

HCI informing Service Design, and visa versa

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Abstract

The emerging field of Service Design seems to build on research and practices developed in both HCI and Services Marketing. It bridges these two until recently quite distinct areas of work and shows that they share a set of underlying principles. They both focus on iterative, interdisciplinary, design-driven and user-centered development of concepts, prototypes and working models. They are both looking at creating high-quality, multi-channel services by taking note of the perspective of the future users/consumers of those services from an early stage in the development process. Likewise, both these fields can in turn learn from the insights and practices currently being developed in Service Design. This paper describes how Service Design both incorporates traditions from HCI and Services Marketing and in its application re-appropriates them.

Key words:

Service Design, HCI, Services Marketing, Consumer Behaviour, Contextual Inquiry, Ethnography

Introduction

Since early 2006 Service Design is emerging in industry and academia as a new area of practice and theory (Parker and Heapy, 2006). There are various reasons for a new label such as Service Design to have come up in this period of time. We are living in a services-driven economy (Laing and Hogg, 2003) wherein consumers are able and willing to be active participants in dealing with organisations providing goods and/or information (Szmigin, 2003). In their interactions with these organisations people are using a mix of self-service and networked technologies. These technologies consist of both tangible elements, such as ATMs or handheld devices, and intangible elements such as interfaces and back-office arrangements. People have ample choice of what device or interface they want to use at any stage in a consumption process. Services offered by organisations to consumers are usually not limited to a particular channel. On the contrary, Service Design stresses the importance of delivering an integrated offering across channels (Van Dijk, 2007a). People can at any point decide for themselves what technology or channel they want to use for their contacts, negotiations and transactions with service providers.

As a concept Service Design seems to offer a suitable label that includes both the creative production and the actual execution or delivery of a service offering. With the nowadays often complex multi-channel services, consisting of both tangible and intangible service elements, it is difficult to single out the contributions of the traditionally more or less distinct fields of interaction design, graphic design, information design, software design, product design and industrial design. These fields traditionally focus on the investigation and implementation of specific aspects that are regarded as integrated in Service Design. It makes sense to regard these contributions as inclusive to the overall design of a service. Each of the experts in the interdisciplinary team needs to be able and willing to work in close collaboration with the other experts involved (Van Dijk, 2007a). The new label of Service Design helps to not get trapped too easily into parochial discussions. With regard to the strategy and content of the actual service, Service Design also bridges these rather technology focused disciplines across faculties to the areas of Services Marketing and economics.

Historic context of Service Design

From an historic point of view the emergence of Service Design has been fuelled by both technological and socio-economic developments that triggered fundamental changes in post-industrial society. The internet has boosted the availability of information and the ability of consumers to utilise this information (Szmigin, 2003). As a result consumers have become more empowered in their interaction with businesses (Baker, 2003). They are challenging the traditional informational asymmetries between them and service professionals (Laing et al., 2002). On a socio-economic level de-traditionalism and an emerging consumerism have left a mark on the post-industrial society. These developments have facilitated the increasing ability and willingness of consumers to use the available information sources in negotiating the terms for interactions with professional service providers (Laing and Hogg, 2003). Together, these developments have changed the way in which individuals and organisations operate (Baker, 2003; Lewis and Bridger, 1999). The service encounter, that was traditionally characterised as a dyadic interaction between a customer and a service provider, is now set in a broader network of interactions with other providers and consumers (Laing et al., 2003). Consumers engage with this broader network while utilising a given service. The service encounter has thus become embedded in parallel consumer interactions. It encompasses multiple interactions and experiences with other parties, that occur alongside and independent of the formal process of interaction with the primary service provider. These parallel service encounters are an integral part of the overall service experience (Laing et al., 2003).

