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What is Media Art?: Concerning 'Imperfect Reality'

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I. Introduction

In the beginning, 'media art' had nothing to do with such things as economics and market value. Media art was about exploring the innovative quality of technology and its inherent potential and how technology could be applied in the area of artistic expression. The subsequent involvement of technical engineers in the process of production of media artwork, however, caused the pace of research and development to accelerate rapidly, at the same time as creating a situation where requests for funding and suchlike were justified on the basis that technical developments would be used for artistic expression.

In Japan too, the Media Arts Festival (sponsored by the Agency for Cultural Affairs) held since 1997, was set up as a competition that was open also to anime, manga and gaming products. As a consequence, the term 'media art' in Japan adopted a completely different meaning from its generally accepted meaning overseas, namely 'art which has electronic

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As a pioneering media artist, Masaki Fujihata employs multimedia technologies creating virtual spaces to examine new possibilities for interaction and communication. His works include *Removable Reality* (1992), a collaborative project with Kei'ichi Irie, which used an infrared cordless phone, and *Impressing Velocity* (1994), in which he used a laptop computer equipped with GPS to digitally map Mount Fuji, and ongoing project *Field Works* (1992~) which reconstructs collective memories into cyberspace as a video archive indexed with GPS data. Fujihata has exhibited extensively throughout Japan and internationally, and he was granted Award of Distinction in Ars Electronica in 2013 for his project *Voices of Aliveness*.

media as its medium.' This obvious misuse of the term causes confusion overseas and also shows the carelessness of Japanese people when it comes to the meaning of words. I personally find this situation to be inexcusable. Based on what I have said above, I will again look into the question of 'What is media art?' I will expand on the same 'issue awareness' that was part of my solo exhibition, *The Conquest of Imperfection* (held in Japan in 2006 and in the UK in 2008), and also part of my discourse, *Imperfect Reality*, published in 2009, and through commentary on my own works, will attempt to define 'media art.'

II. Encounter with a computer

Before I set about expounding and citing examples of the thinking that has emerged in digital spaces and the motivation behind its artistic expression, I wish to present a list of topics upon which the discussion will be based.

- (1) We want to believe that reality is perfect, but when compared to the space inside the computer, reality is imperfect.
- (2) The imperfectness of reality creates a 'sense of reality,' cracks and accidents.
- (3) Electronic media is full of discontinuous planes (dangers) that should be thoroughly investigated.
- (4) The experience of art is an 'accident experience' in which your safety is guaranteed. Through the simulated experience of 'imperfectness,' reality is made to look better.

III. The perfect abstract world that is the computer

Since my first encounter with Apple computers in the late 1970s, my work as an artist has involved computers for nearly 30 years. In 1983 in particular, having become involved in the launch of a new computer graphics company, I found myself working in an environment where I was surrounded with some very high-cost computers at the time when

This paper was broadly revised in accordance with my oral presentation at the 'What is media art?' symposium, co-hosted by the University of Tokyo Graduate School of Information Studies and the Graduate School of Film and New Media, Tokyo University of the Arts on July 25th.

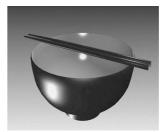
computers were still not generally available to ordinary people. The pleasure I derive from using computers to produce my work has always been a significant factor. If I were to describe that pleasure in another way, it is the pleasure I get from traversing between the real world and the world that exists inside the computer. Later I started thinking about the difference between the two. The space inside the computer is a perfect abstract world and our access to it is restricted, in that we can only enter that world through special means.

IV. The real world and the world inside the computer

Image 1 is a work I created in 1984 for an exhibition titled *Rice Bowl Boat*, *Chopstick Oars*. It is just a set of chopsticks resting on a bowl, but I wrote the program for this myself, creating a rotating body using trigonometric functions I learned in high school such as sin and cos. A rotating body in the real world, say in the case of a piece of pottery, is created by the potter rotating the clay on the potter's wheel, or in the case of a rice bowl, by the wood-turner whittling down the wood on a lathe. With a computer, however, this is achieved through the use of functions. I was quite shocked when I realized that at the time.

The application of mathematics, however, is also capable of producing the likes of image 2. It is a form that cannot be realized with a potter's wheel, no matter how the potter's wheel is applied. It is, in fact, an application of a trigonometric function in which a cross-sectional view is transformed as it is rotated. It was with this form that it first struck me that mathematical functions are stimulating new ideas for shapes and forms. When I talked above about the difference between the real world and the world inside the computer, this is the kind of experience I was referring to.

