

# Complexity – An Experiment of Posthumanist Platonic Sex

**Kok Yoong Lim**

Media Art in Aesthetic Technology Lab, Soongsil  
University  
[limkokyoong@ssu.ac.kr](mailto:limkokyoong@ssu.ac.kr)

**Sojung Bahng**

Korea Advanced Institute of Science and Technology  
[sojungb@kaist.ac.kr](mailto:sojungb@kaist.ac.kr)

**Wonseok Choi**

Biomedical Knowledge Engineering Laboratory, Seoul  
National University  
[qua121@karts.ac.kr](mailto:qua121@karts.ac.kr)

**Joonsung Yoon**

Media Art in Aesthetic Technology Lab, Soongsil  
University  
[dryoon@maat.kr](mailto:dryoon@maat.kr)

## Abstract

As cybernetic progress is opening more pathways for telematics, the experience of presence in mediated environments is creating even more dissolution between corporeal intimacy and virtual intimacy. This ultimately leads to the questioning of the very nature of our being, identity and perception of reality. This paper addresses the neuro and cognitive aspects of tele-intimacy and through the discussion of the project *Complexity*, examines what is the nature of our intimacy now? It will address the representational issues and performative aspects of tele-intimacy and develop a context for techno sex with neurofeedback system to mediate human perception of intimacy.

## Introduction

Some (祟), a trendy word in Korea now, is an abbreviation of something (祟祟). It is used to conjure complexity in a relationship. The word has a sexy connotation of desire, intimacy, indeterminacy, and mysteriousness. The slipperiness of its definition makes it extremely difficult to pin down what Koreans mean by 'some'. The project *Complexity* is an exhibition but also a social experiment that explores the complexity of the sexualized culture of our post-modern social world. Human's lust, love and attachment, Fisher et al has noted, can and often operate independently and this is validated by the neural independence of these emotion-motivation systems. [1] Given this, we can vindicate controversies and moral panics. Situated within an art context, we investigate the performative capacity of tele-intimacy, how it instigates interpersonal relationship and open up pockets of interaction and evoke emotions.

## Exhibits

Project *Complexity* was exhibited in Seoul Art Space Seogyo in Seoul, South Korea in September 2015. The project comprises of four interactive installations: SoMe

Chair, Synchronicity Music Box, Differential of Memory and Generative Light, which were respectively placed in different zones in the exhibition space mapped according to the anatomical classification of the cerebral cortex in human brain:

- AC: Auditory Cortex;
- OL: Occipital Lobe;
- TL: Temporal Lobe;
- FL: Frontal Lobe.

The mapping of the exhibition space to different anatomical regions of the brain is a curatorial strategy to provide a metaphorical cue to understand the exhibits in neural correlation in different constituent within intimate relationships: love, lust and memory (Figure 1).

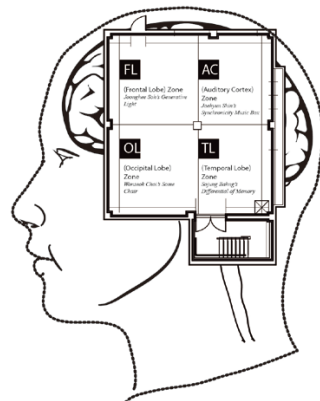


Fig 1. Floor Plan of *Complexity* Exhibition.

### Tele-intimacy

Two of the interactive installations employed EEG-controlled physical computing interface. The participants were provided a 4-channel EEG headset each to detect their brainwave and heartbeat as non-verbal communicative cues in the interaction process. IJsselsteijn defines interactive systems alike as “teleoperator systems that allow users to control and manipulate real-world objects within a remote real environment”. [2] This kind of system are used to replace human to work in challenging environment but interestingly we see an increasing usage to draw people closer by allowing them to feel the presence of another person connected via network. Intimacy is a sense of closeness and it can be characterized by emotional intimacy (romantic love) or physical intimacy (sexual desire). Cybernetic is allowing both type of intimacy to assume an ‘out of body’ form to be intimately performed across time and space, hence tele-intimacy.

