



LI SHAN  
THE PUMPKIN PROJECT

南瓜計劃



## **A dialogue on Bio- Art**

by Zhang Pingjie Nov,2007

The meaning of “bio-art”

“Bio-art” is art work that is produced using biological organisms as its main medium. It is created by artists for display and collection. The medium is cultivated through genetic engineering and other scientific technologies in order to exhibit new biological forms and patterns. It is alive and a work of life. Bio-art consists of art work using animals, plants, algae and fungi.

The emergence of bio-art and its periodical background

In the late 20th century, the dawn of the modern bioengineering and biotechnology, bio-art was given birth. The milestone of its birth was ‘Dolly’ the cloned sheep and the success of the human genome project. They’ve laid foundation for human biological exploration into the 21st century. If Dolly’s success was the beginning of single sex reproduction, then the completion of the human genome sequence provided us with the necessary tool for construction of life forms. <sup>1</sup>

Throughout history, the evolution of art has always benefited from and been influenced by the scientific revolution, whether it’s the advances in anatomy and better understanding of perspectives during the renaissance; or the optics giving rise to impressionism; or the birth of modern art during the industrial revolution; or the new forms for media art through IT technology. The take off of the biological century will ultimately foster the conception of bio-art.

The earliest examples of bio-art were a series of works “Loughton Candidate” performance and video installation at the early 90s by Matthew Barney, a student at the New York Medical School. Most of his works are named after medical terms. The artist became the person of the decade, and was named by “Art News” as one of the most important and influential artists of the 90s.

The first real living and surviving bio-art work was created by an American artist and professor of University of Chicago, Eduardo Kac and his team in February, 2000. They used transgenic technology to create a green fluorescent bunny, called Alba. The cute Alba bunny is still living with him today. During 2000-2001, Kac successfully made another fluorescent gene work called “The Eighth Day”. In the Bible, God uses seven days to create the universe, so “The Eighth Day” of Kac was created without God. All transgenic organisms of “The Eighth Day” were cloned in accordance with the production

rules of green fluorescent protein (GFP), and then he created fluorescent plants, fluorescent insects, fluorescent fishes and fluorescent mice.

Li Shan is the first Chinese artist who started thinking about and stepping into the Bio-art. At the beginning of 1998, he created a synthetic biological work. "I extracted one section of DNA from the egg of fish and butterfly, respectively... and exchanged their codon of information chain following parity." "Ribosome moved along with the mRNA as usual, but reading information had been changed, a kind of protein was synthesized according to my personal purpose." Finally, "My art work is an organism, which is different from other organisms." <sup>2</sup> This is a way of Li Shan's to organize his Bio-art language. He has established a frame of basic thought for bio-art through genetic exchange, recombination or modification between fish and butterfly, human being and dragonfly.

Encoding, as a method of bio-art's creation, will probably be used for a long time. In addition, Li Shan has started thinking of the latest discovery of inorganic life, and the lifestyle under the state of plasma.

When bio-art was born, Roy Ascott, an authoritative canonical theoretician of new media art, named it 'Gene Art' and placed it as a sub-category of new media art.

Since there have been no thematic exhibitions of "Bio-Art" till now, artworks about bio-art generally appear in shows of new media art or art biennials, such as LINZ electronic art festival in Austria.

However, genetic art has been developed beyond the new media art category, which is a product of the IT era. Years later, Wikipedia listed "Bio-Art" formally as an independent taxon and pattern, though not in other official encyclopedias. In 2005 and 2007, Edward Kac wrote two books to elaborate the development from new media art to bio-art, and the relationship between bio-art and future society and human beings. (Telepresence and Bio Art –Networking Humans, Rabbits and Robots / 2005) (Signs of Life: Bio Art and Beyond / 2007)

The operational methods of bio-art

As a product from highly developed biological technology and biological engineering, bio-art is supported by biological technology and its echelon working pattern. At least there are few artists who are qualified with skills across these two different fields till now. The artists' creative proposal can not be carried out and sustained without working with the biotechnology. Artists may employ or authorize bio-technicians to implement, or invite them join in experiments, research and development.

"In the biological century, what confused artists first is the transfer between life itself and art media. Art works are no more than objects for display. Artists will cooperate with various specialists in the fields of biology, genetics, cytology, and gene theory and computer science to develop live works and establish new art language and style." <sup>3</sup>

The professional treatment of bio-art

Since bio-art works are alive, they must have the biological life-circle from offspring, being born, growing up, flourishing and death. Similarly, the protection, breeding and cultivation of them thus become a professional skill. It will foster a group of professionals and companies in this field. At the very first beginning, artists must learn the ways of protection from biologists to keep the works alive and healthy for exhibition and collection.