Apart from the characterisation 'information society', based on developments as described above, the post-industrial society can also be typified as a 'service economy'. This term stresses the fact that the contemporary economy is service-based rather than goods-based (Rust and Kannan, 2003). Shaped by advancing technologies and changing consumer expectations, businesses are under pressure to improve their competitive positions by increasing their focus on the consumer and delivering optimal customer services (Rust and Kannan, 2003). Contemporary consumers are increasingly expecting control in transactions and choice in the service setting. These expectations may have been triggered by the facilities of the internet, but they are also projected on the use of traditional channels (Rust and Kannan, 2003). In their book 'Consuming Services', Gabbott and Hogg (Gabbott and Hogg, 1998) stress that the consumption process of services is different and more complex than that of products. Whereas physical goods are evaluated, purchased and then consumed, services can be evaluated, purchased and consumed at the same time or in reverse order. In the experience of the consumer, the stages in the consumption process of services are very inter-linked and mingled. This, combined with the above described parallel service encounters, indicates that the contemporary consumption process is a very complex and dynamic process that is not easily represented in a linear model (Gabbott and Hogg, 1998).

Gabbott and Hogg also explain that by actively participating in the consumption process of services, for example by punching buttons, entering information or swiping cards, consumers have become co-producers of the services they consume. They are actively shaping the nature of a service while making use of it (Gabbott and Hogg, 1998). E-services that are delivered across multiple channels are usually based on self-service technology (SST). SSTs refer to innovations, based on computerisation and/or other technological advances, that allow (or force) consumers to help produce their own service encounters via machine interaction rather than by interacting with a firm's service personnel (Lee and Tan, 2003). Examples of other SSTs are voice mail systems, ATMs, airline

ticketing machines, hotel check out through interactive TV, and self-scanning systems at retail stores (Bobbitt and Dabholkar, 2001). The adoption of e-services by consumers has in marketing studies been investigated in line with the adoption processes of these other Self-Service Technologies. These adoptions have been gradually progressing during the past few decades. They were catalysed in recent years by the wide integration of broadband and mobile internet use by consumers, and by the willingness to engage with multi-channel service offerings. As a consequence it has also catalysed the emergence and urgency of Service Design.

Service Design builds on the theory and practice of HCI

For the further development of the research and practice of Service Design it is important to develop and appropriate theoretical frameworks and research methodologies. The current practices in Service Design suggest that User-Centered Design (UCD), a framework often used in HCI, and Contextual Inquiry, a methodology developed within HCI, are both very useful for Service Design. In the emerging field of Service Design researchers and practitioners seem to be picking up on these and other frameworks and methodologies that HCI has to offer. Key terms in presentations and publication on Service Design are consumer-centeredness, inter-disciplinarity, interativity and design-led processes (Parker and Heapy, 2006). These terms are very central in the field of HCI as well. This explains why HCI is in a good position to inform the development of Service Design.

User-Centered Design (UCD) is a research approach that is well established within HCI (BSI, 1999). It places the needs, preferences, abilities and concerns of the people who will eventually use the interactive systems at the heart of design and development processes. As a multi-staged process for the design and development of interactive systems, UCD involves research activities focused on the intended users of the system in every stage of the development process. The UCD process consists of four stages that each have a specific research focus. It guides the multidisciplinary teamwork of engineers, programmers, project managers, marketers and researchers who are involved in the development process of interactive systems. UCD is described in the literature as ‘the practice of creating engaging, efficient user experiences by taking the user needs into account every step of the way as an interactive system is developed’ (Garrett, 2003). This principle fits very well with Service Design.

