

Chapter 3.19

The Function of Representation in a “Smart Home Context”

Mats Edenius

Stockholm School of Economics, Sweden

ABSTRACT

In our society, we seem almost completely engaged in a variety of representational processes. By rendering events and processes “still”, they can be more easily manipulated and transferred into a stock of movable resources which can provide the possibility to control. It is in that context information technology can give us power. In this article it is argued that in order to understand information technology we must begin with representation. I will illustrate such a perspective by a case study that puts a smart home-technology in focus and exemplifies how it may let us deeper our knowledge about IT, how that knowledge is constructed, what actors are involved, what drives them and what kinds of issues are at stake.

Antiquity had been a civilization of spectacle. “To render accessible to a multitude of men the inspection of a small number of objects”: this was the problem to which the architecture of temples, theatres and circuses responded. With spectacle, there was a predominance of public life, the intensity of festivals, sensual proximity. In these rituals in which blood flowed, society found new vigour and formed for a moment a single great body. The modern age poses the opposite problem: “To procure for a small number, or even for a single individual, the instantaneous view of a great multitude”. (Foucault, 1977, p. 216)

INTRODUCTION

We utilize different tools to represent the world and relevant information and knowledge in order

to run our lives and make strategic choices. In our contemporary life, we seem almost completely engaged in different representational, fixation—"still" making—processes. A three-dimensional world is reduced to a two-dimensional representation, a lot of reproduced events and objects in a curtailed form (cf. Cooper, 1992; Latour, 1987; Edenius & Borgerson, 2004; Bloomfield & Vurdubakis, 1997; Kallinikos, 1996).

By rendering events, processes and happenings "still", their manipulation and transference into a stock of movable resources can be facilitated. Thus understood, representation provides the possibility to maintain control by expected reactions to the changes made in and through the representations. By representation, I mean a symbolic codification, an operative scheme; "something for something else" (Castoriadis, 1987) like texts, documents, models, or statistics. A commander of a battlefield, for example, needs a map (representation) of the ground to lead his troops, a manager needs a organization chart to manage the company, we create budgets, Internet-home-banks, timetables, and so forth. Variant technologies of representations exist in almost every facet of our lives, not the least of which are our homes. We not only use different representational practices in our homes that are linked to videos, cellular phones, cameras, and so on, but also for cooking facilities, home computers, e-mailing, heating switches, laundry booking, and more.

During the last 10 years or so, a variety of technologies have come into our homes. Many of these could be said to be an application of the intelligent building concept of residential property. When diverse technologies of representations are consolidated in one place in our homes, we use the epithet "smart homes". Smart (home) services technology was originally developed for the automation of commercial buildings, and has subsequently gained widespread acceptance (Peterson, Williams, & Mills, 2001). Chapman and McCartney (2002) stress that the "smart home" is comprised of everything from "an

intelligent building that provides a comfortable and productive environment through automated control systems such as fire safety, security and energy/lighting management" to claims about the "smart home project that allows individuals using it in their daily lives to use their intelligence and think and act for themselves" (Stelcner, 1998; Woodnutt, 1998) to different unobtrusive monitoring systems that support people (Bowes & McColgan, forthcoming; Fisk, forthcoming).

In conventional research about the smart home, a number of epistemological questions are put forward about the world we have attempted to capture. A few of these questions are: Is it well described? What details have been missed? Do we have the necessary features that are required to run the home efficiently? Have we found an acceptable solution for people with restricted mobility? In what way has the smart home improved the user's life? What kinds of activities do we need to monitor in order to successfully meet our objectives (Graham-Rowe, 2004; Glascock & Kutzik, 2005; Fisk, forthcoming; Kinder, 2000)? Beneath the surface of these studies, we can see structural perspective posit technology as embodying structures (which may become appropriated by the users during their use of the system, (Orlikowski, 2000). The residents' actions play a crucial role in explaining the consequences associated with the use of new information technology. However, the conventional studies in the field of smart homes leave the analysis on a more or less instrumental level. A more structural perspective, which is inherently dynamic and grounded in continuous action, is hitherto lacking or is barely discernable.

I will argue that by not examining the epistemological questions posed in the conventional research, there is a potential risk of comprehensively overlooking where the technologies used in a smart home may lead and what the overall results will be. In other words, I would like discuss what a smart home is as much as what it does.

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/function-representation-smart-home-context/18245

Related Content

The Administrative Use of Computers in Professional Sport Organizations

Terry R. Haggerty (1991). *Journal of Microcomputer Systems Management* (pp. 2-12).

www.irma-international.org/article/administrative-use-computers-professional-sport/55671

Organizational Factors and Information Technology Use: Tying Perceptions of the Organization to Perceptions of IT

Riza Ergun Arsal, Jason Bennett Thatcher, Thomas J. Zagenczyk, D. Harrison McKnight and Manju K. Ahuja (2009). *Journal of Organizational and End User Computing* (pp. 37-59).

www.irma-international.org/article/organizational-factors-information-technology-use/4146

Tailoring Tools for System Development

Anders I. Mørch (1998). *Journal of End User Computing* (pp. 22-29).

www.irma-international.org/article/tailoring-tools-system-development/55751

Rethinking Expertise in the Web 2.0 Era: Lessons Learned from Project Durian

Ilias Karasavvidis (2013). *Social Software and the Evolution of User Expertise: Future Trends in Knowledge Creation and Dissemination* (pp. 330-353).

www.irma-international.org/chapter/rethinking-expertise-web-era/69768

The Impact of Virtual Integration on Innovation Speed: On the View of Organizational Information Processing Theory

Yan Tang and Ping Zhang (2022). *Journal of Organizational and End User Computing* (pp. 1-20).

www.irma-international.org/article/the-impact-of-virtual-integration-on-innovation-speed/298702