Digital Bionics

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Website: Taiwan Digital Art and Information Center
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Online Page:
http://www.digiarts.org.tw/chinese/Gallery_Content.aspx?n=DBA0D52CDDAE46E5&p=21271C0A383F2951&s=4385E72AD771AAAF

Curatorial discourse

By Hsu Su-Chen

> The term “Bionics” is originated from the Greek word “bio” meaning “life”, and the suffix “nic” meaning “having the quality of something”.

The nature has always possessed a formidable strength. It is revealed in the culture and history of humanity like recurring tides since the beginning of time. In the technology and digital waves nowadays, intimation and imitation of such mechanism are unavoidable, for the humanity is constantly inspired by the biosphere in the evolution of civilization. For example, “bionics” as first proposed by the American J.E. Steele in 1960 is “ a systematic science that researches on the functions that mimic bio system, or functions that characterize features of the bio system, or ways that work similar to the bio system.”

Hence, topics such as observation, research and imitation of the structure, principle, and behavior of the living organism, the functions of the organs, the physical and chemical process going on inside, and the transfer of energy and information, even memory, etc. are all within the boundary of bionics. Bionics provides the human technology a new milestone with its birth in 1960.

When the digital artists use new media to create and touch upon contemporary topics, they sometimes inevitably involve bionics. The virtual public art work “The Interface Beyond Sea and Sky“ designed by the team led by LIANG Jen-Hung is an example of intentional cooperation with bionics. They use the shape of Aetobatus narinari as their design blueprints, imitate the fish body to the large span, thin shell construction, and leave the surface in a state of flowing space. This dynamic skin surface imitates the kinetic properties made by organism in its environment. The overall construction is a gliding media with a fish-bone like structure.

The development of digital technology not only deepens people’s the dependence on it, but also virtualizes the scenarios of our “presence”, and can aggressively design different access points to this virtual territory. “Watch” by HSIAO Sheng-Chien utilizes the media’s implying features and transforms our social experience into new models, interpreting organism’s social behavior using the interaction between

mechanical and digital techniques.

KUO Hui-Chan's "Mimicry" series utilize digital technology to accommodate the artist's body in the city's material structure. The artist's behavior of modeling biological transparency and mimicking the environment's color enables the art work to expand from simple biology concepts to digital technology, and further exaggerates the humanity's ability. Like HSIAO Sheng-Chien's "Watch", this piece reflects the individual's helplessness with the community life in the social structure.

LIN Pey-Chwen's "Virtual Creation" virtualizes the unlimited power of human as the creator. This piece allows the audience to visualize themselves in the surreal oceanic ecology created by the digital technology. The audience can draw new species of butterflies with their hands. Computers are used as search engines for inspirations, satisfying the rush of creating new lives. The interesting thing is that these new species of butterflies are like flying in the vacuumed sea, while the marine ecology continues to exist without disturbances, presenting the puzzling state of the new media or the biological technology age.

The information flow transformed and transferred via audience interaction in the new media is similar to the partial content of Biocybernetics. Some are related to the research and simulation of the recognition in biological model, the cerebrum study, memory and the thought process. "Fuse" by the SoiiZen Laboratory is an example using the transformation and transfer functions. The images in this work are live news clips captured from the internet. The audience can use the light source to catch clear news pictures and audio reports in this field of simultaneous information. However, these seemingly real news reports are in fact audio reporting converted from written articles via internet software programs. The "perception machine" created by "Fuse" allows information to flow in the internet space like the nerve system inside the human body, guiding us through the re-identified digital field of perception.

The digital world magnifies the subject of new body sensations, differentiating this age distinctly from the others. Through digital technology, people have surmounted and exchanged the abilities of various perception models. It treats the body as an active, elastic, and sensitive life system. Therefore, in order to achieve such unison of body and machine, digital software and hardware must become a body to simulate the logic of the body's sensory organs, or the so-called "logic of the body." However, until now, such sensitive necessities created by the digital space still face the problem of computer program limitations.

"A female tarantula rushed forward by a few body lengths but could not find a hiding place. She therefore had to stop and remain motionless. Her spotty appearance had excellent camouflage effects, but the silken egg sac between her chelicerae and scopulae nevertheless exposed her……"

(Tran by Jessica Wang; edited by Chang Baywen)

[1] Translated by CHEN Jen-Cheng (2002). "New Wombs – Electric Bodies and Architectural Disorder" by Maris Luisa Palumbo. Taipei City: Prominence Publishing Co. Ltd. Page 79.
[2] Translated by YANG Yu-Lin (2002.) "A Letter to Thoreau" from The Future of Life" by Edward O. Wilson. Taipei City: CWPG. Pages 15 to 16.