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Exemplars in Service Design

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Abstract

Exemplars play an important role in applied service design but are largely overlooked in academic literature. So far, most design research in other fields has concerned how surface properties of exemplars are incorporated in the current design, but services are different from most other design disciplines in regard to material. To expand the understanding of how exemplars matter to service design, material from recordings and observations of design meetings have been analysed. We observed a pattern that exemplars, in this case, were introduced in communication in the format of micro-narratives that express emotional impact of service elements. This study shows that exemplars in the form of micro-narratives are retrieved in design discourse primarily from gathered data, common reference points, and personal experiences. They contribute to the collective understanding of the service concept and support the alignment of the service offering with customer expectations.

Introduction

Exemplars play an important but academically neglected, or set aside, role in design in general. In service design literature there is little mentioned about methods and practices that utilise the potential of exemplars. Exemplars can be used to inspire, explore, and analyse possible design solutions and are used extensively by design practitioners. For instance, benchmarking and similar activities (e.g. identifying the service landscape) are common practice in applied service design but still unexplored in service design research and literature.

The main focus of this paper is to analyse how exemplars are used during actual design discourse - their origin, structure, and for what purpose they are used. In other design fields, exemplars have been the focus of research from a number of perspectives (e.g. Herring et al., 2009; Eckert, 1997; Eckert & Stacey, 2003). In this paper we will start by giving an overview of what we mean by exemplars and from what perspectives exemplars have been analysed in previous research. Then we will point out specific features of services that might make the

study of exemplars different for the service design discipline. The *service concept* (Goldstein et al., 2002) construct will then be introduced to provide a framework for understanding how examples influence communication in observations and recorded material from two different service design projects.

To show how the material has been analysed we will then present an overview of design communication, and touch upon some elements of communication analysis that help us make sense of what really goes in the collected material. The findings and some implications for service design will then be provided.

Design and exemplars

As mentioned, service design literature reveals little about the importance of exemplars. There is however a general consensus that *examples* are used by designers, and that they are important in design processes. Under this consensus, techniques such as moodboards, competitive products, metaphors, personas, and others are mentioned as being "examples" of something. In this study though, we do not look at "examples" from that common-sense point of view but rather delimit the meaning to referential techniques that use existing elements and already existing design objects that are brought into the design process to benefit the result of that process. Schön (1983) calls these *exemplars*. As a consequence, this excludes techniques such as personas, that are referential of archetypical users, moodboards, that are referential to abstract qualities, etc from the study presented here.

Exemplars in other design fields

On the whole, designers use a wide set of tools and techniques of which a subset are referential techniques. Using different terms, it has been suggested that exemplars can be used to, e.g. help designers understand design languages (Rheinfrank & Evenson, 1996) and genres (Dearden, 2006). That they are used to inspire (Herring et al., 2009), and provide a repertoire of design solutions (Löwgren & Stolterman, 2004). Another theme that is common is reuse, which stretches back to Christopher Alexander and the development of design patterns. The ability to reuse prior work can be seen as a characteristic of a mature discipline (Hornsby, 2009), which also allows for adding and modifying previous elements and designs to fit the existing situation. For instance, the teaching of architecture is grounded in concrete exemplars and early in education students learn about the great genres and exemplars of history to understand the timeless components of design elements (Winograd & Tabor, 1997; Schön, 1983).

Though most other design disciplines have touched upon the use of exemplars, research has so far mainly concerned surface properties and explicit accounts of how exemplars are utilized in design practice (Herring et al., 2009; Eckert, 1997; Eckert & Stacey, 2003). In these cases the exemplars serve as common reference points that help designers co-ordinate activities and facilitate communication.

Distinguishing features of services

Some often mentioned features of services are intangibility, heterogeneity, inseparability, and perishability (for an overview and critique, see Lovelock & Gummesson, 2004). The most frequently mentioned feature is intangibility – services cannot be identified by reference to their colour, shape or weight. Services are also heterogeneous in the sense that they are made

up of several touchpoints that are mediated and delivered in the context of various materials and types of interaction. A single service touchpoint might be simultaneously available through, e.g. the Internet, telephone, newspaper, and from a traditional office. This makes services highly complex and all the constituent parts might need to be designed to provide the best possible customer experience.

