In this article we position user-driven innovation vis-a-vis participatory design and Scandinavian systems design by identifying the defining characteristics of user-drive as the relationship between power over interaction, and learning in interaction. A case of design of feedback on electricity consumption for private households based on user-driven innovation serves to exemplify core principles of user involvement and user engagement. By referring to a phenomenological understanding of what it means to be in an innovative state of mind, we explain how letting users take the innovative lead has contributed a positive outcome, and how our approach to user-driven innovation can be regarded as a way to combine classic Scandinavian values of democracy with new economy calls for innovation in systems design. The article stresses the importance of designers taking a genuine interest in learning from users while also giving users the opportunity to learn about design. [Article copies are available for purchase from InfoSci-on-Demand.com]

Keywords: Ecological Information Systems; IT-Innovation; Learning; Model Power; Scandinavian Systems Design; User-Driven Innovation; User Participation

INTRODUCTION

The term user designates the relationship between a human being and an artefact. This relationship is asymmetrical, since only humans can make sense of this relationship. The basic characteristics of this sense-making has to do with taking power over the artefact, and the possibility for learning offered in the taking-power process. Research in Human-Computer Interaction suggests that humans attribute a variety of meanings to human-artefact-relationships (Bødker & Bøgh Andersen, 2005): one type is that of humans and artefacts being nodes in a system, but with the human actor conforming to the rules of the system, another type being that of humans having a tool which expands capabilities and agency individually.

In this article we seek to conceptualize the innovative space of a human-artefact re-
relationships of the tool-type. As case in point we present and discuss the outcome of an instance of user-driven innovation, where we as designer-researchers worked with eight families on developing interaction concepts for feedback about electricity consumption of private household. In order to identify, evoke and work in the zone of innovation of these families, we had to consider the relationship between designer and user: how do designers conceptualize users?

The user discourse has, since the first steps to include users in the design process of computerized Information Systems in the 1970s, gradually changed: from “victims” needing support in the 1970s (Bansler, 1987) to “competent practitioners” in the 1980s (Greenbaum & Kyng, 1991), to “serious professionals” in the 1990s (Nardi, 1993), to a present valuable “source of inspiration” (Gaver, 2001) or “developers with a recipe” (Aaen, 2003). These various discourses can be regarded as an increase in user significance primarily from a business perspective, where users are regarded as an irreplaceable source of inspiration for innovation along with the market conditions set by “new economy” (Kelly, 1999). In reflections on “Design Research in 2006”, Sanders (2006) describes this increasing interest in users as a result of failed innovation in the years 1999-2001: “innovation that was not relevant, not people-centered and ultimately not useful, e.g., the many failed products and services of the dot-com era” (Sanders, 2006). Consequently, a search has been set out for “truly people-centered innovation” (ibid.), and the concept user-driven innovation has gained increasing attention in systems design.

The term user-driven innovation is, however, not new. It was coined by C. Freeman, who in the 1960s used it as part of his theory of democratic production processes (Freeman, 1968). In the same period von Hippel presented the term “user dominated innovation” (von Hippel, 1976), making the same point as Freeman: users can play a valuable innovative role for product development. Von Hippel’s ideas are today realized in production processes and tool-kits to support lead-users’ “real freedom to innovate” (von Hippel, 2001).

Since the new millennium, the term user-driven innovation has entered the research field of Scandinavian systems design (e.g. Bodker, Kensing & Simonsen, 2008; Buur, 2008; Kanstrup & Christiansen, 2006). In Denmark research grants have been earmarked for methodological development of user-driven innovation and have resulted in several research centers, research groups, projects and experiments carried out in collaboration between researchers, business partners and users. The Scandinavian systems design tradition and user-driven innovation as defined by Freeman share a focus on an human-artefact relationship of the tool-type where the aim is to design for skilled people. The assumption is that users are in fact already skilled in what they do, hold potential to design improvements, adapt inventions, and turn them into innovations.

The research reported here seeks to combine democracy and creativity, and to regard users as innovators. As opposed to von Hippel’s lead user-category we worked with innovators who may not be future users themselves. Their qualification was their situatedness in the home and everyday practice of electricity consumption and household reflections – a practice too rich for designers to understand on their own. Viewing users this way, put the user on equal footing with the professional designers, in a partnership of complementary capacities (Kanstrup & Christiansen, 2006).

There is, however, still conceptual work to do to clarify the design space in which it makes sense to engage users in innovation. We envision this specific design space as dimensioned by the above mentioned two relationships: the human-artefact relationship of the tool-type, and the designer-user-relationship as a mutually asymmetrical partnership. We are not aware of research, which has gone in-depth with the implications of mutually asymmetrical partnership in a design context. Sanders did a categorical landscaping into “research led” versus “design led” design, and “expert led” versus “participatory” design (Sanders 2006). Participatory
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