Interface-to-face: Sharing Information with Customers in Service Encounters

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Abstract

Customers are often deprived of valuable information during face-to-face service encounters. We discuss such situations in the context of the "incidental user" and highlight the associated problems. A theoretical framework is proposed, according to which sharing information with customers would significantly enhance the service experience both by inspiring trust and by contributing to the effectiveness of the service encounter. We discuss possible HCI-related solutions to this challenge, including the use of a double screen approach as a means for presenting information to customers and enhancing collaboration between service providers and their customers.

Keywords

Incidental user, services, service design, information display, trust, effectiveness

ACM Classification Keywords

H5.2 Information interfaces and presentation: User Interfaces: User-centered design; H5.3 Group and organization interfaces: Collaborative computing.
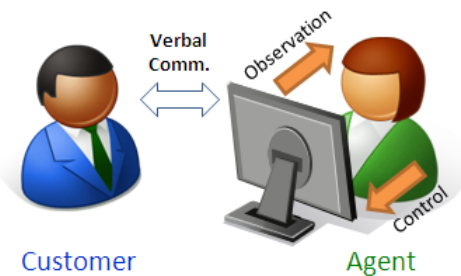
General Terms

Design, Human Factors, Theory

figure 1. Traditional service setting with a single monitor facing the agent.
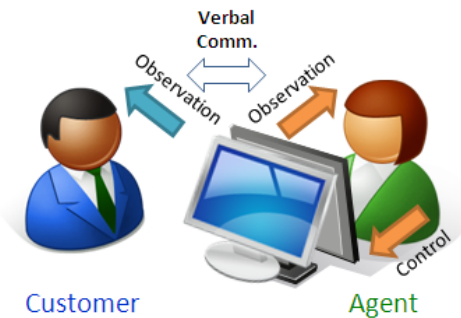

figure 2. Proposed double screen with a dedicated customer monitor.

Introduction

Our daily lives include numerous service encounters – moments of interaction between a customer and a firm. These encounters are "critical moments of truth in which customers often develop indelible impressions of a firm. In fact, the encounter frequently *is* the service from the customer's point of view" [2, p. 139]. Due to their importance, individual service encounters can greatly affect a consumer's overall satisfaction with a service provider [7]. This importance is magnified if we consider that services represent an incredible 80 percent of the US economy (US Census Bureau, 2006) and constitute a similar proportion of the economies of other developed countries.

Historically, the locus of research carried out on service encounters focused on interpersonal dynamics of the encounter [2], due to the emphasis on "high touch" (customer service with a high level of personal contact) and the relatively modest role of technology. However, the past decade has seen a remarkable increase in the use of technologies in the interface between firms and customers. For example, self-service technologies (SST) provide customers with access to services without direct interaction with a service employee [5]. These technologies have resulted in fundamental changes to the way companies interact with their customers [7]. They also carry broad implications to the design of human-service interactions, allowing various forms of technology-based interaction to take place [9]. Thus, customers may become more active in creating service outcomes [13].

Service providers are aware of the need to satisfy and retain the customer, because it is less expensive to satisfy existing customers than to attract new ones

[17]. This objective emphasizes the need to carefully design the service delivery process, and to change the design upon the introduction of new technologies.

The traditional face-to-face service encounter is comprised of two human parties: the customer and the service provider or "agent". Information technology, operated by the agent, is a third party to join the service encounter. All three parties need to collaborate, and are mutually dependent on each other, to complete a task successfully [15]. Traditionally, such collaboration would take place according to the illustration in figure 1, which illustrates a common service process in which only the agent actively interacts with the computer, basically serving as a mediator between the customer and the organizational information. This modus operandi reflects the traditional approach of the HCI field, but is not suitable to the service context for reasons that will be discussed in the rest of the paper. A new approach is therefore called for, in which better design will facilitate improved services, as illustrated in figure 2.

In this paper we consider the integration of the customer needs in the design and in the delivery of a service and the potential benefits of such an approach. We suggest a framework, centered on the concept of the "incidental user," that considers both the issue of customer trust in the service provider and the issue of the effectiveness of the service encounter.