Contextual Inquiry is a set of techniques employed within HCI research to investigate a culture, or a specific group of people, with the aim to contribute to the development of improved interactive systems (Wixon and Raven, 1994; Dix et al., 2004). The methodology used for Contextual Inquiry is based on ethnography (Dix et al., 2004), which is a research approach that produces a detailed, in-depth observation of people’s behaviour, beliefs and preferences by observing and interacting with them in a natural environment (Ireland, 2003). The aim of ethnography is to build up an understanding of people in the context of their everyday lives. Usually a small group of people is studied. Instead of looking at a limited set of variables among a large number of people, ethnographers attempt to get a deep, and detailed understanding of the life and circumstances of fewer people (Plowman, 2003). The techniques that are used in ethnography are mostly derived from anthropology. They can reveal subtleties of consumer behaviour that cannot be discovered through other methods (Garrett, 2003). A main strength of Contextual Inquiry is that the data elicitation takes place in the actual context of the end users of interactive systems (Raven and Flanders, 1996). This yields insights that other techniques such as surveys, telephone interviews, lab-based testing, and focus groups cannot give (Wixon 1994). Another strength is the fact that the participant is seen as the

expert in the area under investigation (Simpson, 1996). All these characteristics of Contextual Inquiry fit very well with the principles of Service Design.

How HCI can Learn from Service Design

HCI can benefit from the appropriated frameworks and methodologies used in Service Design. Traditionally studies in HCI tend to focus on the use of the online channel only (figure 1). Recent insights in Service Design however stress that the scope for investigations on the use of e-services should not be limited to the use of the internet alone. It is relevant to look at this usage in the context of everyday multi-channel usage by most consumers. HCI should therefore broaden its scope to see beyond the snapshots of just the usage of the electronic channel. In this sense Service Design is informing HCI on how to move the field of UCD forward.

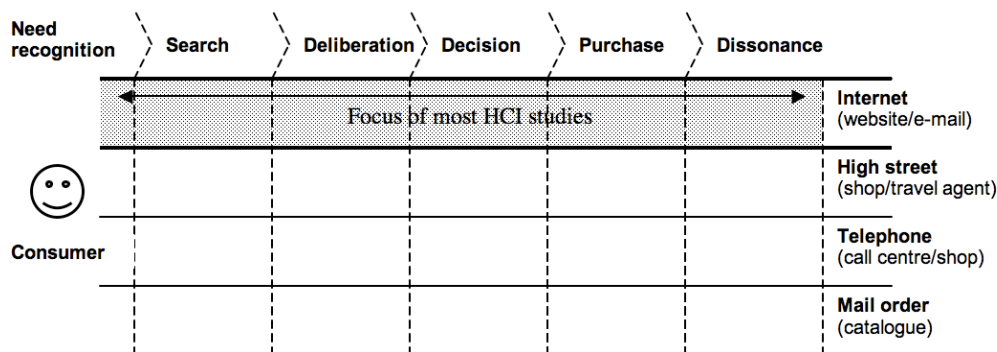


Figure 1. The traditional scope of HCI studies is focused on online usage. (Van Dijk, 2007b).

When investigating the service experience from the perspective of a consumer, it is helpful to collect and analyse experiences with other channels than the internet as well, as they may explain how and why someone chose to combine the use of various channels. This is illustrated in figure 2 in the appendix (Van Dijk, 2007c). The recent notion of the relevance of multi-channel investigations that arises from Service Design studies, offers a useful source of inspiration for the field of HCI. It shows how HCI can broaden its scope and appropriate its theoretical frameworks and methodologies. Though the current HCI literature contains valuable knowledge about the reasons why consumers decide to use, or not use, the online channel, it does not describe how or why consumers combine the use of various channels or decide to move between online and offline channels. The HCI literature so far offers little perspective on multiple channel usage. Most HCI studies tend to look only at the use of the online channel, not at the broader use of the multi-channel environment wherein the online channel exists.

