

On Interactivity

“Interactivity” is the key which will open up a new type of art. Interaction is the most common activity between humans. They are interactive living beings who can make objects, talk with each other, write texts and pass these on to others. “Interactive art” is a test bed for the upcoming new type of art which will create a completely different aesthetics for reading/writing, communication and the memory system. Before reaching this point, we have to overcome several obstacles which hinder us in understanding the importance of interactivity. Unexpected discoveries made through technological achievements, the intoxicating speed of computer hardware, the beauty of designs, and the novelty of innovative interfaces blind people’s understanding of interactivity itself. Incorrect criticisms have been made by observing only the objects which are presented to the user as an interface. Certainly, by developing new interfaces new types of action between humans and systems can be realized. However, this is still not yet truly embodying a new type of interaction. The real art of interaction lies even further beyond this point.

A new type of art

“Interactivity” can change the way one experiences art, and it can also change the type of art. The function of interactivity alters the viewer’s position to that of a participant who drives the experience of art. The viewer will become an active participant, and the artist a server, a creator of an interactive system: The participant is a client, the artist is a server—like a digital networking system. A system is not a static object, it is a dynamic system reacting to the participant depending on the way the artist created it. The participant is a client, the artist is a server—like a digital networking system. An artist’s ideas are within the structure of live, dynamic systems. An art system is a presentation of a model of life, a model of a relationship, a living organism which we might call a subset of the emerging self. It reflects an aspect of life through human interaction.

In the modern history of art, many different forms of art have evolved. Impressionism, Cubism, Surrealism, and other movements have struggled for a form to continue their activity. Until now, most of their influence has remained locked up as museum objects, objects to be looked at. One method of reading these objects is to use one’s imagination as to what they offer us and what kind of interactions happen with them. Yet it has been impossible to collect and memorize some form of interaction itself in a museum. By using computer technology, it is possible to manage the process of interaction, forming a new type of reading/writing the environment between the creator and the viewer-participant. Interactivity is not an element of art and is not a manifest form of art. In principle all types of art need interaction, but “Interactive Art” focuses on interaction itself. It is a new method of preserving the art activity/experience.

For example, if we think about the process of viewing paintings, our first step is to capture the semantic codes behind the image. After a viewer has read all the codes in the painting, he/she usually leaves the gallery and starts to think about what it was, what it could mean. In the process of analyzing meanings, interactions between codes start. And then the brain interrelates several codes of meaning and produces a new code for understanding them. Interrelating these codes is a highly sophisticated cognitive process; a viewer should have a previous knowledge of codes such as symbols, icons, and images as well as some experience in relating them to each other. In this case, the process of

viewing and the process of thinking are not simultaneous. They are separate processes. An interactive system serves to combine these two processes into a single real-time process for the user. Thus, experiencing becomes equal to understanding. Interactive art provides the user with an artificial environment where he/she can learn by experiencing it. While this type of art suggests a new relationship between space and time, it also requires a new form of criticism for a new type of aesthetics. It cannot be compared with any earlier form of art.

Openness versus restriction

Consider, for example, complexity theory, which explains non-real time interaction between our actions and their consequences in our environment. Cause and effect are delayed. The effect is totally open. Normally the response is too complex for us to recognize the extent to which we participated in the final effect. Interactive art is considered to be art which behaves like complexity theory. It reacts to something complex it has never been faced with before. When a user acts on it, interactive art responds infinitely to different actions. It is a very optimistic way of installing a piece because people can reach the core only by chance. Although, to some extent it is true that if an artwork contains a certain function (e.g. under complexity theory) and tries to expose that function clearly to the user, the user can understand it. Perhaps, if one can understand it, it is not interesting enough, because it is too simple.

This understanding of “Interactive Art” stems from scientific development. Art is not equal to scientific experiments. When an interactive art piece is placed in a gallery or museum, the piece cannot be a laboratory experiment. Art pieces should work without any instructions, live, eight hours a day, and persist for months. Art pieces must not be a demonstration of mathematical functions or of innovations in technology. As a matter of fact, a laboratory experiment cannot perform for the public all the time. An art piece is an object to be exposed to the public. The general public cannot spend the whole day waiting for a special event caused by an interaction. Therefore, condensation is required to make people understand interactivity in the museum.

This brings us back to the process of understanding: when does a meaning come to our mind? If a function/system is totally free of parameters, it is difficult for the user to chance on an event which would reflect all the aspects of the function/system. Any given happenstance would be seen from the reader’s point of view as the ultimate parameter of the function/system. In order to provide the best possible chance for understanding, a well-designed restriction is needed. This is an important technique for defining a function when constructing a system. By inventing a restriction it is possible to bring the art piece from an experimental laboratory to a public space. This also reveals the author’s viewpoint, the position he takes, his vision, his thought and the communication he wishes to make. Restriction works like a wall that enables a space to materialize from infinite space (void space). It separates a single grain of sand from the mass of an entire beach.

