

Chapter 20

Design for Consciousness in the Wild:

Notes on Cognition and Space

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ABSTRACT

In this chapter we want to describe consciousness as a metabolic process having place through the apprehension with the world. Consciousness is not an isolated entity; it is instead growing up and reproducing itself by relating with the world. In this frame higher psychological processes, cognition levered by cultural elements, take place. Cognition itself has its bases on the cultural milieu, and it is related with consciousness being one of the possible expressions of it. Therefore in this paper we decline some possible dimension on how consciousness, through cognition, but also through emotions, reflexivity, relationships, expression, takes place and allows the individual cogently participate through the world. Mobility is a novel chance for the individual to take chance of the context to reverberate its consciousness. The physical space is populated with sense, which is gathered, manipulated and reinvented during its interpretation. Here is proposed a provisional list on how sense imbricates places and some possible ways of making use of it for design purposes can be argued. Memory, emotions, reflexivity, sociality, and bewildering therefore from reverberations of consciousness, become qualities that can be explored in the physical space from HCI. We will explain with examples how mobile and GPS technologies represent a new frontier for the sharing of culture and for leaving traces that, according to the statements of cultural-historical psychology, form the starting point for individual's life of mind.

INTRODUCTION

Here is introduced a metabolic approach in the definition of consciousness. Following the starting position of Antonio Damasio (1994, 1999, 2010), consciousness is not an abstract entity, separated from the rest of the organism. It is instead rising out and continuously modified by the apprehension with the external world. The notion of structural coupling of Maturana and Varela (Maturana and Varela, 1980;

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Winograd and Flores, 1986) helps us in the setting out of what happening to consciousness through the continuous relationship with the environment. Through the senses, consciousness receive stimuli, this in turn modify the asset of the human brain with modifications in the neurons weights of synapses. The response of the individual to the environment is continuous and reverberates through different cycles of feedbacks. This could be a possible interpretation of what consciousness is. Which is consistent also with the Leontiev view (Kaptelinin and Nardi, 2006). Leontiev was stating that consciousness has place through the activity and the interaction with the tools. As a matter of fact consciousness arise from the interaction with the artifacts, but the vision here is broader. Consciousness is whatever happens to the organism in its just staying into the world. Consciousness is what resonates through the integument and into the other levels of metabolic activity as a result of the human being into the world. This can be considered as a model of consciousness in the wild. The Leontiev definition of consciousness has a chief labor based approach. An additional richness of this model is that the artifacts are a crystallization of human thought and activity, that is a possible way in which culture and the social milieu affect consciousness, that is: the individual by making use of tools, use them to make lever on his cognitive activities, and this give rise to Higher Psychological processes. Vygotsky (1978) introduced higher psychological processes as physical and cognitive tools created by the humans and incorporating reasoning in order to allow someone else to make lever on them and producing higher levels of reasoning. In this way the Activity Theory gave start to a new vision of consciousness while speaking about work. Indeed their approach, when crossed with the work of Damasio provides a distinct neurophysiologic justification to considering consciousness as an organic phenomenon from one side. From the other Maturana and Varela explain in detail how it happen in a cognitive way through describing their vision of structural coupling. Even the notion of self can be part of this conceptualization of consciousness; Wiley (1994) and Damasio (2010) from different disciplines provide a picture of the self that is not anything of abstract, but continuously resonating the world through the integument and providing adaptive and creative responses. Even experience can be considered as embracing this construct (McCarthy and Wright, 2004). Consciousness, reflexivity, self, cognition, experience are therefore different shades of the same activity, which is making the organism to attune to the environment and let the stimuli resonate through the inner life, in order to continuously improve knowledge, making sense and adaptation processes. From other disciplines, like psychiatry (Kokoszka, 1999), Activity Theory (Stetsenko and Arieviditch, 2004) or Distributed Cognition (Càrdenas-García, 2013), we can find similar views. This metabolic vision of consciousness has indeed consequences for the design of technology, especially for GPS and smartphones. What stated before puts the bases for considering what it could means consciousness in the wild as a paradigm. The metabolism on consciousness takes life from the environment and relates with it through the human activity. The Gibsonian paradigm of perception in motion (Gibson, 1979) is another declination of what this means. Gibson first introduced the hypothesis that the individual moving into the world is an activity that is synchronic with perception. Humans continuously tune in perception according to their movements and vice versa; therefore the two activities are tightly interrelated and cyclical. The unfolding of consciousness has as a central focus the perception in motion, which is the main mechanism of the consciousness having place and from where the other paradigms can be derived logically. Indeed perception in motion is the main starter of human reasoning and all the other cognitive functions can be considered starting from perception in motion.

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