Service Design also builds on Services Marketing

Apart from HCI, Service Design also benefits from frameworks and methodologies offered in consumer behaviour research, which is a specialised segment of Services Marketing. One of the themes that stands out from the Services Marketing literature, as a prominent characteristics of contemporary consumption behaviour, is control. The theme of control offers a useful perspective on multi-channel usage that is key in Service Design and complementary to the traditional online channel focus in HCI. Consumers nowadays expect and demand control over both the process and the outcome of the consumption process. They prefer to make up their own decisions on when and how to interact with a service provider. And in doing so they may choose to use the channels that are most convenient and

effective for them. In her book 'Understanding the consumer' Szmigin describes how consumption nowadays has become a very sophisticated and complex process (Szmigin, 2003). Everyday consumers need to make a vast amount of choices. They need to evaluate the pros and cons of many different consumption situations and make up their mind on how to act. Szmigin explains that contemporary consumers seem to be quite able to do all this. They are generally well informed and confident. If they take an interest in a certain product, service or business, they know how to find the information they need. They also initiate and change relationships with businesses according to their needs, expectations and experiences (Szmigin, 2003). In line with Gabbott (1998) and Baker (2003), Szmigin describes that consumers have become active co-producers of the services they consume. During the process of consumption they define the ultimate use and value of a service. Szmigin also stresses however, that the outcome of this process can be different from what was originally intended by the provider of the service. The pressure and complexity of the post-industrial society make it necessary for consumers to be creative in their use of what is available. Their creative consumption often initiates new or different modes of use and consumption of services. Therefore Szmigin stresses that innovation in the marketplace is as much driven by consumers as by producers (Szmigin, 2003).

The second theme that has been taken from the literature on contemporary consumption as being relevant in relation to our research questions is fragmentation. The literature on this theme contributes to an understanding of why consumers make decisions that appear to be inconsistent when compared across different consumption situations. The observation that the contemporary consumer has many faces is confirmed by Gabriel and Lang in their book 'The unmanageable consumer' (Gabriel and Lang, 1995). They state that contemporary (Western) consumption is fragmented and volatile. Consumers are trying to make the best of their lives, despite its precariousness and unevenness, and while marketing battles are raging around their heads and wallets. Consumers have proven that in spite of the best efforts to constrain, control and manipulate them, they can act in ways, which are unpredictable, inconsistent, and contradictory (Gabriel and Lang, 1995). From the perspective of a service provider, the various ways in which consumers make use of their service offerings may seem unpredictable, contradictory or even erratic. Szmigin explains this by pointing out that consumers are enacting different roles, depending on many different factors in their daily life (Szmigin, 2003). These can be roles based on functional responsibilities, for example being a parent, professional, friend, or lover. And these can also be roles based on emotional states, for example rationality, irrationality, risk seeking, or security seeking. These roles can be individual driven or directed by social norms and expectations. Since in the post-industrial society consumers are less than before bound to traditional stereotypes their freedom to change their behaviour at will has increased (Szmigin, 2003).

Conclusion

The developments in the emerging field of Service Design are building on theories and practices from the existing fields such as HCI and Services Marketing. By actively engaging with the application and appropriation of the frameworks and methods used, HCI researchers can strengthen their understanding of the broader multi-channel context of Human-Computer Interaction. It is an interesting challenge for HCI researchers to further explore the existing overlap with the adjacent field of Services Marketing and to contribute to the further development of Service Design. Being a relative young interdisciplinary academic field by itself, it makes sense for HCI to engage in this next natural step of further developing its academic research and practice.

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Author biography

Dr. Geke van Dijk is strategy director and co-founder of STBY, a research consultancy specialised in social research for service design and innovation. STBY is based in both London and Amsterdam. In 2007 Geke completed a PhD research in HCI and Services marketing at the Open University. Geke has more than 15 years of experience in social research for design and innovation. In 1993 she founded ACS-i media research & projects, the first usability company in The Netherlands. In 2000 she sold this company to Lost Boys and continued to work as Managing Director of Lost Boys content & usability until 2002. In 2003 she founded STBY, started her PdH research at the OU and moved to London.