Most other design fields focus on one type of material and touchpoint, such as a product or a user interface. Earlier studies have looked specifically at what makes services different for design. Service design and industrial- and interaction design for instance, are different in the areas of process, material, and deliverables (Holmlid, 2007). As a way of dealing with the service specific attributes, designers typically visualise services (Kimbell, 2008; Segelström & Holmlid, 2009). Another suggested distinguishing feature of the service domain is that it is customer-intensive (Pinhanez, 2009). The fact that services have unique features leads to specific consideration for the design of services:

> *"Incorporating the user as input, and respecting its impact on the process and its outcome, creates fundamentally new constraints in Service design that we believe is going to require new methodologies and practices" (ibid; p. 9).*

Despite this, there might be valuable lessons from other disciplines. Previous research has pointed towards transferability between, e.g. digital interaction design to service design (Holmlid & Evenson, 2007, Holmlid 2009), but the methods and principles developed in other design fields might be better suited for other design objects than services. This is why it is so important to think about the underlying assumptions of existing design methods before adopting them to a new discipline. Especially since the field of service design is explicitly said to apply existing design methodologies and principles to the realm of services (Holmlid & Evenson, 2006). Many of those methods and principles have been successfully developed in other fields (see Moritz, 2005). One theme of our work at Linköping university is looking at how well suited they are for the design of services (Holmlid, 2007; Segelström & Holmlid, 2009; Segelström et al., 2009).

Exemplars in service design

In our literature search we have found no literature within the service design field that explicitly talks about exemplars. In the online repository for Service Design Tools (2009), 38 different tools and methods are mentioned. None of them concern exemplars or associated activities. In his ambitious master's thesis, Moritz (2005) mentions 102 tools and methods put forth by the service design community. Four of these have a direct connection to exemplars:

- Try it yourself
- Inspirational specialists
- Benchmarking
- Mystery shoppers

Moritz's (2005) thesis is the most complete and comprehendible overview of contemporary service design. Most techniques he describes are variations of themes and there are many different terms for quite similar techniques. Inspirational specialists seem to be a valuable and common way of dealing with specific service elements. An example comes from The Mayo Clinic and their SPARK programme, where inspiration about how to handle the check-in process of the hospital came from the check-in process of the airline industry (Saffer, 2007).

Of the little that has been written of service exemplars, and the nature of services, it seems as if the referential examples that are most directly obvious as exemplars would be experiences of existing services. Even though there is knowledge about exemplars in other design disciplines, there seem to be a need for better understanding of the role of exemplars in service design.

Design as communication

Given the nature of services, and the service designer's reliance on co-design methods and visualizations (Segelström & Holmlid, 2009) the design process can be viewed as a communication process. Co-designing means involving different people with different backgrounds which might lead to communication problems. A way to cope with such problems is to use more universal ways of communicating, such as storytelling which is a way of involving non-designers in the design process (Strom, 2007). Vaajakallio (2009), among others, have called for more detailed observations of how people collaborate and communicate in co-design situations. Communication helps designers and teams to collaborate, and one approach to design is to see it as fundamentally a process of communication:

> *"It is useful to think about design as a process of communication among various audiences." (Erickson, 1995; p. 2)*

Design communication

As a way to communicate effectively designers use scenarios and prototypes as boundary objects (Johansson & Arvola, 2007). Physical exemplars are also used as boundary objects, and as such they make communication more effective (Eckert & Stacey, 2000). A similar logic can be applied to exemplars and prototypes since prototypes also facilitate communication (Erickson, 1995) but like exemplars, new challenges associated with services as design material arise:

> *"How do you prototype a service? You can't really. Services are about relationships, and relationships take time to develop – compare that with a consumer product where the process is test-refine-test – it's much harder to do a sticks and sellotape version of services." (Parker, 2009; p. 17).*

As with prototypes, exemplars of services cannot be described in reference solely to external aspects. Instead they must be described also as experiences and impressions of the relationship between the customer and the service provider. New tools for, e.g. visualisations, have been developed that address the temporal, complex, and intangible aspects of services, for instance design documentaries (Raijmakers et al., 2006) and customer journeys (Kimbell, 2008), but no similar methods or tools exist for utilising the potential of exemplars.