When you experience the world inside the computer through forms such as these, the real world starts to feel constrained. In the real world when you make a beautiful bowl, you have to be constantly mindful of mundane things such as making sure that no dust sticks to the surface of the bowl. You go about the task of creating the bowl, always aware of



lmage 1



lmage 2

potential problems. When you create something with a computer, however, you don't have to worry about any of that. On the contrary, possibilities, completely different possibilities from the ones available to you when working with the physical objects of the real world, possibilities in various aspects that you have never before experienced, become available to you.

In the real world, we are constrained by the fact that we cannot escape time. Because time is irreversible, we would need a period of time close to infinity in order to try out every possibility of a single material, but within the space inside the computer, although it is based on processes, time does not pass in the way it does in the real world, making it possible to explore a myriad of possibilities at the same time. Here it is also possible to imagine a world other than a history-based world. The realization that my work could involve the development of those possibilities caused me great excitement. The real world is imperfect. It is a world in which we are plagued by 'noise' and constrained by time. The world inside the computer is a kind of perfect world, a world in which so many possibilities can be realized with the perfect integrity of mathematics. It is interesting to compare the two worlds.

Before I ever had my first encounter with the computer as an artist, my motives were to create something that would surprise other people, to ask myself why I was surprised, why things move me, and what makes me shed tears. Having come into contact with the computer, I have acquired an issue-awareness about where the 'sense of reality' in the sense that I have talked about it above comes from. It may sound somewhat paradoxical but the only way to acquire this sense of reality, the only way to be sure that we are living right here in the present is to die. In short, I have realized that it is the very imperfectness of the reality I have come to know through producing art with the computer that is creating my sense of reality that I am living in this world.

V. Turning 'imperfect reality' into art

People see visual images through their eyes. By establishing the relationship in which we 'see' with our eyes at the same time as we 'touch' with our hands, we develop an understanding of objects by 'using' our eyes and hands. How do we understand what we refer to as a screen image? Maybe we believe that because we can see them with our eyes that we understand them, but that is an understanding of the object reflected or the result of our own imagination, and it may well be that in fact we still do not understand what the screen image itself actually is.

For example, let us consider the grain on a piece of wood. In this case, however, the wood is not wood. It is Formica, an imitation of real wood. Why is it necessary to print an imitation of a wood grain in the first place I wonder? It is connected to the fact that we have always had an affinity with wood and the texture of wood. We exploit people's memory of the warmth exuded by natural wood and create it in an artificial form. It is a piece of visual information where people just need to see the pattern on the surface of a piece of wood to associate it with a tree. It means, however, that when you touch Formica (the wood imitation), an accident occurs, one in which you realize that it is not real wood. This kind of simulacrum experience is called 'the modern day,' the appointed holy land of which is Disneyland. Rocky Mountains created from fiberglass, the marble pattern veneer, flowers from the south which never wither and die, etc., etc. People discover something new and exciting, and contemporary values and joy in the fact that their various senses are switching to objects created by artificial means.

As I said at the beginning, 'electronic media is full of discontinuous planes (danger).' The relationship between 'things' and images is being disturbed by the digital. Alternatively it is a reality that people in today's world find it interesting that the relationship is being disturbed. This, however, should not become an object of consumption. Artists need, piece by piece, to turn what I refer to as the 'imperfect reality' lurking therein into works of art.

VI. Technology and expression

I have a photograph that I randomly took in a subway station in Seoul image 3. It was supposed to show the display of train arrival and departure



Image 3

information, but for some reason the Windows boot screen is displayed instead. As something that was not supposed to happen, it would most likely be regarded as an 'accident.' An engineer would ordinarily consider it 'a problem' albeit somebody else's problem, but this kind of accident could happen at any time and anywhere. Through comprehensive management of technology, there would be fewer accidents. But no, there would still be accidents. You just wouldn't see them.

If we were completely to conceal or erase such accidents, then the fact that we would no longer be able to experience a sense of reality would in fact become a problem, the reason being that, as technology becomes increasingly more perfect, the very richly satisfying 'imperfect reality' that is inherent to technology will gradually disappear.

At the point at which I became conscious of the relationship between technology and artistic expression, I was ridiculed by people for the way I used to uncover occurrences such as this one and was told that all I think about is technology because I'm a hard-core media artist. However, as I think about the field of media art, a field of art that is concerned with media and artistic expression, nothing interesting will develop unless you do this uncovering. Nothing new that involves media technology can be created unless you are sensitive to where the crevasses and discontinuous parts exposed by technology lie.

