

Study on Media Art Using Automatism of Surrealism and Kinect

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Abstract

Automatism will be incorporated in interactive media art, of which the ultimate aim is audience participation, to provide an extended experience for audience to interact with the work in unconsciousness. This thesis suggests that applying automatism of surrealism to Kinect will expand the access to art for audience and avoid being limited to a simple and short-term amusement. Based on surrealism that pursue unconscious actions and with help of Kinect, this project studies interactive media art with automatism that is not superficial, shallow and standardized but lets the unconscious react.

Keywords: Surrealism, Automatism, Kinect, Interactive, Real-time

1 Background and objectives

Contemporary mass media has made viewers standardized and accustomed to provocation. Media art, which also has its origin in mass media, spring up with similar technology and screen images. Kinect media art is an example. Having been developed for games by Microsoft, Kinect tend to breed artworks for short-term public amusement.

More and more Kinect works directed for advertisement for audience participation, while concept and purpose of artist, which should be most important, is less developed and squeezed in.

The objective of this thesis is not only to create an artwork for audience participation that provide easy access to art for audience through interactive system that is improved with Kinect technology, but also to suggest Kinect media art that is renewed with automatism of surrealism.

2 Automatism based on Surrealism

Surrealism is an 20th century art ideology that pursues pure interpretation of human unconsciousness and dream under the influence of psychoanalysis by Freud. [1]

Based on this definition, automatism is one of the methods of documenting social phenomenon in unconsciousness. Automatism rejects all outer influences such as conventional techniques, trained ideas or personal prejudice, and express as the body and mind lead in unconsciousness. [2]

Andre Breton (André Breton, 1896-1966) was a nurse at Grass Hospital in Paris during the World War 1 when he met Jacques Vache (Jacques Vache, 1895~1919), who had rebellious mind and introduced Dada to him. These two events gave birth to automatism. [3]

In 1924, the father of surrealism, Breton argues that surrealism is not a state outside of reality. [4] Breton asserted automatism, claiming that rational, aesthetic and moral decisions must be made without prejudice and restriction. [5]

Other surrealists, who used automatism after Breton, include Mason, Miro, Ernst, Oscar Dominguez and Hans Arp, and Abstract Expressionists include Jackson Pollock, Arshile Gorky, De Kooning and Robert Motherwell.

3 Various Methods of Automatism

Automatism is possible only when unconscious action creates beauty and power of unexpected phenomenon. [6]

This technique requires oblivious, natural and instinctive approach for the unconscious to be active in practice. When simulation in mind is brought out, one meets self in a pure state of essence, automatism works by expressing with the

attitude that is active and voluntary and not passive and forced.

Other techniques of 20th century surrealism apart from automatism are Depaysement, which produces psychological shock by misplacing objects in an unexpected place, Frottage, rubbing drawing tool over corrugated paper on an object, Decalcomania, which produces symmetrical and coincidental form by spreading paint on paper and folding or covering another piece of paper, Collage, unintentionally arranging materials on a surface with an adhesive and Rayogram, abstract photography that uses light and darkness created by placing an object on a photographic sensitive material.[7]

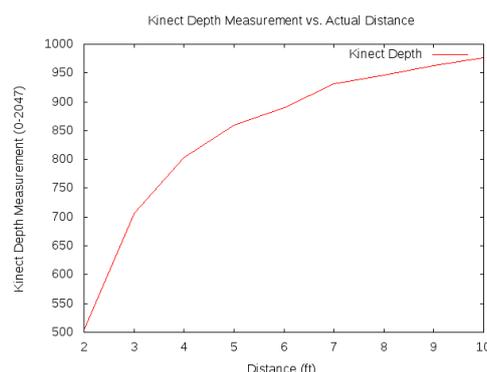
Surrealism is a new reality where a human being fully uses his or her unlimited imagination and unconscious thoughts from the society are represented. [8]

4 Simultaneous response of Kinect

Kinect, an Xbox 360 gaming device by Microsoft, simultaneously recognizes motion with a depth sensor and gives users interactive and more comfortable control.