Service concept

A service concept is an abstract construct, a shared understanding of the service that is being designed. A service concept has been described as:

> *"the general description of the offering and the elements which communicate the service itself (service brand, identity and mood); these elements are translated in the particular aesthetic of the interaction stream (service encounters) and in the peculiar characteristics of the service*

evidences, like tools, environments, etc. or in the proprietary script of the interaction/dialogue with the service operators." (Maffei et al., 2005; p. 7)

Exemplars provide information about other services' interaction streams and characteristics that makes it easier to align the service with customer needs and expectations. As a tool in the design of services, it has been suggested that the service concept can 1) be the link between business strategy and service design and 2) that it can be used to measure the financial performance of a service (in Goldstein et al., 2002). Agreeing on a service concept is an important part of service design which allows the business strategy of an organisation to be aligned with the needs of customers.

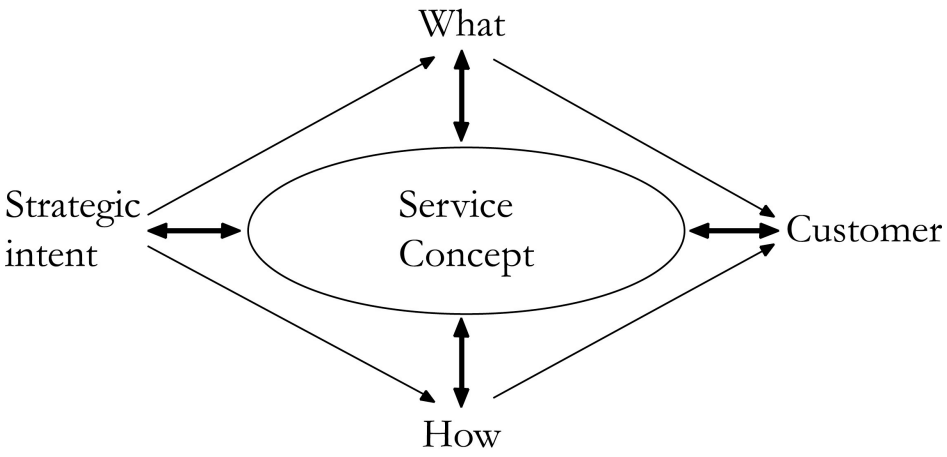

Figure 1: The service concept (adopted from Goldstein et al., 2002)

An analytical model of the service concept, seen in Figure 1, has four dimensions – *how*, *what*, *strategic intent* and *customer*. The concept is represented in the minds of designers and managers, but also the customers have certain expectations and needs associated with their understanding of the service. The *what* of the service concept roughly relates to the impression of a service as a whole, while the *how* is related to the way the service is delivered. In this study we will also look at the service concept as a way of explaining what goes on in discourse during actual, situated design practice.

Communication analysis

To understand communication in design one can find support in Clark's notion of *common ground* (Clark, 1996). In Clark's vocabulary, design is a joint activity and as such it is inseparable from communication. Like all joint activities design is goal oriented which means that the participants are trying to achieve both private and public goals on different levels. To do so, the design team must coordinate their activities and the accumulated knowledge that they have in common. In each given moment the participants in a joint activity brings previous information that partly converge with the information of other participants, e.g. information about exemplars and previous experiences. This shared information consists of mutual knowledge, beliefs, and assumptions, and those are the constituent parts of common ground (Clark & Brennan, 1995).

The initial common ground in a design project is the collective understanding of the information the participants share, and as the project progress they accumulate more and more *public events* that are separately remembered as *annotated records* and more abstract *outline records* by the participants. *External representations* such as the design documentation are also useful to understand the current state of a shared activity. To collaborate effectively in a

design process, participants need to be able to make references to exemplars and other points of reference (e.g. boundary objects). So, common ground allows participants of a joint activity to coordinate their actions based on their shared information about exemplars, representations, and other events. This also means that an exemplar that is not part of common ground cannot be used to coordinate joint activities. Such exemplars must first be *grounded* (Clark & Brennan, 1995) to be accessible.

Grounding refers to the process of adding information to common ground. During collaboration and communication people use different grounding strategies depending on the purpose, which is usually established collectively. If the purpose is to design something, grounding will happen in a special way that serves that purpose.

To analyse actual communication between members of a design team, this framework can be used to understand better what is going on in the collected data. First, one must then transcribe the material to make it more available to analysis. Then it will be easier to find trends and recurring patterns of communication in the material. The different communicative techniques employed by the participants become clearer and as the analysis continues it is possible to say something about how different situations are handled in the studied activity.