VII. Beyond Pages (1995 -1997)



Image 4

Beyond Pages Image 4 was created as an experiment as to what exactly would happen if words and images were to interact. In the experiment, the word 'apple' is on right and a photograph is on the left. If the word and the photograph are all you see, it looks like the kind of picture book that teaches you what an apple is. The first ever picture book was apparently created by the Czech Comenius (1592-1670). His picture book *Orbis Pictus* was subsequently developed into a pictorial encyclopedia or picture dictionary, which are books where we learn words by looking at pictures. Beyond Pages also copies the form of this picture book. With a computer, I copied the physical structure of a book, in which the pages are bundled

together and you turn one page to move to the next page. To emphasize the act of reading, which we associate with such a book, I created a room in which I placed a desk and a chair. That is, I created the room in such a way that you would think, 'Ah, this is a room for reading.'

Usually you turn the pages of a book with your fingers, but in the case of this book, you use a special pen. Someone pointed out to me that it would be a much better idea to turn the pages with your fingers using a camera as a sensor. However, when you actually try to turn the pages with your fingers, what you get is not an image of fingers projected onto the desk. Instead what happens is that the fingers come into direct contact with the surface of the desk and the illusion is gone. Because the human sense of touch is very sensitive, we notice such things as the texture of or dust on the surface of a desk and figure out straight away that the pages of the book that are being projected are not made of paper. It works better when contact is made with the image through the medium of the pen. The experiment proved that in order to make an illusion become real by means of a device, the designing of a precise interface is a good place to start.

So here we have a page showing an image of an apple and the word 'apple.' The image is designed to react when the user does something to it. At the time I created *Beyond Pages*, this would have been referred to as 'interactive art,' but I prefer to think of it as 'action vs. reaction art.' Each page has a predetermined reaction triggered according to what the user enters.

The issue being raised by this work is this. When in the real world, a mother says to her child 'here, take this apple,' the apple that the child takes in its hand is different from the apple on this page. The child has not yet noticed the relationship between the word 'apple' and the apple itself. This is interesting because the words and the images are out of sync with each other, which is not normally the case, but as I have mentioned above, this is a typical modern issue. It is not simply that those differences emerge as the result of the power of unconscious technology. Rather, it is because those differences are being represented critically. A certain French person called those differences 'a work of poetry.'2

On another page, there is an image of a light switch and on the desk there is a real desk lamp. The real desk lamp is turned on using the

2 See Pierre Lévy, "Between the sign and the thing: Masaki Fujihata's Beyond Pages," (first published in *Déjà vu* 'Digital images' supplement, Kawade Shobo Shinsha, 1997), included in the catalogue *Fujihata Masaki: The Conquest of Imperfection* in 2006.

switch in the image. In other words, the object in reality is being controlled by an image. When I showed *Beyond Pages* at a lecture I did at MIT in Boston, one of the students said, "You say that the object in reality is being controlled by an image, but the relationship between the switch and the light bulb hasn't really changed. The switch that is near the door of the room is, in a manner of speaking, a signifiant and the relationship where light bulb is the signifié already exists. This is not something especially new." However, when in the real world the relationship with an object has descended below consciousness, you reassess reality and come to see it much more clearly by contact with this kind of model. This is one of the important roles of the art experience.

VIII. Morel's Panorama (2003)



Image 5

Morel's Panorama image 5 was a work I created when I first got hold of a panoramic camera and realized what an interesting machine it is. Morel's Panorama proposes a new type of mirror. Nowadays the mirror is a commonplace object, but in an earlier time before industrial production existed, it was regarded as an expensive high-tech product, and also a symbol of wealth and power.

The mirror is a device that provides us with the unusual experience of reflecting our image. The stories of showing mirrors to small babies or experiments where mirrors are shown to chimpanzees are an indication of the fact that the way in which human beings recognize and comprehend their own image in the mirror has often been a subject of discussion.

I was interested in the process by which the viewer would understand my new type of mirror (the panorama camera). As part of the actual process of creating the work, I devised a way of, among other things, eliminating various noises and creating a context in which to view the work in accordance with the theme, in order to ensure that the issue awareness was properly conveyed. In order to see yourself reflected in a real mirror, you have to stand in front of it. In order to appear on a video monitor or in a photograph, you have to stand in front of the camera lens, but the interesting thing about the panorama camera is that it photographs at

360 degrees in every direction. There's no escaping from the camera in this case, but the uncertainty as to whether you are being photographed or not is also interesting. The camera provides a very new experience and is somewhat similar to a non-directional microphone.

It becomes the task of those people who find themselves in front of the work to use their bodies to explore what is behind the mirror system. You have to use your body in order to figure it out. By this experience you have never had before, the experience of actually seeing yourself in this way, taking precedence, you transcend facile understanding. Put another way, you end up being reflected in a state similar to that of a puzzle ring or Mobius loop, and by not knowing where the center of the perspective lies, a different viewpoint appears, a perspective unlike that of a post-Renaissance painting, and you are at the center of it.