### Posthuman and Human Desire

Katherine Hayles foregrounds Ihab Hassan’s proclamation of the emergence of posthumanist culture that will radically transform humanism including human desire into symbolic representation. With this in mind, human external representation, including sexuality can be dissolved into quantifiable information and reproduced as both a signified and signifier. Michael Heim equates this to the platonic ideal which can only be processed through mental logic, in the realm of pure idea. [4] In speculating the aesthetic aspect of the project, of particular relevance, is Burnham’s comparison of software with Duchamp’s conceptual art, both are deconstructed into comprehension. [5] Along this line, we investigate the potential of understanding the quantifiable aspects of neurological functions in different components within intimate relationships.

In speculating if we can redirect sexual pleasure to some kind of neuron activities, Wonseok Choi’s SoMe Chair (Figure 2) puts two strangers to test: participants’ brain electrical activity are picked up by EEG reader. Via SoMe Chair, a neuro-feedback process will maintain a focused connection between the participants while amplifying their Alpha, Beta, Gamma and Theta brainwave frequencies (Figure 3). In a reciprocal fashion, one participant’s level of excitement is articulated by different brainwave frequencies and these brainwave amplitude will modulate to the vibration on the chair which his/ her vis-à-vis partner are sitting on and the flashes of the strobe LED light and the soundscapes in the apparatus that enclosed their partner’s head. The work investigates whether intimacy can be a telematics semiotic

process. Consequently, it asks if sensations can be endowed with the sensual communication. This assumption is based on Fisher et al. extensive research on the correlation between brain system and physiological functions associated with a complex human state particularly love. [6]

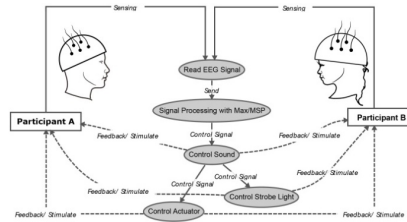


Fig 2. Data Flow Diagram for Wonseok Choi’s *Some Chair* Installation.



Fig 3. *Some Chair*, 2015, Wonseok Choi, interactive installation. It was installed in OL (Occipital Lobe). The occipital lobe contains the anatomical region of visual cortex which processes visual information.

### Platonic Love and Eros

Jaehyun Shin’s Synchronicity Music Box (Figure 4) deploys two 4-channels EEG headset to read the brain electrical activity of two participants and extends them to various prosthetic sound making objects with sexual innuendo. In the moment when the brain waves of the two participants are in resonance, harmony in the sound can be heard, producing a synaesthesia performance joining visual and audio. It put the participants in an active role to work towards a neural synchrony, validated by sonically coherent soundscape. With a bit of imagination, this performative piece is a witty simulation of a mutual orgasm of the brain in two participants. In ethology, the

attachment with the opposite sex (often called compassionate love) is characterized by mutual behavior and emotional union. [1] The performative nature of the audience looking at the participants attempting to reach the moment of congruent neural activity invokes the notion of a voyeur. In relation to “how subjective perceptual experiences can be explained in terms of the firing of neurons” [7], this voyeuristic situation opens a playful perspective to Broadhurst’s argument for an intersemiotic signifiatory practice that transcends language to address qualia. [7] The language of nerve impulse that elucidates the neuronal activity which allows the participants to perceive a sense of intimacy is communicated by means of auditory instead of spoken language. However, as Broadhurst noted, “the ‘experience’ of that subjective perception is forever lost in translation” [7], the moment we start to describe a perceptual sensation objectively.



Fig 4. *Synchronicity Music Box*, 2015, Jaehyun Shin, interactive installation and performance. It was located in AC (Auditory Cortex).