The incidental user

An incidental user is a person who, usually in the context of receiving service, is involved in the exchange of information with a computerized system, and who is not the principal user of the system. Incidental users

figure 3. New McDonald's cash register provides better service by displaying all ordered items and their price to customers.

figure 4. Key players in situations of incidental use.

have interest in the information presented, gathered or processed by the system, but are limited in their ability to interact with the system, to control its operations or to verify the correctness of its data [9].

Incidental use situations are pervasive in service contexts. The incidental user may be a customer who is evaluating financing alternatives with a bank clerk. Depending on his plans, financial state and preferences, the clerk suggests options, discussing the pros and cons of each. While the decision lies with the customer, the banker (i.e., the agent) has both the domain knowledge and the expertise in operating the finance system. Thus, the customer and the banker, assisted by the IT system, cooperate to make the best decision. In most banking settings, however, there is a single monitor on each desk, positioned towards the primary user – the banker (e.g., Figure 1). The design of this service environment prevents the customer from viewing the information on the screen, pointing out certain issues, or getting a quick grasp of the nature of the presented information (e.g., a graphical sensitivity analysis of available options). As a result, the main representation modality in these cases is verbal, making it difficult (sometimes impossible) to correctly remember exactly what was said [6]. To an extent, this approach is reminiscent of the days when "chauffeurs" [3] or "surrogates" [11] used to mediate between the helpless user and the difficult-to-use system. The shortcomings of these traditional designs are apparent.

Often, clerks try to circumvent the constraints imposed by inadequate designs by turning the monitor around to show the data and graphs to the customer. Such a workaround illustrates our main tenet: these systems were not designed with the customer (i.e., incidental

user) in mind. In fact, they stand in the way of fluid and effective communication between the customer and the service provider. The physical arrangement of the service setting creates an inequality between the service provider and the customer along two dimensions: the presentation of information and the control over the system's operation. Furthermore, even if such information were exposed to the customer, it would probably be challenging to understand, as its structure, content and terminology are currently geared toward the understanding of the agent. Some newly-designed service environments have begun to take these considerations into account. For example, displays specifically designed for customers (e.g., new cash registers at certain McDonald's stores that allow the customer to see all the order's items, their prices, and the total price of the order – see figure 3).

Theoretical framework

The key players in situations of incidental use are the IT system, the agent, the customer, and the setting in which the service occurs (see figure 4) [9]. Two key continua along which incidental usage services can be improved are information display and control over the interaction. As part of work that attempts to construct a framework that considers the effects of such design changes, we focus here on the former factor. Several approaches, such as the double screen approach (e.g., the McDonald's example), the shared-screen approach suggested by [6] and Near Field Communication (NFC), in which a person touches his mobile device to an RFID information source, can facilitate sharing information in a service encounter. Two main positive outcomes of improvements in the service are: increased trust of the customer in the service provider and improved effectiveness of the transaction.
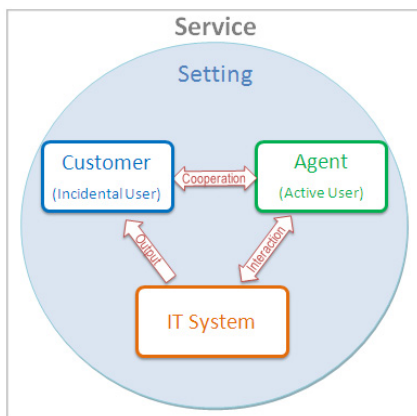
Trust

Trust is the willingness of a party (the customer in our case) to be vulnerable to the actions of another party (the organization – e.g., bank, physician) [12]. Being vulnerable implies there is something of importance to be lost (e.g., poor investment, wrong medication or price). All else being equal, the more trustworthy the service provider, the greater the customer's willingness to accept potential risks associated with the service (e.g., paying in advance for a service; heeding the service agent's advice about courses of action).

The service provider's trustworthiness is affected by the customer's perceptions of certain attributes. According to [12] these attributes include the ability of the service provider to deliver the promised service; the service provider's benevolence, i.e., the degree to which it wants to do good to the customer; and it's integrity, that is, the degree to which the service provider adheres to a set of acceptable principles and practices, such as fairness and openness.

