SELF SERVICE REVISITED

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ABSTRACT
Any conversation for designing for the future of product design will include a discussion on the importance of service design. In undergraduate education, students are becoming increasingly aware of the diminishing prospects for employment making physical products; and at the same time are looking towards the service economy as their future employers. Service lead industries have natural synergies with product design, drawing on methods and processes for user insights including, experience prototyping, usability evaluation and implementation.
In September 2006 the authors presented a paper on the story of an industry led service design project for two product design programs in Scotland [1]. The brief provided an open-ended approach for students to design for services with wide-ranging solutions involving helping hands, community chests and a wandering hamster. Almost immediately following presentation and publication of this paper, the project was revisited and more clearly focused around the issues of providing *financial* services. Having developed through this second year of the project we were able to analyse the educational impact of industry leading education with some surprising results that show students challenging and inspiring both industry and educators a-like. We will reflect on the impact of viral learning across institutions and program development through industry's active engagement with product design education. At the heart of our paper is a discussion of the service design industry and its relationship to product design education.

Keywords: Self Service, Service Design, Industry led education, Interaction Design, Product Design

1 INTRODUCTION

We have evolved to look after our own interests. We like to be individuals. We like to manage and act out our lives in the way we want to. Mass markets have eroded this and we are not happy with it. Yet we like cheaper, faster, more varied products – but we don't want to feel like cattle. We want to feel connected to the global companies that provide our local and personal services yet we do not like our individuality to compromise in any shape or form by this relationship. This is where *Self Service Design* fits. We want to do things ourselves, yet we also complain when we do – the IKEA 'un-flat-packing' experience is not generally viewed as a positive one, with customers even being prepared to pay a premium to have flat-packed furniture, un-flat-packed -- with self service often feeling like the opposite of service, resulting in kinds of oxymoronic self service interactions. Yet we find we like sushi trains and confectionary vending machines in any shape or dispensing variety, but we don't like automated phone

systems, where it can feel like the customer in an involuntary co-worker. But with self service making inroads into increasingly diverse and personal areas of our day to day lives from: digital photo processing kiosks in chemists to processing Tax returns online all this points to an increasingly problematic relationship developing between self-service and the public it seeks to serve.

Clearly self service design is an expanding sector with industries and service points previously totally reliant on offering a personal service experience or customer face-to-face interaction, now actively embracing self service solutions. Clearly both increasing labour costs and advances in associated self service technologies are accelerating this growth, encouraging industry to adopt technology-based self service solutions for customers. But with companies on the one hand increasingly wanting to differentiate their products and the level of service provided whilst also cutting their costs by shifting more customers from human-assisted channels to self-service channels like Web sites and touch tone phone systems, invariably leading to friction at some level. This relationship between expected level of service, particular consumer traits and situational factors within marketing terms has been extensively examined [2] but the purpose of this paper is to examine these issues from a design perspective.

Self service is clearly at a transitional or tipping point, where traditional, mostly people enabled services, are merging and evolving into increasingly networked and technology mediated services – the most established and sophisticated case of this is demonstrated by banking services. To place this into context we will now discuss examples of traditional and emerging self service.

1.1 Traditional Modes of Self Service

Ever since we dreamed of and then realised automated machines, we have dispensed goods mechanically. This became prolific in the 1950s – driven by an automotive industry and an expanding road network. This form of self service 'dispensing' is still with us with for example, food vending with varying degrees involvement - sushi bar and buffet style to touch screen self-service fast food restaurants. Over this period self-service has also moved into the home usually facilitated by means of Self-service Technologies (SST) in the form of home shopping and placement of orders by telephone. With the result that most individuals have now formed high levels of understanding and expectations from these services irrespective of whether they have had favourable or unfavourable personal experiences of these activities.

