
From: Joscha Bach <[REDACTED]>
Sent: Friday, November 8, 2013 2:12 AM
To: Kevin Slavin
Cc: Joi Ito; Martin Nowak; Epstein Jeffrey; Ari Gesher; takashi ikegami
Subject: Re: The benefits of deception

Kevin, thank you for your excellent input and inspired questions on this topic!

> The broad idea is that we'll need to build slack into systems of ubiquitous computing. That there's a paradox in that in order to have a cohesive identity, certain aspects of our lives require omission (or e.g., deception).

There are two sides to this: first of all, many of our interaction partners may have difficulties to accept (or even comprehend) the interactions and social norms that we maintain in other contexts (think: living in a small town in the midwest vs visiting Burning Man; religious community vs. less usual sexual interests; family life vs. work life; organizational role vs. friendships). As a result, we compartmentalize our social expression. In a culturally inhomogeneous society, this kind of deception (in the sense of hiding parts of my personality depending on the context) is a prerequisite of meaningful freedom.

But on a deeper level: while we may maintain the illusion of a coherent self, we do not possess a single social persona. Our social identity merges not only over our personality, but also over the individual relationships in which it manifests. We become who we are through the reflection of others.

> The ethnographer Tricia Wang coined "The Elastic Self" after spending a lot of time with Chinese and American youth using various forms of social software (...)

The notion of the "Elastic Self" might capture both aspects. On one hand, we may explore different possible ways of self-actualization by keeping social contexts isolated from each other, on the other, we usually maintain more than one persona.

> How would you build a system that provides a patient with the ability to continue acting deceptively -- in order to maintain a cohesive identity -- while providing the doctor with the ability to find -- and act on -- perfect information?

The simplest setup: the patient is a BDI (belief, desire, intention) agent, and has accurate knowledge about himself. He also has beliefs about his beliefs, desires and intentions are acceptable to the outside world (which here is a homogenous hospital context and does not need further differentiation), and which ones need to be adapted to fit the actual intentions. For perfect information, the doctor gets direct access to both layers.

The BDI model of agency (i.e. the idea of describing an agent using a set of beliefs, desires and intentions) is a somewhat crude simplification. We may well hold different, contradictory sets of beliefs and goals at different levels, and the one that becomes relevant depends on the context, and the state the agent is in. Also, many beliefs and intentions are not directly represented, but generated when needed, and their content and form may be highly dependent on the interaction. In reality, there is often no perfect information for the doctor to act upon, e.g., because some of the information will be generated during and depending on the actions of the doctor.

We might want to skip that kind of accuracy if we just want to get an idea of the benefits of deception for the organization. If we treat the patients (as well as doctors, nurses, ...) as straightforward BDI agents, the "perfect information" would be the set of beliefs and desires that the patient functionally acts upon. If we want to include self-deception, we might simply add another layer on top of that: the set of beliefs that the agent has about his own beliefs,

desires and intentions at any given time. For functionally accurate deception of others, the patient needs to represent beliefs about the actual beliefs of the doctor, and actionable desired beliefs of the doctor about the beliefs, desires and intentions of the patient himself. (A perfectly clairvoyant doctor would have access to all belief layers of the patient, and the relationships between them.) Only if we want to assess the benefits of deception to the agent himself do we need to implement a more detailed cognitive model.

Cheers,

Joscha

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