From: "jeffrey E." <jeevacation@gmail.com>
To: Gino Yu <███████████████>
Subject: Re: Visit to discuss plans for events.
Date: Thu, 08 Sep 2016 18:13:07 +0000

Max dad was kind but non informative

On Thursday, 8 September 2016, Gino Yu <███████████████> wrote:

Hi Jeffrey,
I will be in the US in October for the TransTech Conference (http://www.ttconf.org/) and possibly SAND (https://www.scienceandnonduality.com/conferences/sand-2016/). I'd like to come to where ever you will be around October 27-30 or so to work out a plan for the series of events I'd like to run. Specifically these include:

1) The Cuba Conference (I still owe you a one-pager on it).
2) The "mutants meet scientists" event at one of your locations.
3) TSC 2017 in Shanghai that I am hosting.
4) Sci-Foo (could be in conjunction with (2).
5) A study on intersubjective engagement I plan on running at Princeton with Ray Lee (see attached paper - I think I sent you the wrong one last time).

I've been developing a testable theoretic framework (have a paper I'm in the middle of writing below) and would like to brainstorm with you a bit on how the above events can build a community toward developing and validating new knowledge in the mind - body / language / belief / behaviour area that we both have an interest in.

Given your connections, I'd love to see who the right people to bring together between us toward building this community.

When I met you in New York, you mentioned that you would be going to Beijing. Do you have dates for that trip? Also, how was the meeting with Max's dad?

gino

Understanding the Self Through the Use of Digitally Constructed Realities

Gino Yu

School of Design, Hong Kong Polytechnic University

Hung Hom, Hong Kong

SUMMARY: *Through interactive visual and auditory stimuli, digital technologies enable designers to create experiences that provoke response and engagement. Participants of a digital experience are uniquely distinguished by the differences in the decisions that they make. These decisions are made based upon their personal interpretation of the digitally synthesized experience. In the "real world," a person's personality is revealed by their response to an experience as interpreted by our conditioned worldview. While we may be born with genetic dispositions, conscious choices are made based upon the past experiences that make up our conditioned worldview. The mechanisms of experience, reaction, and conscious response are physiologically based and use the same underlying physiological processes (e.g., the endocrine system). Thus, the notion of one's self extended to virtual worlds is a projection of one's conditioned worldview onto the symbols within the virtual domain. By thoughtfully designing digitally constructed realities and observing players responses, through the choices that they make and by measuring their biometric changes, one can infer their prior conditioning and worldview. This chapter provides a theoretic framework and research methodology for understanding self through the use of digitally constructed realities.*

INTRODUCTION

Today's advancements in computer performance enable artificial intelligence that exceeds the cognitive abilities of most humans (ALPHAGO, DEEPBLUE). These recent feats have rekindled discussions of computer based human-like intelligence first proposed by Alan Turing (TURING TEST), the notion of artificial consciousness (Buttazzo, 2001) and the possibility of "uploading" one's mind to a computer substrate (MIND UPLOADING). Developing computing systems that are capable of interactions that are indistinguishable from humans requires defining compatible models of self and reality. However, how does one model and objectively quantify a "self" or "personality?"

The quote "A man is the sum of his actions, of what he has done, of what he can do, nothing else," attributed to Mahatma Gandhi or John Galsworthy depending upon who you ask, provides a behavioristic model (RADICAL BEHAVIORISM) for understanding the self. Although one's underlying motivations for an action are unique and ultimately be unknowable, the mechanisms of intention and action are physiologically based and, hence, objectively measurable. Correlating psychologically motivated intentions with objectively

measurable physiological processes allows researchers such as behavioral biologists to develop a testable philosophy of mind and ultimately connect the humanities with the natural sciences.

Interactive digital media experiences provide a unique interface between the realm of the biologically based processes of psychology and the silicon based processes of today's computing machines. Computers create experiences that engage a user's psychology and motivate a response. With today's latest virtual reality technologies, it is now possible for designers to create real-world situations in a digital environment and trigger behavioral responses that mirror their real-world responses. In fact, the application of virtual reality exposure therapies has been shown to be effective in the treatment of anxiety and specific phobias (VIRTUAL REALITY THERAPIES PARSON). These therapies work because the virtual reality presentation provides perceptual cues similar to the real-world experiences that trigger the physiological stress response. Sufferers learn to overcome their anxiety and phobia by carefully designing the virtual experience, varying the severity of the stimuli, and entraining interventions to reduce sympathetic nervous system activation.

While these forms of virtual reality therapy are based upon activating sub-conscious physiological responses, these same mechanisms are involved in conscious responses where decisions are made based upon symbolic interpretation. Video games engage players and evoke emotional responses by manipulating symbols. Unlike passive media, video games give the player an illusion of agency. In a video game, the decisions made by the player will impact their game character (avatar). The degree of engagement, emotional response, and conscious decisions are based upon their interpretation of the symbols and context within the virtual experience. Thus, the conscious decisions made by a player in a video game environment constitute "the sum of his actions, of what he has done, of what he can do" and provide an encapsulated representation of their "self."

In order to develop a theoretical framework understanding behavior it is important to first establish some foundational assumptions. These assumptions bound the scope of the framework and provide a contextualization for designing experiments and interpreting results. The foundational assumptions are as follows:

1) **There is a physiological basis for consciousness that is embodied** – While it is widely agreed that consciousness has a physical basis, science has not yet been able to explain why and how it so arises (Chalmers 1995). We do not yet know how our memories are stored or recollected, though there is evidence that the hippocampus is involved in the process (Eichenbaum 93). The premise of this foundational assumption is that although we do not know how a person's experience of the moment, beliefs and processes for thinking are implemented, the perceptions, encodings and processes are ultimately physiologically based. As evidence for this, psychedelic drugs such as lysergic acid diethylamide (LSD) and N, N-Dimethyltryptamine (DMT) alter cognition and perception (Fadiman 2003).

2) **Symbolic representation focus** – To developmental psychology pioneer Jean Piaget, one of the most important accomplishments for an infant to attain is the understanding that objects continue to exist even when they cannot be observed (Piaget 1954). Object permanence develops during the "sensorimotor" stage of development by the age of two. It is from object permanence that babies begin to develop cognitive models of the world (schemata) first from objects and then from symbols (Wadsworth 1996). Digitally constructed realities are inherently symbolic and experiences are presented as symbols and symbolic relationships.

3) **Interactive experience** – Digitally constructed realities may be passive (e.g., animation) or interactive (e.g., video game). Because the focus of our framework is toward developing a behavior-based understanding of self, the digital experience must be interactive. An intentional response that can be quantified is necessary to measure behavior. For example, interactive role-playing games in which the player is represented by an avatar provide a sense of agency in the digital environment. Their interactions in the game provide a signature that encapsulates their interpretation of the experience.

4) **No action (or stillness) as baseline** – In designing digital interactive experiences, no action (or user input) correlates to stillness. The premise is that any action by the user is directly based upon their subjective interpretation of the symbols and relationships presented by the experience. Hence any action represents a conceptually motivated intention. No action = no intention.

A model that represents a user's engagement of interactive digital experiences will be developed from these foundational assumptions. The model will help designers create experiences that shed insight into an understanding of how experiences motivate behavior to reveal the nature of self.