Bio-art and its thematic artwork

Bio-art and its thematic artwork are two different concepts. Bio-art usually means a new biological pattern through transgenic and gene recombination, (see "the meaning of bio-art"). Bio-art is neither clone nor natural intercourse among various animals, such as horse and donkey product mule. It is creative artwork with life cells. Bio-art thematic artworks refer to plane or interspaced molding works without life cells, but is designed and made from transgenic or combination, based on biotechnology and bioengineering principle. It also includes specimen works made from bio-art.

The main points of making bio-art thematic artworks are the thinking point, the biotechnology basis, the gene recombination condition, the cell merging logic. Bio-art thematic works are descriptions of a brand new pattern and it's a new art mark. They are blueprint and scheme of bio-art, as well as one of the most important parts of future art in people's life.

The prospect of bio-art

Any culture and ecology has a process of developing and disappearing. Will the new species outdate the old ones? Will human beings be able to go along with new species in the future? How to define

the new species? Will it give new connotation to those avant-garde concepts? These questions have already started to impact the knowledge systems we already have.

In the era of bio-art, art can penetrate various fields. Just as Roy Ascott mentioned, the old "figure" aesthetics is replaced by "appearance" aesthetics. People can not predict what will appear. It will happen in various fields and interdisciplinary, connect and use all kinds of high-tech, enter into people's daily lives with the development of future life style and environmental system. It will change the elements of future society and form a new social network and ethics, and explore a new market.

For transgenic and gene combination bio-art works, other gene sequences of lives and plants will soon be broke since the human DNA sequence is almost finished. With the popularization of genetic chip-test skill, the artists' work in the future will be much closer to coding and programming, focusing on gene repulsion with scientists to recombine new species.

#### Bio-art and 'Bio-Art Museum'

Once bio-art has formed into certain scale, bio-art museums will then come into usage. If transgenic and gene recombined art works can survive, there will be digital new bio-species art museum. The future museums will not collect dead history any more, but display life artworks with artists' creative intentions, such as transgenic and gene recombined animals, plants, alga and fungus instead. And private collectors will purchase these fostered limited reproductions (clone).

#### The restriction of law and ethics toward bio-art

Bio-art laws are legal regulations on how bio-arts should act as a kind of art, as a species to environment, and is restricted by the public. That should include controls on limited reproduction and quantities, mutual responsibilities between artistic and technical teams, the owner of copyrights, artists' signature and recognition certification, multiply limitation for purchasers or collectors, artwork ID number, the first and second generation's family tree, etc.

#### Notation

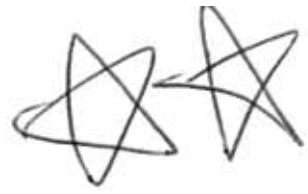
1 See "Mutation", ART CHINA/No. 5, 2002, p22