Looking at a service design process with a communication perspective allows us to contribute to a better understanding of what exemplars are in service design, and how they are used

Method

With the overarching goal of identifying origin, structure and purpose for incorporating exemplars in design communication we looked at the communication in two service design projects. Observations and audio recordings from projects at the Swedish Customs and the national meteorological institution (SMHI) were analysed. Communication within the design teams was analysed using theories from the field of communication analysis. A total of 454 minutes of audio recordings, collected during four separate design meetings, have been the core data source and excerpts from these recordings will be presented later on. A total of fourteen people, ranging from company staff to trained designers and developers, participated on different occasions. The meetings were held via conference calls and/or video conference calls, which made visual communication difficult or impossible. We did not take part in any way during the meetings but the participants were aware that we recorded their sessions.

Transcripts

To understand and make analysis of design communication possible most of the recorded material was transcribed. Transcription is the transfer of speech into writing to study the structure, form and content of communication. The transcripts were made in line with guidelines suggested by Linell (1994), which divides transcriptions into three levels depending on how the text should be analysed. The third, and least detailed level, has been applied in this paper which means that syntax and punctuation are used in line with regular writing conventions and things like mistakes, hesitations, repetitions, and so on are ignored. This level serves the purpose of revealing and analysing cognitive content (Linell, 1994). Unfinished sentences are signified by three dots (...). Comments or remarks made by the author are put within square brackets [pause]. Where episodes have been skipped it is

signified by this notation /.../. The excerpts should be read literally as service experiences, and not as metaphorical or analogical. The idea of a service concept will be used as an analytic framework here.

Result

The excerpt presented here comes from some of the more interesting sequences in the material where exemplars were mentioned. In this section we have underlined the example and the emotional response because those are the parts of the excerpts that are most interesting for the analysis. The excerpts were collected half-way through the design project at the Swedish customs, which also had implications for the content. The results have been divided into three groups:

» Behaviours
» Tangibles
» Gathered data

Behaviours

The focus of this kind of contribution is behaviour. As in this excerpt where a service element is discussed from an expectation viewpoint, excerpt 1:

> *"I think it feels like this; if you don't get [an email] for all [messages], then it feels to me like it is either-or, so that you don't get confused and trust that you get a notification to the mailbox every time you get a message in the portal, and then all of a sudden I don't get one. That could get a little confusing."*

As exemplars in this excerpt the participants use a behaviour – the first underlined bit of the excerpt. The behaviour is described in detail and serves as an example of inconsistency – which they fear may get confusing. The emotional level is added in the following elaborations about the behaviour. The concluding remark is where the (underlined) emotional response is finally clarified.

This was a common way of arguing for the how of the service concept. So what the designer is saying in this excerpt is actually that if the customer expects certain behaviour, i.e. feedback, then it would be bad if that was not fulfilled. Implicit in the excerpt is the assumption that similar elements in other services behave this way, which also makes it a good idea to customise the service accordingly.

In another context, a suggestion based on a previous solution is made. The structure is similar to other contributions where, in this case the behaviour, is first suggested and then the expected response. Excerpt 2:

> *"At the same time as a message arrives to the account, another message should be sent to their mailbox that 'you have a message'. It doesn't matter what was in the letter but it said that there was a new message to be read."*

The fact that last time this behaviour or function was implemented, customers only needed a confirming letter, makes it a good suggestion about how the this service element should behave. The behaviours discussed in these excerpts follow the same pattern as when tangible exemplars were used.

Tangibles

This type of contribution was made in reference to exemplars from common ground or personal encounters. The contributor here considers a "'1' within brackets" as part of what customers expect because they might have used similar services at the bank. Excerpt 3:

> *"Think about how it looks at the bank. There is usually a small '1' within brackets, on the... on the edge here... messages [pause] Then you see that something has changed."*

In this example it is the nature of the experience that is implicit, i.e. it is understood that it is good if you can see that "something" has changed. Together with the emotional response, the bank example creates enough understanding of the event for others in the design team to understand the impact on the service concept. In this way, some contributions involving exemplars become arguments for a specific solution.