### The Issues of Going beyond Sex in Cybernetic

The best way for us to explain the implication of posthumanism on human sexuality is through the notion of platonic. Platonic describes love or intimacy that is free from sensual desire. Platonic love in this original sense rationalizes affection that is not sexual as the ultimate ideal form of love. It is important to note that the concept of platonic love was developed from Socrates’s Eros. Micheal Heim posited that our affinity for virtual world stems from Eros. However, Heim’s proposition is more related to our attraction to the intelligent machine, particularly those in the cyber world. But the paradox, of course is, how we know that we are in touch with a computerized entity and not with a real person in the network since Alan Turing provided the formulation that we cannot differentiate between human and machine

behind the screen. The inference of this is platonic metaphysics bridges the gap between Eros and computerized entities. [4] Even though we have yet to achieve the technological advancement to realize platonic notion of human nature in the cyber reality but we are, as Heim pointed out, “on an ontological continuity connecting the Platonic knowledge of ideal forms to the information systems of the matrix”. [4]

### Neuroanatomy and Intimacy

Sojung Bahng’s *Differential of Memory* is the brain monologue dealing with the phenomena of the mind (Figure 5). Bahng meticulously dissected our integrated perception of reality into fragments of events prerecorded and stored in a video database analogy to the way temporal lobe forms explicit long-term memory in our brain. Audiences can actively participate in the projection of such reality by choosing the micro events they want to make visible in a multilayered video collage. The montage displayed on the screens is generated by sequencing user-defined tags on the video clips on a tag timeline. Each montage follows the general flow of the timeline. The underlying stochastic processes will produce a new sequence each time a montage is generated.



Fig 5. *Differential of Memory*, 2015, Sojung Bahng, interactive installation. It was located in TL (Temporal Lobe). The temporal lobe of the cerebral cortex contains the hippocampus that forms explicit long-term memory.

Bahng’s work is acting as a metaphor for the brain itself, demonstrating the multilayered nature of consciousness. The unified whole experience is made up of micro conscious events; each one tied to the activity of different neurons/ nodes at different times and locations, in the processing system of vision. [7] It is this intricate brain’s memory function that is important in the comprehension of her multilayered video installation.

Joonghee Soh and Sojung Bahng’s *Generative Light* is similar to a confession room, where you come face to face

to a recursive reflection of yourself with a LED sculpture resembling brain's network (Figure 6). In tracing the shift from human to posthuman, which both evokes terror and excites pleasure, the pulse detector in Soh's piece acts as an indicator for our posthumanism readiness, signaling the LED sculpture to blink in resonance to your pulse rate, with that being the remnants of your intimate experience you have found in *Somplexity*. Fisher at al's comparative study between human romantic love and mate choice among mammals suggests that this mammalian behavioral 'attraction system' is associated with dopaminergic reward pathways in the brain, which upon activation will induce responses such as increased heart rate, sweating and trembling, alert and energetic. [6]



Fig 6. *Generative Light*, 2015, Joonghee Soh, interactive installation. It was located in FL (Frontal Lobe). The frontal lobe contains most of the dopamine-sensitive neurons in the cerebral cortex.

### Conclusion

In *Somplexity*, cybernetic setups connect us across distance and time without that memory of skin against skin intimacy. Yet, our corporeal existence still dominates our perceptual experience. Heim's erotic ontology of cyberspace counters the preference for disembodied intimacy. [4] Riva and colleagues posited that psychological impact of the media is conditioned by symbolic representation but the physiological impact of teleoperations is conditioned by tangible interface in the realm of reality. [2] Besides providing a new context for aesthetic interaction, this project furthers our theoretical understanding of the fundamental challenge of mediating the perception of intimacy. The implication of this is that research in presence design will have to extend beyond the simulation with increasing fidelity but combine cognitive psychology, neuropsychology and socio-cultural issues as they have profound impact on the sense of being in a mediated environment. We highlighted the conceptual

interaction between the seemingly remote fields of techno-sex and neuroscience research, and we are considering the perception of intimacy as the point of departure. For future study, a robust measure of user psychophysiological responses will be essential for the building-up of perceptual cues to simulate or substitute the experience of intimacy in a computer-mediated environment.

### Acknowledgement

This project was initiated by the artist collective Artengine ([www.artengine8.com](http://www.artengine8.com)). We gratefully acknowledge the creative support of our friends and colleagues at Artengine. This project was funded by a grant from the Seoul Foundation for Arts and Culture in 2015.

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