2 See INCLINE/No.13, 2000, p383

3 See "Mutation", ART CHINA/No. 5, 2002, p23

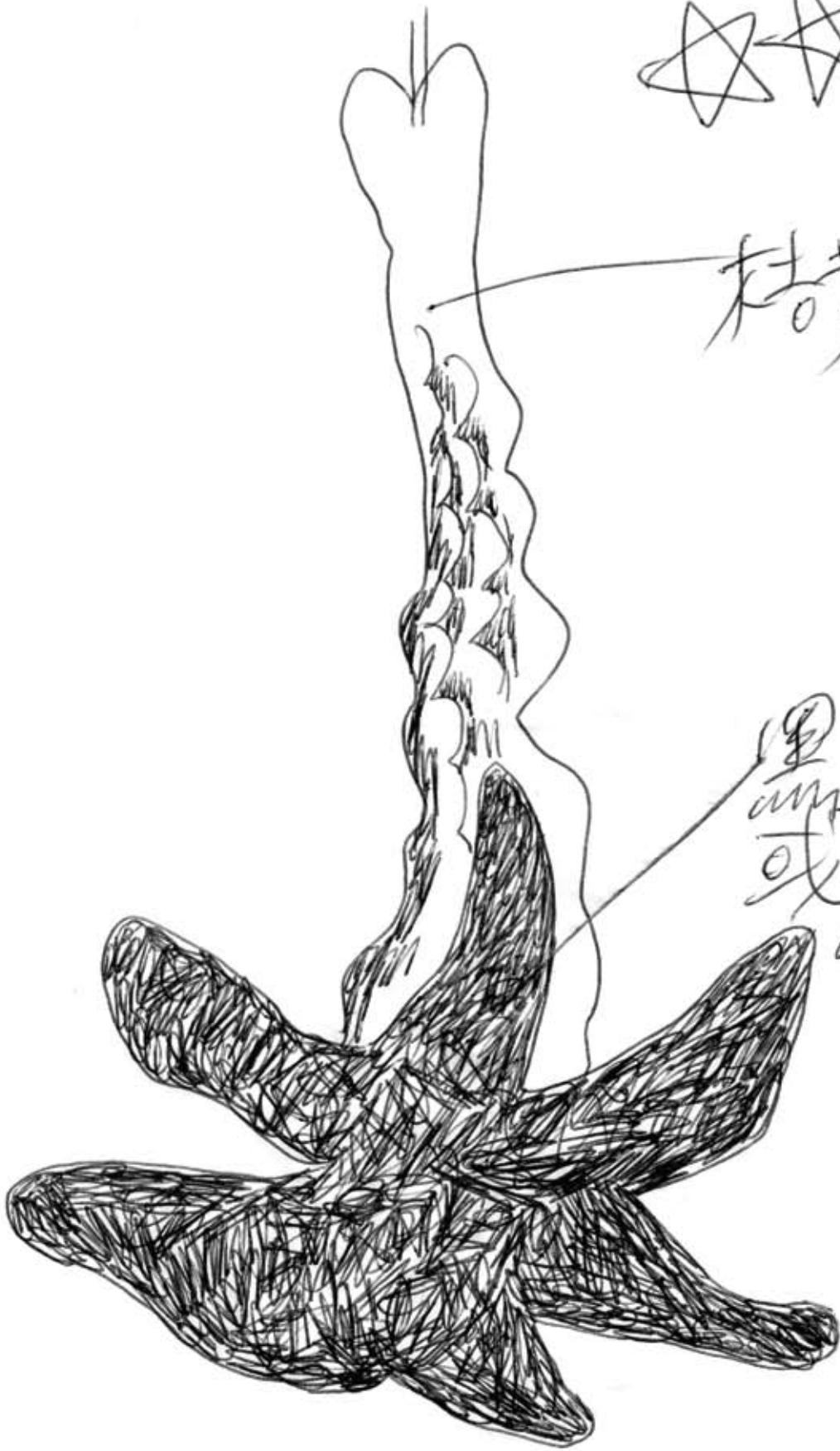






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### **Artists Statement:**

Emerging in China, 'Bio Art' is created by artists cooperating with new partners, that is, scientists in laboratories.

Different from the biologists, the artists pay more attention on aesthetics – the change of the shape – instead of the transformation of internal structures. There are several species that could be created such as plants, animals and bacterium, which by now are already undergoing experiments in the labs following commissions by artists. Yet, we do not know for certain whether these plans are fruitful or not until the whole experiment finishes: The experiments need to develop for a generation or two. Via gene manipulation and reconstruction, the organisms germinate and mature.

There is common ground of all these projects that to make the new form of art by transforming and reconstruction the original genes artificially.

Pumpkin Project (2007) is one such experiment that could currently be realized under the guidance of a scientific specialist. It is both artificial and ecological. The essence of 'Bio Art' lays in the process of development, the exhibition being the climax of this process.

The altered biological evidences are amazing. The scientific technology is now used in both the applied transgenic products as well as in the aesthetics of 'Bio Art' work. Transforming the daily and edible plant itself is significant as well. It changes the relationship between human beings and other organisms, and it creates new spheres of art forms. We chose and treated the Bio Art work carefully. It involves notions of ecological balance and biological selection, as well as considerations towards society, morality and law.

Li Shan & Zhang Pingjie







Li Shan, The Pumpkin Project, ShanhART Gallery, December 2007, installation view



## Li Shan

Li Shan has undergone many stylistic changes throughout his unique artistic career but has never lost his ability to express internal sensibilities as well as external reluctances. The latest paintings in his “Rouge” series show mutant beings with butterflies as ears or as part of their faces. They seem to evoke the two contradictory strains that entail humor, laughter and self-mockery on the one hand and a cynical undercurrent of criticism on the other. “Rouge” is based on the principle of ambiguity. Li Shan attempts to find an evolving form that can address the problem of trying to extract the recognizable out of the unrecognizable.

Most recently in a series entitled “Reading” (2005), he created computer images of various insects and plants. Closer viewing reveals that these insects are composed of human body parts like fingers, ears and genitalia. Through his uncannily realistic representation of interspecies insects, Li Shan questions the hypocrisy and lack of equality of human values in today’s politically informed bio-scientific experiments. In terms of artistic style, he has adopted decorative methods similar to those of folk art, thus creating intimate, eccentric and oddly organic objects. Indeed, they seem to be mutant creatures from some hypothetical textbook on horticulture. The synthesized insects are constructions of digital imagery morphed into abstracted pictures. He raises the question of whether it is still possible to identify the boundaries between any particular organism and the world it inhabits. Li Shan’s seemingly infinite variety of work reveals a sort of consistency upon closer inspection. All the works evoke a tension within the idea of the yet unknown. He manages to reconcile opposites in a way that leaves them unreconciled, allowing viewers to reach their own conclusions.

Li Shan was born in Lanxi County in Heilongjiang province and graduated from the Shanghai Academy of Drama in 1968. Li Shan’s work has been exhibited internationally in solo and group exhibitions such as *Painting the Chinese Dream: Chinese Art 30 Years after the Revolution*, that traveled through America, ending at the Brooklyn Museum, *China’s New Art, Post 1989 Art Centre* (Hong Kong) and the 45th Venice Biennale.



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