Appendix - Figure 2

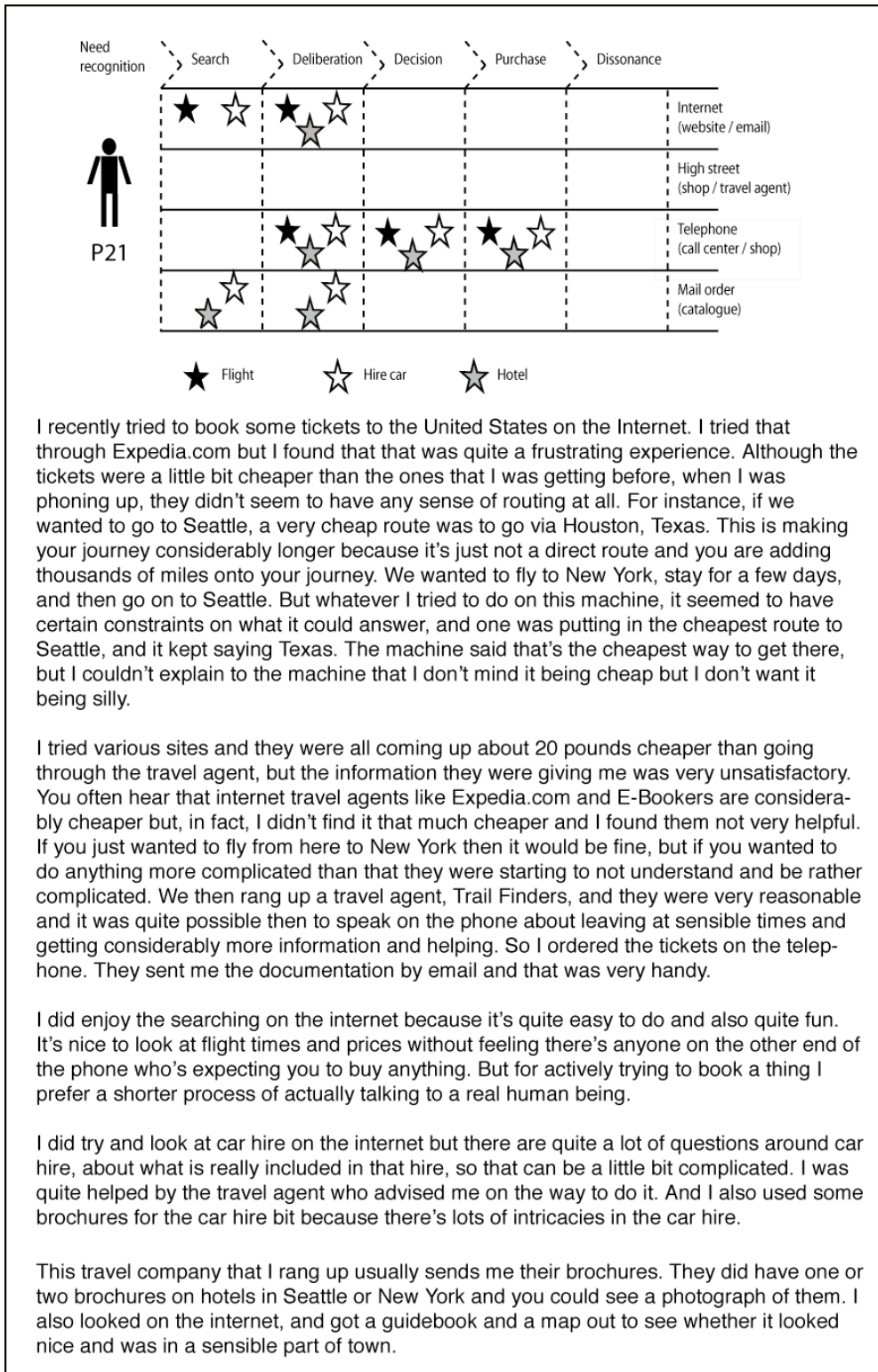


Figure 2. Example of a Service Design study that broadened the traditional HCI scope to include the context of multi-channel usage (Van Dijk, 2007c)