Restrictions can give users a route map to help them navigate interactive environments, tell them a correct order for reading, provide some orientation in space. Restrictions should be aesthetically beautiful. Creative restriction design for interactive environments needs a capacity for abstracting a particular behavior between user and system. In other words, it is a language of interactivity. It is a grammar for using interactivity.

Such beautifully designed restrictions activate the user in front of the system, enable him or her to dance with it. Some of the best-designed interactive art pieces generate a good atmosphere that stimulates and activates their users. If the restriction is not good, then users remain sceptical, uninvolved viewers.

From document to event

According to a former definition of art, an art work is created by a human's body acting on a material in real-time, with some of the objects, such as canvas, being preserved after his/her struggles with the material. Paintings are recordings of action, documents of interactions. Viewers use their imagination to reconstruct the interactions between an artist and his/her materials. A coming interactive art will not preserve any objects, but serve as an interaction with a function/system for generating an energy/place where participants' struggles can emerge in real-time. It is this real-time process during which a user activates his/her thoughts to simulate happenings between now and the future. Far beyond reading/writing, real-time action can breach the barrier between the expression of the creator and the experience of the user. It is not a document, but an event that takes place here and now. It is crucial to develop a possibility for recording an event.

In the early sixties, a computer was designed by D. Englebart to handle documents interactively. By now, as we all know, this has been well developed. However, the interactive system which I am discussing is not a system for reading/writing documents; its most important aspect is how to organize the event between the user and the system, an emergence of user and system. The first digital computer was designed as a mathematical calculator for cannons. The next computer was made as a counter for the presidential elections. Now people use computers as a kind of office for handling documents or as a media terminal. I would like to propose that computers should be designed for organizing events for the emerging self in real-time, as a reflection of our lives and an aid in finding a reason for our existence. Additionally, the network is the most interesting feature in the development of computer sciences. It can be used not only for sending and receiving documents, but also for managing and handling events between people. Interactive art must be an avant-garde/radical/experimental model for this purpose.

Interface development

The visible part of "Interactive Art" is its interface. A monitor, mouse, keyboard, trackball, certain sensors, table or floor, and projected images are the only objects people can see in a dark exhibition room. If a viewer rather than a participant, enters the space, he/she wants to know the meaning of these objects without any interaction; they are not concerned with what might happen during interaction. In the worst case, no interaction at all occurs, the viewer simply observes the objects and the interactions of others, in the same way as one analyzes paintings.

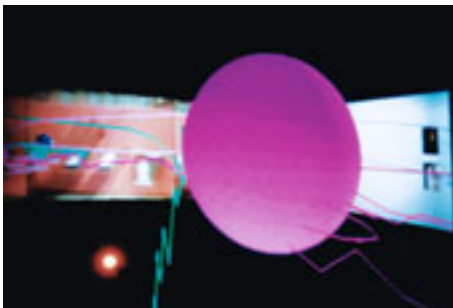
The interface is visible, but interaction is invisible. To focus on interactivity, we must be conscious of the difference between the role of interfaces and the function of interactivity. The role of interfaces is to visualize the meanings inside the system and to be transparent. Interfaces are objects which can be manipulated by hand and must also explain to the user how to use them. These objects/symbols and icons on screen should be designed according to the clear semiotics of interfaces. In a successful case, these objects and signs can seduce the viewer into becoming a participant. In the worst case, a beautifully decorated interface is merely an easy-to-understand object for press photographs. Thus, it produces a false effect. It is good for promotion, but it is not about interactive art.

The design of icons on a screen display which serve as an interface provides the user with a content that has a similar role to that of words in sentences. Words are elements of sentences and they each contain different meanings. Similarly, different types of interfaces have different links to different contents. They should be carefully designed, given that the interface is the surface of interactivity.

To continue this metaphor, only through the interface can one interact with something that lies behind, with certain meanings. One could say that interactivity is the field for constructing sentences. This field is regulated by a kind of grammar which is not same as the grammar for writing sentences, but rather a grammar that tells you how to use it. It is to be read/understood intuitively according to the interaction with the system. As with natural languages, the coherence of this grammar is important for constructing a platform for engagement between the user and the system. This is the point where a user can enjoy spending time in understanding the different grammars of different interactive art systems. The process of understanding grammar is at the core of interactive art systems, it is not about understanding the meaning of each word (an interface should be transparent).

Once the grammar has been grasped, the participant can read easily. And at the same time he or she can also write sentences. An interactive environment enables the user to read and write to the system simultaneously. Writing is reading. The user is a part of the system *or* the system is a part of the user. The system programs the user's interaction and the user dances with it. It is the ultimate place/field for the self emerging in real-time, a place where the user's spirit is alive, where the user can be emotional enough to feel alive.

When an interactive art system is successful, children are very reactive to it. This is a good sign for the upcoming new type of art. For children, getting to know something is their daily task. Knowing is their basic occupation. They are not afraid of destroying their former senses for the purpose of knowing something new and they achieve it by inventing a new way of interacting with it. I do not care about former styles of intelligence. I believe to know is to interact.



Masaki Fujihata: "Nuzzle Afar"



Masaki Fujihata: "Small Fish"