IX. Unreflective Mirror (2005)

In contrast to *Morel's Panorama*, which is a metaphorical mirror, in *Unreflective Mirror* image 6, I used information engineering methods throughout in my attempt at creating a mirror. Using VR (virtual reality) technology, I simulated a mirror. The title of the work is *Unreflective Mirror*, but the word 'unreflective' also has the meaning of 'thoughtless' or 'unthinking' and so the Japanese title of the work is '*Unthinking Mirror*.'

The position of the glasses that the viewer is wearing is detected by the camera on the upper edge of the mirror frame, and according to the three-dimensional position of the glasses, the same glasses are 'reflected' in the mirror. Because it is shown in stereoscopic view created using a polarization filter, the correct glasses are visible to the viewer at the correct depth. Because, however, there is no data for the figure of the viewer himself, the viewer is not reflected in the mirror. Only the glasses being worn by the viewer are reflected. Through this work, anyone can become an invisible man. In the back of the room is a surveillance camera, and the images from the camera appear on a monitor on the back wall. This monitor also is of course reflected in the mirror, and in the monitor in the mirror, the back of the viewer is properly reflected in real time. The result is





lmage 6

that everything within the room is 'reflected' in the mirror except for one's own figure.

These were two consecutive works involving mirrors, but they involved nothing more than an experiential understanding of the idea that we regard the mirror as something that will always reflect us. I thought long and hard about what is actually happening inside a mirror and the nature of the phenomenon called 'reflection.' When I tried to reconstitute it with computer technology, I discovered various interesting problems. For example, there were problems with the frame of the mirror in the calculation of the position of the glasses that were being reflected, and it didn't work out properly although I was using a method I believed to be logically correct. It was an issue related to visual perception in humans that the visual images that have been captured are apparently processed upon the assumption that the world is immobile.

There was also a problem arising from the fact that the work was exhibited in a place associated with art, but people complained that the work is 'not technically perfect.' This work, however, was not supposed to be technically perfect. Its purpose was to present critically the various problems associated with technology and so there is meaning in the fact that it is intentionally 'imperfect.' To create something that is technically perfect is not all that difficult, and if I had created something technically perfect instead, it would have ended up being similar to a Disneyland attraction.

The complaint about it not being technically perfect connected to attitudes about whether the computers that operate the work or the cables that connect the computers should be tidied away out of sight, which is an important issue when it comes to how we view media art or how media art is going to be viewed in the future.

X. The eight major themes covered by media art

I have until now considered and commented in an ad hoc manner on the various subject-matter of media art, in most cases that of my own work, but thinking about the perceptive, cognitive and comprehensive faculties of

human beings, I have come to the conclusion that media art has about eight major themes. They are as follows:

- (1) Automatic recording and playing back of an object. Using devices to turn objects into information.
- (2) Interfaces. Devices that connect information and reality. The illusion of manipulating an object.
- (3) Interactivity. From a viewer to a participant.
- (4) Viewer issues. A 'drawer pull' for information.
- (5) Where has the exhibition space gone? The new relationship between the intellectual space of the art museum and information.
- (6) Archives. Is the Internet an archive or a database?
- (7) Designing a new form of media container.
- (8) Digital technology before and after. Externalization of process management. The beauty of the algorithm.

I am not saying that every work of media art contains the above themes to the letter. But there is reason to believe that each of the themes in the list, in some form or other, and with different relative importance, has to be included in the various subject-matter of a work of media art. There may be major themes other than the ones above, but it is also the creator's job to go out and discover new major themes.

Let me try to explain it concisely. (1) As an issue that starts from the camera, it is based on the idea of 'record and play back' in which an object that exists in reality is turned into information and played back. (2) There is an issue as to how a human being subsequently extracts the object that has been turned into information and what will happen is that what he or she extracts will change according to the way in which it is extracted. This overlaps with Marshall McLuhan's (1911-1980) 'the medium is the message.' In other words, if the interface changes, the internal world changes in appearance also.

Although the themes are tentative, I think that the task of figuring out the kind of theme being dealt with when looking at a work of media art according to the eight major themes will become a form of guidance in appreciating the work for the viewer/participant and that is why I have

suggested them here.

XI. Three definitions related to media art

I have proceeded with my discussion as a means of answering the question 'What is media art?' but in closing I want now to suggest three definitions related to media art.

- (1) Media art is artistic expression in which electronic technology acts as media.
- (2) Media art is media-conscious.
- (3) Media art is about creating new media.

We cannot obviously theorize about the future merely as an extension of the trajectory seen in a rearview mirror, and there is no-one who can fully predict what the future holds. 'Creation of a new media' is about creating what is in the rearview mirror in a different form. I enjoy looking in that rearview mirror and catching glimpses of the future.

So here ends this paper in which I attempt to answer the question 'What is media art?' ∞