With many sectors now offering their customers the option of performing personal transaction-related activities from home, within retail environments and airports all involving many hundreds of thousands of transactions every day - the majority being facilitated by SST - one might reasonably ask as these services quickly go from novel to the unremarkable where might the boundaries be set if any in this expanding sector. Research examining the reasons why, in an increasingly and ever expanding market place, some SST's are more acceptable than others [3] has shown this relationship with SST to be an extremely complex one drawing on quite divergent factors like role clarity, motivation and ability with respect to this fast changing technology. Even where consumers have been exposed to some form of SST such as ATM's etc. attitudes towards self-service would still seem to be moderated fundamentally by the quality of the customers actual experience.

1.2 Emerging Self Service

The internet and related (wireless) technologies are changing the landscape of self-service where we can access products and services across the globe and bypassing language and cultural barriers. However we still need to look at ways of integrating between the information provider (for example internet or phone) and the tangible qualities of a service. There, for example, still needs to be a way of unlocking a car in an automated self-service car rental system, online rental of DVDs needs packaging and so on. Leading this change is the service design company LiveWork (www.livework.co.uk). Their 'Streetcar' project (www.streetcar.co.uk) exemplifies this approach, where self service car rental is enabled through a dense network of rental cars that can be accessed any time of day or night via phone or internet booking. The relationship between products, the internet and services is the challenge of self-service design over the coming years as we increasingly want to take personal-ownership of the global experience. This new way of interacting with products and services has lead to a new language of service design as we will now explore in the following section.

2 THE LANGUAGE OF SERVICE DESIGN

Communication is the bedrock of design; whether verbal or visual, design has always defined its landscape through language. The relationship between intangible experiences and behaviours, and tangible products and interfaces has created a new language of service design – best documented by Lavrans Lovlie [4]. To provide a flavour of this resource, some of the most appropriate terms for designing self services are:

Touch points – which form the tangible interface to the user, such as ATMs, call centres, websites, vending machines and mobile phones.
Service blueprint – a map detailing the complete service from technical infrastructure to the user's interaction with the touch points.
Value Exchange – the value of the service experience measured against customer expectations.

The key to designing a good service that will be acknowledged by the intended user is that that it is relevant to them and easy to use. Properly informing the consumer of the benefits of this new or adapted service is also vital in ensuring fast and efficient migration.
Services must be cost efficiently managed, replenished, controlled and supported (especially at the beginning) – otherwise there will be a negative feeling about the service which will result in a poor take up or longer adoption times. This negativity can often arise by the poor implementation of the interface between the user and the service – not actually the service itself. Therefore in order for the service to be a success it must work in harmony or be enhanced by the user experience of the interfacing hardware.
The touch points that provides or supports the service should not be intimidating but instead welcoming to the user. Consumers don't like to feel ignorant or incompetent. In relation to product design, service design presents new challenges for presentation and show of work – particularly in the context of a degree show. Students dealing with service design are very often dealing with large systems involving the relationships between many people and often using a wide variety of technologies. This landscape is much more akin to interaction design and architecture than it is to traditional product design. Bill Hollins [5] describes this challenge in relation to manufacturing and provides five ways in which designing services differs from manufacturing:

- **Customer contact -** Generally, in manufacturing the customer is probably unaware of how the product came about. In services, production and consumption tend to occur at the same time.
- **Quality -** In manufacturing measures tend to be quantitative, and quality tends to be measured against things like drawings. The measures of quality in a service tend to be qualitative and there are few quantitative measures. As a result, there is a wider variability in services and it is more difficult to control the quality of a service – as it is often down to the individual person supplying it.
- **Storability -** Because services tend to be intangible, it is usually impossible to store them. For example, a car in a showroom if not sold today can be sold tomorrow but an empty seat on an aeroplane loses its value once the plane has left.
- **Tangibility -** One can physically touch a manufactured product but most services are intangible. One cannot touch legal advice or a journey, though one can often see the results.
- **Transportability -** Most services cannot be transported and therefore, exported (though the means of producing these services often can). It is estimated that only 11% of services are exportable although this is fast changing

3 DESIGNING FOR FINANCIAL SELF SERVICE

Consumers are becoming more comfortable and informed with technology and how it can shape and enhance the world around them. They are increasing their expectations on what it should deliver and how it should be delivered. This has led to a migration towards full self service and /or assisted self service from traditional services in environments such as supermarkets, banks, airports and petrol stations in an effort to make them more efficient and cost effective.

