Atomic Memory and the Future Human

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1. INTRODUCTION

This research deals with the evolution of life, combining digital art, sound and scientific data. This is achieved through proposing an image of the future human and posing the question whether the carbon atom, contained in all terrestrial life forms, can contain data or a memory of all its previous states.

2. CONCEPT

Carbon is the basic building block of all known life. The continuous transformation of carbon compounds on Earth forms the carbon cycle, a process that maintains terrestrial life. By taking the carbon cycle as an outgoing point, I have created two computer-animated works. Based on Primo Levi’s writing on the carbon atom (Levi 1984), the work Atom C (Figures 1 and 2) maps the atom’s journey through the biosphere, only to end up in the human brain where it makes part of our consciousness. A second piece entitled Photophilia (Figures 3 and 4) proposes a future of human evolution towards a more sustainable existence.

Both works are a result of merging ideas stemming from the natural sciences (physics and molecular biology) and philosophy.

2.1 Can there be Atomic Memory?

In 1959, the theoretical physicist and Nobel Prize winner, Richard Feynman, proposed a theory of atomic memory. Feynman (1960) states that with time and technology advances, human kind will be able to store data on an atomic level. Forty-three years later, a research shows the beginnings of atomic memory that stores a bit by the presence or absence of one silicon atom (Bennewitz et al. 2002). As such technological advances influence the progress of humans, this research asks whether we can in time learn to read the data stored in a single atom. From a sustainable point of view, this knowledge will help towards building biological data storage units that will coexist with nature systems, yet still adapt human kind’s ever growing need of data storage space.

2.2 The Post-Anthropocene Human

As bioethics and biopolitics become more and more integrated in art, there is an emergence of a new way of looking at evolution. Artist Eduardo Kac (1998) states that working with bioma is an act of manipulating life and for Kac, every manipulation is a part of evolution. Drawing from his idea of evolution, my proposal for the future human is a human that has evolved within the carbon cycle and has gained the ability to photosynthesize. By feeding on solar energy, this human-plant prototype has regained the egalitarian status within the biosphere and would enter the age of the Post-Anthropocene. Instead of cultivating nature for its own needs, this human is able to produce oxygen and become a sustainable link in the carbon cycle.

Figure 1: Atom C film still
3. USING TRANSDISCIPLINARITY AS A TOOL

With the use of information that spans across disciplines, my aim is to create space for wider debate. In my research, I found that the combination of subjective visualisation based on scientific principles combined with scientific data could be a very useful tool towards communicating complex ideas on the subject of evolution. The purpose of creating such a narrative is triggering a sense of awareness of our interference in nature’s cycles, as well as creating an empathic experience for the viewer in order to remind of our interconnectedness within the biosphere.

4. REFERENCES