Kinect is composed of Depth and Color. Depth has two lenses, IR Light and Depth Image CMOS sensor. Color consists color image CMOS sensor. IR Light projects subject through IR and after IR camera films it, Depth value is acquired by using triangulation.

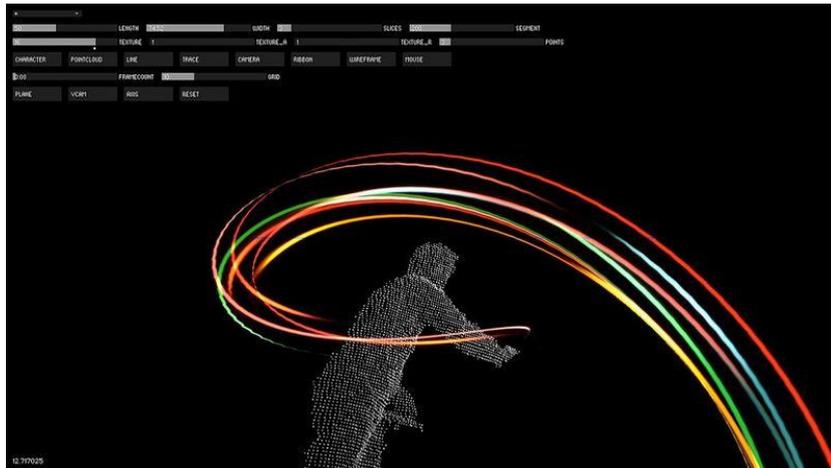
Kinect performs relatively accurate recognition within a certain distance (approximately 3m) from the subject. The further Kinect is, the less accurate its accuracy becomes. The graph analysis shows that Kinect Depth Measurement increases as the distance grows from 2 feet to 10 feet. [9]



[Figure 1] Kinect Depth Measurement VS Actual Distance

The technique that is currently used for Kinect art is a system that can recognize real-time interactive elements such as bones, muscle, heart rate and facial expression. [10]

5 Interactive Media Art using Automatism



[Figure 2] Kinect Graffiti (2011) by Christophe Naour

Kinect Graffiti developed by Jean-Christophe Naour is designed to display from graffiti motion traced by Kinect. The motion and drawing recognized to the screen can think another angle simultaneously and recognize surrounding space. When creating graffiti, the wide manual choices such as UI colors and line thickness can increase audience participation and the audience can simultaneously make unconscious drawing with automatism of surrealism.



[Figure 3] Darknet, Funkynet_1, Funkynet_2 by Guillaume Massol

Darknet, Funkynet by Guillaume Massol makes physical motion traces by using a system that delays Kinect recognition. The remaining image of lines that remind a spider string is sensible enough to make an illusion for the audience and ultimate experience of unconscious state by automatism is possible.



[Figure 4] Levitate (2012) by Everywhere

The Creators Project organized by Intel and VICE (Media Corporation) exhibits Levitate by Everywhere. This project, which is based on surrealism, is designed to make the reflection of arms fly like wings when one flaps them and fall when stops.

The significance of work lies less in automatism that lets audience react unconsciously, but in the fact that it gives the audience a profound question of fall and soar through interactive art.

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6 Conclusion

This thesis aims to develop Kinect artwork that incorporates Automatism, which pursues the unconsciousness based on Surrealism. Differentiated from standardized Kinect media art, surrealism and automatism will be incorporated. The objective is to study media art that can provide a new experience combined with unconsciousness rather than merely making physical motions.

Continued development of interaction art by studying automatism, the work can leave a trace in mind while in unconsciousness as well as it can intrigue.

The examples of interactive media art using automatism can be improved by recognizing several spaces simultaneously and allowing audience to choose the space unconsciously.

Kinect is a processing device that simultaneously transmits bone, muscle weight, heart rate, facial muscle movement through depth sensor value. This is expected to create media artworks with interactive elements that changes the

screen according to simultaneously recorded facial expressions or heart rates that the audience provides unconsciously.

Sophisticated use of Kinect and Automatism in future works will simultaneously make mutual interaction that catches the psychology of the audience and even unconscious mind being shown.

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