How can the design of an IT-based service encounter improve the perceived trustworthiness (i.e., credibility) of the service provider? Consider a design solution in which the customer has direct access to information (as opposed to the mediated access that prevails in most service encounters); e.g., a screen dedicated to displaying relevant information to the customer. Such a solution can trigger three trust-enhancing mechanisms:

Removing uncertainty
By allowing the customers to directly access information, service providers reduce uncertainty. According to [19], people perceive ambiguous situations as being skewed against them, thus

undermining the fairness of the offer. Similarly, [4] suggest that "when information is hidden or when control of the situation is out of one's hands, conditions are typically biased against one" (p. 231). Removing ambiguity by displaying more relevant information should increase perceptions of fairness and integrity.

Transparency
Organizations send messages to customers both by providing (or not providing) information to them and in the ways in which such information is provided. The way and the degree to which information is provided serve as signifiers [14]. They are interpreted by the customers as messages that reflect the service provider's transparency, how much it values the customer, and how much importance it places on responding to customers' needs. A point-of-sale device that does not allow the customer to view the details of the purchased items may give a sense of concealment and lack of transparency; whereas a dedicated display for a patient in a triage room, displaying her name and date of birth, will likely project transparency. Thus, the transparency induced by disclosing information directly is likely to project benevolence and to inspire trust.

Social and communication issues
One element of face-to-face communication is gaze [6], with direct eye contact implying that attention is being directed toward the other party. In situations where the agent is focused on operating the IT system, his gaze is directed toward his monitor. This aversion of gaze could be misread as the agent allocating insufficient resources toward providing the service, causing social discomfort and confusion to customers. In general, situations in which the agent's actions are hidden from

figure 5. Single, agent-oriented screen does not allow the customer to see any information related to her purchase.

figure 6. Double screen allows the customer to easily verify her bill.

the customer may undermine the perceived integrity of the service provider, leading to reduced trust.

Effectiveness

Customers are often considered passive recipients of services. However, by playing a more active role, customers can contribute to the service offering and improve its effectiveness [1]. [16] suggest that co-creation of value stems from a dialog between the service provider and customers. Such a dialog implies interactivity, engagement and the ability and willingness to act on both sides.

Consider a customer who is evaluating several financing alternatives. A successful service encounter requires that both entities – customer and agent – contribute actively [10]. The customer holds the desired goal of the service (e.g. low risk investment), together with detailed information needed to complete the task (e.g. future plans). The agent has the domain expertise (e.g., available investment opportunities) and the expertise in operating the bank's IT system. Designing the service environment so that both parties can directly view the relevant information, relate to it and exchange ideas about it increases the likelihood of effective exchange of information between the parties and of a satisfying service.

In fact, the face-to-face service encounter can be viewed as a collaborative effort between two parties to accomplish a task, much like a distributed cognitive process [8]. We can view the service encounter in terms of the exchange of processes that include the agent, the customer and the IT. The agent and the customer possess different kinds of knowledge as described above and the system should be designed to

support overlapping and shared access to information that would facilitate more effective problem solving [18]. Making customers aware of information can both allow them to contribute relevant information and to act as quality controllers (verifying the agent's actions and information entered to the system).

When the benefits of distributed cognition are not realized, the outcome of services may suffer. [6] and [18] investigated the information exchange between agents and customers in a travel agency, finding an asymmetry in information presentation (i.e., the customer is deprived of most of the information that is displayed on the monitor). They maintain that this inequality in access to information degrades the interaction and the effectiveness of collaboration between the two parties. Consequently, [6] suggests an alternative system where the agent and customer work together on a shared monitor, which can result in "cognitive offloading" as the mental work required of customers can be reduced.

Summary

We presented the phenomenon of the incidental user in service settings and discussed preliminary ideas regarding possible design approaches to enhance service encounters. Focusing on the double screen approach (see figure 6) as an exemplar of such approaches, we considered potential outcomes and implications for service encounters, such as the customer's trust in the service provider and the effectiveness of the service encounter. These outcomes are likely to eventually influence customer loyalty and perceptions. Thus, we have argued on a theoretical level that it is possible to significantly enhance the service experience by applying established HCI

principles and using methods and tools, such as user-centered design to create greater transparency of information and thus inspire trust, reduce uncertainty and create a better overall service experience for customers.

Our next step is to test the theoretical arguments by using qualitative and experimental methods in the context of service encounters.

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