The growing importance of personal banking within the financial sector necessitates a closer relationship between bank and customer by providing focused personalised services such as mortgage advice, loan applications or debt consolidation advice. In this sense self service within banking is increasingly about relationships. It means that the bank branch may not necessarily be a place you have to queue while tellers are detained depositing customers cheques, withdrawing cash or paying bills. It is about making the banking environment as efficient as possible while not detracting from the customer experience.

NCR is focused on providing solutions that aid the transition between a fully assisted service and self service. It is important to aid customers to smoothly adapt with the technology ensuring this transition is as seamless as possible. The best way to get consumers to adapt is to ensure the solution is not only useful to them in terms of the service it provides but also easy to use and understand.

Following on from the 'Character Card' Brief set by NCR in 2005 as reported in Rogers et al. [1]. With this in mind a new brief was created that would allow the students to more clearly investigate products and services best suited to help explore this transition between traditional and emerging self service. The new brief entitled Adoption = Usefulness + Usability, whilst adopting the premise of the character cards, placed greater emphasis on financial services. The brief tried to get the students to understand that everybody has different requirements and desires from a product, these can be driven by a range of factors such as a lifestyle choice, a particular upbringing or a persons physical limitations. This aligned it closer to NCR's core business and expertise which made it more relevant and also easier to judge!

Within a self service banking environment the designer must understand the different needs and expectations of the end user and also the changing requirements from a bank. These changes may be driven by a cultural shift, technological advances or new business strategies. As with the previous year's competition, cards were created that presented fictional characters with very particular financial needs. For example, a single character may have had physical restrictions, they may have had experiences that influence their decision making processes; of different age and backgrounds and whilst having different interests, lifestyles and habits of the students.

It was important from this point of view that the students used the design process to investigate and understand how people interact with services, environments and products to produce innovative concepts. The brief explicitly required a focus on the relationship between the bank and the character and did not need to consider the mass market. To make the outcomes more grounded and less "blue sky" students where asked that their concepts should be realisable in 2008.

The outcomes contained a wide variety of challenging and well considered solutions including for example: green house banking, experience bartering and memory parks. Responding to the previous years' feedback it was recognised that the NCR Design Usability judges should more actively critique the students work and offer direct feedback. The judges were impressed overall by the professionalism of the presentations in both delivery and content. The majority of the groups' strengths lay in their research and development of user insights – one group even exploring regression hypnosis to fully understand what it was like to be a 5 year old!

Many of the concepts interestingly sought to challenge or even marginalise the original financial aspect of project, which was not discouraged given the specific and different learning outcomes of the modules each cohort followed described in Rogers et. al. [1]. Feedback from NCR suggested that this may have been because the students were unsure of the financial aspects and that students should have seen as an opportunity to learn and understand the problem rather than ignore it. Additionally the project's title, Adoption = Usefulness + Usability, was not explicitly reflected and/or reinforced by the solutions of any team groups. NCR felt this was an opportunity missed by the students, this simple equation may have helped focus some of the groups research and enabled more relevant solutions. The clearer focus of this second year of the project has helped to reinforce a business, academic and student relationship through the cross fertilisation of ideas, interests and techniques. NCR has always been a prolific sponsor of design and design students and are therefore enthusiastic about fostering the bonds made to ensure an interesting, relevant and challenging brief is created for the next set of students.

4 FUTURE

Paul Horn [6] of IBM's Service Science research group best outlines the future for education and service design:

"By collaborating with universities and encouraging a cross-disciplinary approach to services science, corporations and research organizations can play a large part in developing the skills of the 21st century workforce. By collaborating with universities and encouraging a cross-disciplinary approach to services science, corporations and research organizations can play a large part in developing the skills of the 21st century workforce"

Which is exactly the approach reported in this paper. With industry leading the way in services, it is natural for industry to provide direction and inspiration for students working in this hugely exciting and emerging discipline. With all parties committed to continuing this project into its next iteration taking place in Autumn 2007.

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