The tangibles were sometimes also of a more personal nature, as in excerpt 4:

Designer: *"In my inbox there are terrible amounts of mail and that doesn't bother me because the new ones end up on top. The list goes on forever if you attempt to scroll down."*

Team member: *"Yes it does."*

Designer: *"But I don't think it's a problem actually."*

The "yes it does" is not meant as a counter-argument but rather as reinforcement of the designer's contribution. A previous experience serves as example and an anchor point for the contribution. The indifference to the potentially negative experience of having lots of messages in the inbox is a way for the designer to argue for a specific solution in connection with the service concept.

In this last excerpt concerning tangible exemplars, the existing main page is the example and here it is the information associated with the example that is in focus. Excerpt 5:

> *"I went online and clicked [the link] on the [existing] main page, and there you get, well, instructions about [another service] and this and that depending on your question. Now I don't know if that should be here too."*

Gathered data

Contributions that involved gathered customer data acted as powerful design arguments. As in this excerpt where a reference to how customers perceived some specific service evidence is made in excerpt 6:

> *"[The customers] were completely clear about the meaning of the word."*

This is followed by the immediate response:

> *"Okay, but that's good then."*

This saves time, because the team can rely on the gathered material rather than go on discussing the matter. When the response "but that's good then" comes, it's not only an acceptance but also a way to say "we can leave this topic for now". All these exemplars are about both the how and the what of the service concept, how the concept should be designed in order to align it with the wishes and expectations of the customers.

Observations from earlier design phases show that questions initially are more directed at the what of the service concept. Questions like "Who am I when I do this?" and "What do I want and how does that matter?" is more common and considerable effort is put into understanding what the service concept should be. In these earlier stages stories play a significant role, e.g. in building a shared service concept.

Discussion

A close examination of the collected data revealed how contributions involving exemplars were made. Regardless of how they were made there were always consequences related to both the how and the what of the service concept. Exemplars seemed to contribute both to the understanding of options and the value of choosing different solutions. Members of the design team added emotional responses to exemplars to express their value. This was sometimes done explicitly, as in excerpt 1: "that could get a little confusing" which was a straightforward way of saying that it was a bad solution, or implicitly as in excerpt 3: "Then you see that something has changed", which is meant to imply that it is a good thing that you can see if something has changed. The value of such implicit expressions is understood in the context of the situation. We were also able to identify the origin, structure and purpose of exemplars.

Structure

We observed a pattern of how exemplars were introduced in the observed design situations, roughly following this structure:

» Introduction of the exemplar
» Description of the surrounding context or behaviour
» Implicit or explicit referral to expected associated emotional response

We call this kind of contribution *micro-narratives* to distinguish them from related activities such as *planned storytelling*, where storytelling happens as a formal and deliberate activity during the design process, through techniques such as storyboards, scenarios and personas. These are planned and premeditated activities. That is, scenarios and role-play are prepared to perform a function in the process. During actual real-time discourse however, such techniques are not available and different strategies must be used. One common strategy is the enactment of ideas and concepts (Arvola & Artman, 2007; Vaajakallio, 2009). For instance Arvola & Artman (2007) explored how gestures are used and found that interaction walkthroughs and improvised role-play enable participants to describe dynamic, interactive features extemporarily. The presented study complements these studies by showing another way of envisioning ideas and concepts. During actual, real-time design discourse, situated stories are produced extemporarily, on the fly, by participants of the activity.

Purpose

Micro-narratives occurred dynamically and continuously. They are utilised for many different purposes (individual and shared goals) and comes from different sources. Shared goals support the collaboration, like informing the team (e.g. excerpt 1 and 5). Individual goals involve arguing for a specific solution, like in excerpt 4. An important point to make is that even though many references point directly to tangible aspects of exemplars, they implicitly concern events. Implicitly they also refer to the complete service experience for different audiences, since all the touchpoints in a service affect the overall service experience. So, when visuospatial elements are referenced in this way it says something about the how of the service concept, but also about the what. Implicit in the excerpts are the value for the new design (i.e. the impact on the service concept) and the situation. Similarly, the micro-narratives help designers go from analysis to synthesis. The exemplars are what Dubberly et al. (2008) would call a description of *what is*, and these are used to inform the work on *what could be*. This is supported partly by involving individual experiences collected during the initial stages of design. This is why individual experiences are so important and micro-

narratives allow individual design team members to contribute knowledge about service encounters, thus filling in the gaps of required knowledge.

