

Ontogenetic art

Or Ontological art (achieved through ontogenetic interventions)

A term introduced by Yiannis Melanitis to describe chimerical, DNA models, theoretical ones, as also new live types acquired in vitro (in lab) or agriculture.

Ontogenesis or ontogeny, in biology, describes structural changes and was coined by Ernst Haeckel (1834-1919), meaning *the development of the individual organism* [Futuyma, D.J. 1998. Evolutionary Biology. 3rd ed. Sinauer Associates, Sunderland, Massachusetts. 1997,page 652].

Haeckel also described phylogeny as *the evolutionary history of species* [ibid, page 652].

Changing the genetic status of an organism is quite old practice, including animal and plant breeding by *choice* [for an artistic procedure see George Gessert] or *chance* and may be in vivo or in vitro.

Ontogenetic change, in art theory might also refer to the concept of the organism changing as a whole, used to emphasize on something that affects the organism so intensively as to modify its basic properties. (ontologic change).

Ontology (from *onto-* and the Greek *ὄν, ὄντος* « being; that which is », *is the philosophical study of the nature of being existence or reality as such, as well as the basic categories of being and their relations.* That's a lexicon (wikipedia) definition of the term that refers to being as a philosophical category deriving from the pre-Socratic philosophy.

Afterwards, the concept of ontologic art was implicitly defined by Aristotle in his course (Physics II 8 199a 15-17), in which he raises the question of the function of art in two ways:

The arts, whether acting on the basis of the nature and extend beyond the things of nature (doing) or mimic (imitate) nature. In the first case, the art transcends the boundaries of nature through some kind of perfection of natural forms, producing results that are not found in nature itself, while in the second case an imitation (mimesis) is been done without substantially changing the content of nature. For Aristotle, the art can be "perfected nature" gathering information from different aspects of the basic form and produce an artistic product not found in nature, with the to produced embellishments as estimated above the initial fragmentary stimuli.

The effort of improving upon the natural forms requires that

- a. physical forms are not perfect nor ultimate
- b. Humans are standing "against" nature and intervene from the "outside"

This last perception is not strictly accurate, because some form of intervention of the beholder or the subjected individual is always there, while an absolute isolation of a system from its environment. has never been (or is ever possible to be) accomplished. (Each interaction with a system means that it communicates with us by sending back information).

However, there is a critical point when we pass from a status where information, up to now served as an extension or empowering of the body (mediated environments, networks etc.) inserts the body in order to reform it in an ontogenetic manner (DNA manipulation).[<http://www.melanitis.com/bioart.html>].

Hence, instead of *ontological* we may use the term *ontogenetic* art, involving the organic both organic and synthetic systems, as well as the abiotic (e.g., a water wave). In the case of abiotic systems, *ontogenetic change* would be the one that could, for example, produce a wave type that does not occur typically in nature. (The Greek prefix *gen(-γεν)* does not necessarily refer to biotic systems, In this case we may argue that a wave-genesis is been accomplished).



Cartilage structure in the shape of a human ear grown by seeding human cartilage cells into a biodegradable ear-shaped mold. The *earmouse* was created by Dr. Charles Vacanti, 1995, University of Massachusetts. This example is not *exactly* ontogenetic since it creates an adult response of the animal to recreate cells through growing, or it acts ontogenetically on cells only and not on the organism as a whole.



Ontogenetic art is observed on Hieronymus Bosch, but since it's inside a work of painting, Bosch does not have any "obligation" to define if these chimerical creatures are derived from cross-breedings or serve as a symbol of human and animal decline. So the technology behind them remains obscure, as in any high form of artistic expression.

Thinking on the physical models

When I try to draw a cow, it looks like a horse.
Bernard Russel

The philosopher who speculates on nature creates a model of observation which is usually figurative, by means that it comes from a comprehensive historical, social and cultural context. A question might be: can someone recreate the original circumstances that gave rise to an idea, considering the context of its birth and development in order to identify its nature and precise characteristics?

The sum of all ideas generated by the philosophers may contain ideas out of normality - as we find in Descartes' *Discourse on the Method* (1637), *there is nothing to imagine so bizarre and unbelievable that it has not already been said by one of the philosophers* (II, 19).

Some ideas appear as a mental exercise, 'outside their epoch', may re-disposed in other contexts, those of a newer era and be retested. So we can at least separate them in three regions, corresponding to different types of "performances or exemplary models" [Vekios, Theophilus: a) "Descriptive models in ancient Greek thinking". magazine *Archaeognosia* 1 (1980), 135-151.]

A. Social,

B-artistic- technological and

C. those referring to the immediate perceptual reality(Biological)

Therefore we are returning where we started, at the point where a mental perception of the world is not only an intellectual construction but reaches a perceptual reality and by this sense we may call it an organic reality. Flusser's notice of a chimerical animal which causes unknown reactions to us because of its infrequency, (cow with a head of a horse) is a step out of our basic perceptual model of the world. What explains something would be called an *explanatory model*, while what is a key element of the theory will be named *essential model*. Certainly, a model is an assumption out of an area of situations where the action is performed.

What happens however when certain qualities or perceptions cannot be conceptualised? For example, to continue the paradigm of Flusser, a cow with human speech (a speech which is not identical to human speech as to comprehend the new cow we should get out of the context "cow"), we need a model that can explain, with a reality's requirements, reasonable ones, the inexplicable.

A model may also provide new forms that have not been phenotypically observed but are "solutions" of the parameters examined in this model according to its specified laws. (Such as the prediction of many elementary particles in quantum physics or the prediction of celestial spheres under the gravitational forces).

The construction of a model can lead to results rather questionable, causing the dilemma "to what degree a cow is a cow, when a cow has a head of a horse?" as stated by Russell, *You may dream of a winged horse, but only because you have seen horses and wings*. [Russell Bertrand, *A History of Western Philosophy and its Connection with Political and Social Circumstances from the Earliest Times to the Present Day*, Allen & Unwin 1946 /, p. 586], which means that each characteristic we acknowledge holds a place in our memory. But the ontology of an organism can be "equal" to the ontology of an idea. Russell introduces information in the basis of the ontogenetic process, something that I think that interlinks philosophy with the biological methodology. Ideas can also exist in that process and what would be interesting (and unsafe) is to redefine the ontology of the natural world by means of a philosophical ontology...

References

- Futuyma, D.J. 1998. *Evolutionary Biology*. 3rd ed. Sinauer Associates, Sunderland, Massachusetts. 1997
- Aristotle , *Physics*
- Descartes' *Discourse on the Method*, 1637
- Vekios, Theophilus: a) "Descriptive models in ancient Greek thinking ". mag. *Archaeognosia* 1, 1980
- Russell Bertrand, *A History of Western Philosophy and its Connection with Political and Social Circumstances from the Earliest Times to the Present Day*, Allen & Unwin, 1946

Yiannis Melanitis
Athens 2012
melanitis@hotmail.com

Copyright © Yiannis Melanitis 2012, All Rights Reserved. No part of this document may be reproduced without written consent from the author.