelka Institute and the University of Southampton, artificial neural networks were trained and directed to replenish lost fragments of sculptures and friezes of classical antiquity and generate never before existing, yet algorithmically “genuine” objects of that era. 3D printed and CNC routed in marble and various synthetic materials, filling the voids in the eroded and damaged marble sculptures, some of these algorithmic outputs were turned into new machine-fabricated sculptures. Uncanny in their algorithmic integrity they render the work of a synthetic agency that lends a faithful authenticity to the forms, while also producing bizarre errors and algorithmic normalization of forms previously standardized and regulated by the canon of Hellenistic art.



Fig. 1. *CAS\_05\_Julia Mamea*, 2019, Egor Kraft, marble, / polyamide, Copyright by Egor Kraft.

## CAS II

CAS II continues this artistic investigation spanning computational, sculptural, screen-based and textual works engaged in the topics of meta-archaeology, epistemic focal biases, aesthetics of computational automation and historicism based on the practice-based inquiries with machine learning technologies. Challenging AI-based methodologies, against data from prehistoric and geologic time archives, including first stone tools and writing systems, as well as paleontological archives of fossils of plants and organisms, CAS II moves on from replenishing lost fragments of art, to history itself. Building on research around artificial fossilization of matter, led by Jakob Vinther at the University of Bristol (Saitta, Kaye, and Vinther 2018, 1-16) and using databases gathered by “Big Data” as a response to the biodiversity extinction crisis, this research aims to involve AI technics to generate new instances of the objects found in datasets. How different would an AI-rendered, and hence synthetic, fossil of a plant be from an actual sample from Late Silurian-Devonian floras? Or will AI-manufactured proposals of new old specimens be distinguishable from those remaining millions of actually existed species

that simply haven't been catalogued yet? Furthermore, what philosophical concerns around materiality, non-organic ontology and agency are entailed by the actual production of such objects, which involve artificial fossilization technics? What does it mean to 3D-print synthetically derived bone remnants of prehistoric life incorporating calcium phosphate bone tissue engineering methods, primarily designed for printing bones for surgery? These are the questions at the centre of this artist talk.



Fig. 2. A 3D-scan of a specimen *Neofelis nebulosa*, 2019, @ Natural History Museum, digital scan, Copyright by All images copyright Digimorph.Org and Natural History Museum.

It is both challenging and fascinating to think in these geological terms about how planetary-scale computation is enabled via networks of cables, servers, data-centres and individual nodes that together form a new geological layer across the surface of the planet; a crust of telecommunication networks that is not merely limited to deeply buried cables or other bulky material embodiments but extends further into the atmosphere involving radio frequencies as well as growing numbers of orbiting satellites. A mechanically organic palaeontology.

### References

- Dietrich Stout. 2016. "Tales of a Stone Age Neuroscientist" *Scientific American* 314, no. 4: 28–35.
- Evan Thomas Saitta, Thomas G Kaye, and Jacob Vinther. 2018. "Sediment-encased maturation: a novel method for simulating diagenesis in organic fossil preservation" *Palaeontology* 62, no. 3 : 1–16.

### Biography

**Egor Kraft**, an interdisciplinary artist and researcher (b. 1986, St. Petersburg), lives and works in Moscow and Berlin. Egor acquired his education from Rodchenko Art School, The Academy of Arts Vienna, Central St. Martins College and 'The New Normal' program at Strelka Institute. As an artistic method he looks for ways to produce work which sits on the boundaries between realities and their virtual misrepresentations.

He participated in the 5th Moscow Young Art Biennial, Ural Industrial Biennial, Ars Electronica, WRO Biennial, Impakt Festival, Open Codes at ZKM and other museum shows internationally. Egor has been nominated for Lumen, Kandinsky, Pulsar, Innovation and Kuryokhin Prizes. In 2017 he was included in the New East 100, a list of people and projects shaping our world today by *Calvert Journal*. In 2019 He became a STARTS residency research fellow at the University of Southampton and a Garage Museum Art and Technology Grant recipient.