Origin

Exemplars in micro-narratives were retrieved from the research phase (excerpt 6), common ground (excerpt 3), or personal experiences (excerpt 4). A closer look at how the different sources are adapted in new designs and the different impacts depending on source would be a good way to continue this research.

Exemplars that are introduced in micro-narratives also represent more than just the example itself. By saying, "Think about how it looks at the bank" (excerpt 3), it is also implied that a bank is similar in some sense to the current design, and that the bank genre is a potential model for it. Without this exemplar it would take a lot of time and effort to explain all the associated attributes of a bank, but instead the bank can be used as a common reference point. Collecting exemplars to use in design projects could be helpful, much like designers in other disciplines collect and storeexemplars. The service design exemplars would however need to be different in the sense that also temporal and emotional aspects of services would have to be stored.

Conclusion

Exemplars matter to design communication also on the level of analysis applied here. As common reference points, exemplars allow designers to communicate more effectively and understand the emotional level of service elements. At the same time exemplars makes communication more effective when they are understood in their socio-cultural context with associated attributes, values and so on. Micro-narratives are recurring in real-time design discourse and when these narratives involve exemplars they seem to follow a certain structure. The narratives provide a way of correcting and adjusting the service concept, and by doing so, aligning the business intent with customer expectations.

The results found in this study support the understanding of exemplars as a valuable resource in design communication. Since some of the exemplars are used for communicating insights from early stages of the design process they increase empathy for customers and contribute to a better understanding of the service context. However, more research in this area is needed to understand how the potential of exemplars can be better understood and ultimately benefit service design quality.

The aim of this paper is not to suggest a new method or technique, simply to add to the existing knowledge about what actually goes on during design communication on a more detailed level. Given the presented findings, and to harvest the potential of exemplars, new methods that address service specific attributes of exemplars could be developed though. In the same line of thinking it might be beneficial for service design if exemplars could easily be collected, stored and shared within the design team. This research has implications also for how to "set the stage" in collaborative design situations where a number of exemplars can be grounded in common ground initially (by viewing or experiencing them together) to benefit communication between participants of various backgrounds and skills.

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Works Cited

Arvola, M., & Artman, H. (2007). Enactments in Interaction Design: How Designers Make Sketches Behave. Artifact , 106-119.

Clark, H. H. (1996). Using Language (6th ed.). Cambridge: Cambridge University Press.

Clark, H. H., & Brennan, S. E. (1995). Grounding in Communication. In L. B. Resnick, J. M. Levine, & S. D. Teasley (Eds.), Perspectives on socially shared cognition (pp. 127-149). Washington DC: APA.

Dearden, A. (2006). Designing as a conversation with digital materials. Design Studies , 27 (3), 399-421.

Dubberly, H., Evenson, S., & Robinson, R. (2008, March + April). The Analysis-Synthesis Bridge Model. interactions , 57-61.

Eckert, C. M. (1997). Design inspiration and design performance. Proceedings of the 78th World Conference of the Textile Institute (pp. 369-387). Thessaloniki, Greece: Textile institute.

Eckert, C., & Stacey, M. (2003). Adaptations of Sources of Inspiration in Knitwear Design. Creativity Research Journal , 355-384.

Eckert, C., & Stacey, M. (2000). Sources of Inspiration: a language of design. Design Studies , 21, 523-538.

Erickson, T. (1995). Notes on Design Practice: Stories and Prototypes as Catalysts for Communication. In J. Carroll (Ed.), Scenario-Based Design: Envisioning Work and Technology in System Development (pp. 37-58). New York: Wiley & Sons.

Goldstein, S. M., Johnston, R., Duffy, J., & Rao, J. (2002). The service concept: the missing link in service design research? Journal of Operations Management , 20, 121-134.

Herring, S. R., Chang, C.-C., Krantzler, J., & Bailey, B. P. (2009). Getting inspired! Understanding How and Why Examples are Used in Creative Design Practice. CHI2009 (pp. 87-96). Boston, Massachusetts, USA: ACM.

Holmlid, S. (2009). From Interaction to Service. In S. Miettinen, & M. Koivisto (Eds.), Designing Services with Innovative Methods (pp. 78-97). Keuruu, Finland: Otava Book Printing LTD.

