Microbial Emancipation

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Abstract

There is an increasing interest in microbiomes, especially the human microbiome. What *Microbial Emancipation* aims at is to visualize the well-known fact that the relationship between human and microbial life is deeper than a host-guest relationship. In the deep past, the mitochondria was an independent living bacteria that became our mitochondria, the energy source of eukaryotic cells. *Microbial Emancipation* presents the narrative of the violent extraction of the mitochondria, an involuntary emancipation, to prove this relationship, and it aims to transform our understanding of the place of microbes and humans in the world.

Work

Microbial Emancipation, a work by Malitzin Cortes, Yun W. Lam and Maro Pebo (2020) explores the relationship between humans and microorganisms. Beyond our microbiota, the population of microorganisms in our body that participates in our digestion, protein synthesis, maintenance of our immune system (Wang *et al.* 2017), there is a more intimate continuum between us and bacteria. Looking at the history of our cells, we can find traces of an ancient bacterium in our mitochondria. Mitochondria were at some point an independent bacterium, and are now organelles that among other fundamental tasks give us the energy to live.

This work is the violent extraction of the mitochondria out of an animal cell to exist as an independent entity; a forcing out as an act of unwanted liberation and unrequested emancipation; a literal undoing of the unlikely yet fundamental collaboration that allowed for most known forms of life. The emancipation of the mitochondria is a ritual and a sacrifice, killing the cell to defy all doubt, the mitochondrion lies bare, alone, as an offering and proof of our identity.

Fig. 1. *Microbial Emancipation*, 2020, Maro Pebo, Malitzin Cortes and Yun W Lam. Picture by Lucas D'Ambrosio / MM Gerdau – Museu das Minas e do Metal.

The first awareness of our microorganisms, occurred through their benefits for human health. Within this anthropocentric interest in microorganisms, we frist developed an understanding of this synergy for the skin microbiome. We then went one layer deeper in the gut microbiome and learned to understand the biochemical relation of the gut and the brain, pointing us to an unknown relation between our nervous system and our microsymbiotants. This ever deeper relation stops in the difference of the phenomenon of species, we with our animal cells, and they, the microbes.

What the emancipation of the mitochondrial aims at, is to frame and visualize the well-known fact that our relationship is deeper. Bacteria are not just everywhere around but also somehow inside, ingrained in the very human cell. Animal and plant life is possible because of this hyper-intimate relation. In the deep past, the

mitochondria was an independent living bacteria, engulfed by a bigger Archaeon that lost its genes and its independence, to become the energy source of eukaryotic cells.

Fig. 2. Still form *Microbial Emancipation*, 2020, Maro Pebo, Malitzin Cortes and Yun W Lam.

This is a remarkable fact that transforms the relation between humans and microorganisms. We have known about the bacterial past of chloroplasts and mitochondria for decades thanks to the work of Lynn Margulis (1998), this artwork wants to make it material, have it happen, and help us experience the deep history of each of our cells.

All of our stories, our desires, and our human culture have developed around macroscopic beings, excluding the microbial history of the origin of multicellular life. The emancipation of the mitochondria wants to include remote endosymbiotic bacteria in the understanding of the self of all macroscopic species, with all the reinterpretations it implies. This is the framing that makes visible the deepest intimacy of microorganisms and macroscopic organisms.

This work is the violent extraction of the mitochondria out of an animal cell to exist as an independent entity. A forcing out as an act of unwanted liberation, unrequested emancipation. A literal undoing of the unlikely yet fundamental collaboration that allowed for most known forms of life. It undoes in order to make it visible.

The reliquary holds mitochondria from the artist's blood that used to be a free bacterium. The emancipation of the mitochondria is a ritual, is a sacrifice, killing the cell to defy all doubt, the mitochondrion lies bare, alone as an offering and proof.

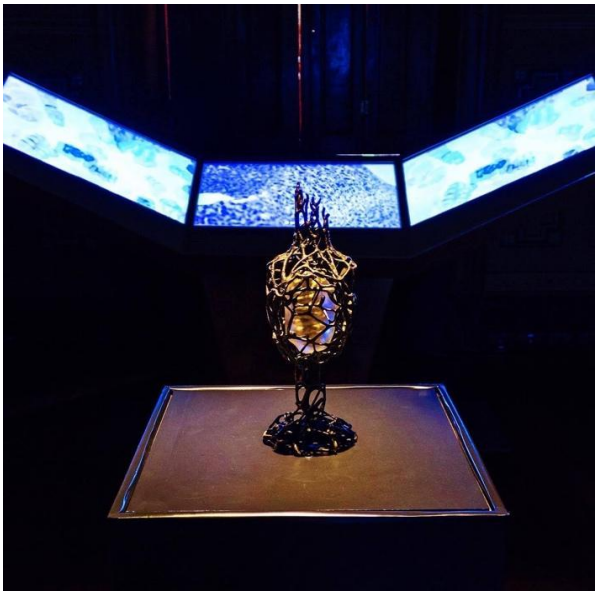

Fig. 3. *Microbial Emancipation*, 2020, Maro Pebo, Malitzin Cortes and Yun W Lam. Picture by Lucas D'Ambrosio / MM Gerdau – Museu das Minas e do Metal.

References

Margulis, Lynn. 1998. *Symbiotic Planet: A new look at Evolution*. New York: Basic Books.

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Biography

Maro Pebo was born in Mexico City. She holds a PhD in Creative Media (Hong Kong), an MA in Gender Studies (Italy) and a BA in Art History (Mexico). She specializes in the intersections of art, science, and biotechnology. Her current interest lies in microorganisms' culture and a microbial posthuman turn. She is senior lecturer in Moist Media at the DeTao Masters Academy SIVA Shanghai and currently works on fostering post-anthropocentric microbiology literacy in society. *@maro_pebo.*