

Embodied Time (-) Changing Our Mind

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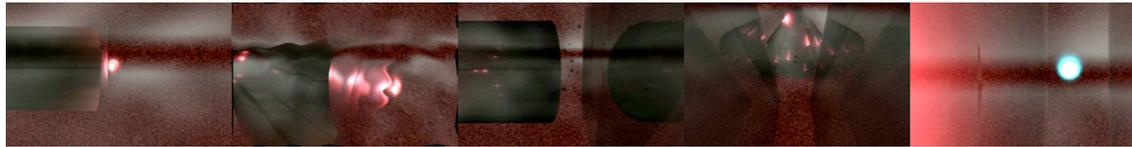


Figure 1 **Embodied Time (-)** Simon Chui & Hsu Han Chiang.

The aim of (-) is to invite conscious participation in embodied time, ordinarily an unconscious phenomenon. In both neural processes and intermedia art, the short term temporal juxtaposition of different components embodies an orienting affect not part of any one component. By engaging conscious attention to these parallel processes we hope to improve our understanding of interactive systems.

Intermedia

Intermedia art places attention on the sensorial and conceptual processes between media that orient themselves according to their context. The process can be compared to events occurring naturally in the brain in response to stimuli. Historical precedents for such event-related potential in art and technology extend from the ‘noise-makers’ of Futurism and Dada and the ‘readymade’ conceptual art and ‘gap’ music of Marcel Duchamps in the early 20th century to process art and Happenings of the ‘70s; each phase embodying a response to the stimuli of its contemporary philosophical and scientific developments.

In theoretical and practical terms intermedia is understood as an affect between different media elements and media conduits, the ‘natural’ channels of the senses and the transmission channels of technology. The shift from familiar orientations stimulated by this affect in the usual channels of communication sets up feedback situations that produce sensations different in nature from its elemental condition.

What is embodied time?

It is a gradual consciousness of an autonomic visceral affect embodied in the nervous system. There are various terms people use regarding this process such as "the orienting response" [Friedman 2001, 356]; we prefer to call it ‘affect’.

Affect is a precognitive phenomenon. Receptors in the vital organs conduct information about the state of the body to the peripheral and central nervous systems where the data is sorted as specific sensations of touch, hearing, vision, position, etc. It is at the level of the cerebral cortex “that memories of previous sensory information are stored and the perception of sensation occurs on the basis of past experience” [Tortora and Anagnostakos 1984]. For example, our perception of an image will change if a sound is played while we are viewing it. The time it takes to register a system’s “intrinsic and practical relations” [Varela 2000] and of awareness to their combined resonance are related to brainwave tests carried out by neuroscientist Benjamin Libet which demonstrated a “readiness potential” in neurological processes. Libet’s experiments detected brain activity occurring a split second prior to the decision to act followed by a split second between the decision and the completed action. It amounts to a

half-second of autonomic and conscious activity where the autonomic is an affect (an instantaneous sensation of distinct quality) which is then mixed with memory traces [Massumi 1996; Libet 1982]. A correspondence can be detected between the basis of this embodied time of neural processes, and the realtime affect, distinct from its media elements, that arises from the feedback and feedforward processes of intermedia art. [Sumich 2003] The composite symbol (-) gives a graphic expression to the real and distinct conditions of embodied time.

Methodology

The processes of a neuron are used as a model for designing a virtual interactive experience of embodied time. The interaction of media is channelled between the computer processor and the human participant. The design is represented in the form of an animated movie. (Figure 1)

In the movie, as in a video game, two entities interact within a neural environment. Molecular energy emanates from each entity flowing back and forth between them. In parallel, there is an oscillation of reaction and response between the entities’ charge and the chemical properties of the environment. Different responses and refractions between material components of stimuli and environment are distributed across the five panels of the animation. At various times prominent features of these components connect with each other (synapse) engendering distinct characteristics and qualities i.e. of a particular chemical nature in neuroscience; of a particular tone or ‘colour’ in intermedia art. The temporal firing sequence represents the embodiment of time, making the human aware of both the neural and intermedia interactions at once. We hope users will be led to reflect on their own unconscious neural and cognitive affect, during the explicit experience of embodied time in (-).

Literature

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