Holmlid, S. (2007). Interaction design and service design: Expanding a comparison of design disciplines. Nordes. Stockholm.

Holmlid, S., & Evenson, S. (2006). Bringing design to services. Invited to IBM Service Sciences, Management and Engineering Summit: Education for the 21st century. New York: October.

Holmlid, S., & Evenson, S. (2007). Prototyping and enacting services: Lessons learned from human-centered methods. Proceedings from the 10th Quality in Services conference, QUIS 10. Orlando, Florida.

Hornsby, P. (2009, 06 22). UXmatters. Retrieved 08 16, 2009, from Reusing the user experience: http://www.uxmatters.com/mt/archives/2009/06/reusing-the-user-experience.php

Johansson, M., & Arvola, M. (2007). A case study of how user interface sketches, scenarios and computer prototypes structure stakeholder meetings. In L. J. Ball, M. A. Sasse, C. Sas, T. C. Ormerod, A. Dix, P. Bagnall, et al. (Ed.), People and Computers XXI: HCI...

but not as we know it, Proceedings of HCI 2007. The 21st British HCI Group Annual Conference. 1, pp. 177-184. Swindon, UK: The British Computer Society.
Kimbell, L. (2008). What do service designers do? Retrieved 07 01, 2009, from Designing for Services: http://www.sbs.ox.ac.uk/D4S/videoArchive/index.html
Linell, P. (1994). Transkription av tal och samtal: Teori och Praktik. Arbetsrapport från tema K 1994:9.
Lovelock, C., & Gummesson, E. (2004). Whither Services Marketing? In Search of a New Paradigm and Fresh Perspectives. Journal of Service Research , 7 (1), 20-41.
Löwgren, J., & Stolterman, E. (2004). Design av informationsteknik: materialet utan egenskaper (2:nd ed.). Lund, Sverige: Studentlitteratur.
Maffei, S., Mager, B., & Sangiorgi, D. (2005). Innovation through Service Design. >From Research and Theory to a Network of Practice. A Users' Driven Perspective. Joining Forces. Helsinki: Available online: http://www.uiah.fi/joiningforces/papers/Maffei_et_al.pdf.
Moritz, S. (2005). Service Design: Practical Access to an Evolving Field. Cologne, Germany: Köln International School of Design.
Parker, S. (2009). Social Animals: tomorrow's designers in today's world. Retrieved 08 16, 2009, from RSA Projects: Removing barriers to social progress : http://www.thersa.org/projects/design
Pinhanez, C. (2009). Services as Customer-Intensive Systems. Design Issues , 25 (2), 3-13.
Raijmakers, B., Gaver, W. W., & Bishay, J. (2006). Design Documentaries: Inspiring Design Research Through Documentary Film. DIS 2006 (pp. 229-238). Pennsylvania: ACM.
Rheinfrank, J., & Evenson, S. (1996). Design languages. In T. Winograd, Bringing design to software (pp. 63-80). New York, New York: ACM Press.
Saffer, D. (2007). Designing for Interaction: Creating Smart Applications and Clever Devices. USA: New Riders.
Schön, D. A. (1983). The reflective practitioner: How prefessionals think in action. USA: Basic Books.
Segelström, F., & Holmlid, S. (2009). Visualization as tools for research: Service designers on visualizations. NorDes 2009 – Engaging artifacts, Nordic Design Research Conference. Oslo.
Segelström, F., Raijmakers, B., & Holmlid, S. (2009). Thinking and Doing Ethnography in Service Design. IASDR, Rigor and Relevance in Design. Seoul.
Service Design Tools: Communication Methods Supporting Design Processes. (2009). Retrieved 08 17, 2009, from Service Design Tools: http://www.servicedesigntools.org/repository
Strom, G. (2007). Stories with emotions and conflicts drive development of better interactions in industrial software projects. Proceedings of the 19th Australasian conference on Computer-Human Interaction: Entertaining User Interfaces , 251, 115-121.
Vaajakallio, K. (2009). Enacting design: understanding co-design as embodied practice. Engaging Artifacts, NorDes 2009. Oslo, Norway.
Winograd, T., & Tabor, P. (1996). Software Design and Architecture. In T. Winograd (Ed.), Bringing Design to Software (pp. 10-16). New York, New York: ACM.