GRAFTING DESIGN. HOW DIFFERENT DISCIPLINES AFFECT AND HYBRIDISE SERVICE DESIGN PRACTICE.

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ABSTRACT
In the last decade Service Design has become a more defined discipline thanks also to the growing dialogue with other disciplines in order to define their own respective boundaries. This process of definition is still in progress; being the connector among several design activities, conditions and stakeholders (involvement of different actors, unpredictability of human behaviours, context bonds, technology availability, local resources availability, economic issues, etc.) Service Design needs to work with and rely on other disciplines (such as informatics and telecommunications, engineering, sociology, psychology, architecture, urban planning, etc.) to build up its own identity and to accomplish the aims of each design project. This paper will explore the reasons why Service Design needs such hybridization and will present three cases to show the interconnection among the different disciplines involved at different levels:

1. discipline theory definition
2. applications in thematic contexts
3. applications in specific cases

Keywords: Service Design, discipline definition, theory, applications, Positive Psychology, Urban Planning, Engineering

1 INTRODUCTION

In the last decade Service Design has become a more defined discipline thanks also to the growing dialogue with other disciplines in order to define their own respective boundaries. This process of definition is still in progress; being the connector among several design activities, conditions and stakeholders (involvement of different actors, unpredictability of human behaviours, context bonds, technology availability, local resources availability, economic issues, etc.) Service Design needs to work with and rely on other disciplines (such as informatics and telecommunications, engineering, sociology, psychology, architecture, urban planning, etc.) to build up its own identity and to accomplish the aims of each design project. This paper will explore the reasons why Service Design needs such hybridization and will present three cases to show the interconnection among the different disciplines involved at different levels.

Nowadays Service Design is a growing discipline, especially in business and management schools, where it is a natural component of such courses. According to Paul Horn (2005), senior vice-president of IBM Research, the need to understand and use new technologies in the best way, is the bedseed for a new discipline that industry and academia are coming to call “services science”. Technology gives us today new possibilities and we are also facing a change in lifestyles as a reaction to the current economic and environmental situation. Thus, according to Rifkin (2000) now it is more important to access services, than owning products. This shift of paradigm must be driven by sustainability (Manzini, 2003) to let the services be more convenient and accessible to the people, and to keep their benefits for a long term lasting. Also we notice some changes in people’s behaviour, aiming to solve a problem or to generate new opportunities in a new way. This is a kind of Social Innovation (Young Foundation, 2006) and Service Design that must be addressed to this issue. Service Design can graft some relevant issues from all the disciplines that concern with sustainability and social innovation. It is the field of study which can bring together the work done in more established ones, like computer, social and economic sciences, and carry out a new, hybrid, up-to-date discipline.

This hybridisation of Service Design with other disciplines can come out at different levels:

- discipline theory definition
- application in thematic contexts
- application in specific cases.

This paper shows the meaning of these layers and the interconnections among the different disciplines, presenting three different collaborative service design experiences, where other fields "engrafted" onto the project. According to Burns, Cottam, Vanstone and Winhall (2006), what now is called "Collaborative Services Design" is the result of the action played by different actors involved in a service project, where the designer appears as the catalyst of the interactions among the stakeholders who come from different backgrounds.
The first service design experience presented in this paper is focused on service design theory and shows how the author built a piece of that starting from Positive and Environmental Psychology ones. Afterwards the paper goes on presenting applications of service design theory in two different cases: the first one is about a thematic context, such as local sustainable development, with an Urban/Territorial planning background, and describes service design approach in describing and designing the nature of settlements. The second one is about an applied research project within a company context, where service design was asked to build a scenario for new sustainable mobility service in the Italian context.

2 DISCIPLINE THEORY DEFINITION

This paragraph shows the starting point for the development of new tools for collaborative service design, which come from Positive and Environmental Psychology.
From a theoretical point of view, as Service Design deals with relationships among people and, thus, human behaviour, one of its roots lie in Social Sciences, like for example Positive and Social Psychology. According to Csikszentmihalyi's Flow of Consciousness Theory (1975), individuals feel a sense of wellbeing that can be an intrinsic reward by itself, because of the rate of their involvement. Applying this idea on collaborative services, social services where final users are actively involved and assume the role of service co-designer and co-producers (Manzini, 2008), we can say that the design activity is a way to set up the conditions to help carrying out an optimal experience (Csikszentmihalyi, 1975). The following list tries to make clear the contribution of Service Design, with its tools and language, in the optimal experience building process; trying to interpret some of the ten Flow of Consciousness Dimensions from a design perspective (the author has developed all the dimensions, here omitted).

1st Dimension: Clear aims
Optimal Experience: What must be done is clear
Service Design: Offering: What service does and what it is useful for. This issue must be clear and well defined.
2nd Dimension: Prompt feedback
Optimal Experience: Precise perception of how the things are going on
Service Design: Offering and delivery transparency: It is about flows for goods, information and money.
3rd Dimension: Challenge-skills balance
Optimal Experience: Action opportunities and outer world requests are perceived in balance with inner skills available to face them.
Service Design: Easy approach and participation level in balance with user's skills.
4th Dimension: Inner motivation presence
Optimal Experience: The experience is self-referential; the person stays in the experience because it completely fulfils himself: he feels an inner-motivation and a send of self-determination.
Service Design: The individual pro-activity, the chance people have to participate, to play their skills and, thus, choose the results of their actions and experiences, is a personal reward for the efforts put in the service implementation.
5th Dimension: Concentration on on-going situation
Optimal Experience: Irrelevant stimuli disappear from the consciousness: all the attention is focused on the current situation, concerns and conflicts are temporarily deleted.
Service Design: The service delivery process must be in a way not to distract the user from the

experience. It must be friendly and easy to approach.
6th Dimension: No self-observation
Optimal Experience: The subject doesn't modify his/her behaviour as from outside, a personal-growing and being-part-of-all feeling are present
Service Design: The way the participation performs, the guidelines must be outlined not to confuse the user and his role; he is active in producing solutions as much as professionals are, because he is a "user-designer". He must not stress his/her status pretending to be what s/he is not.
7th Dimension: Loosing the sense of time
Optimal Experience: Time seems to go slower or (more likely) faster.
Service Design: The time factor is what makes the difference between a service and a product-system. In services this dimension could be in conflict with the definition of flow of consciousness, because in a service offering, the time must be always pointed out. Nevertheless, from a subjective point of view, whether all the other dimensions are present, even time is coherent with the definition of Optimal Experience, but only as a consequence of a well designed collaborative service, not as a direct designer intervention.

The first quadrant of Flow of Consciousness Diagram developed by Carli (1986) can be very interesting when seen in a Collaborative Services Design perspective. To underpin how Service Design approach can measure its intervention and its tool in designing an experience, according to the given context and user's skills.

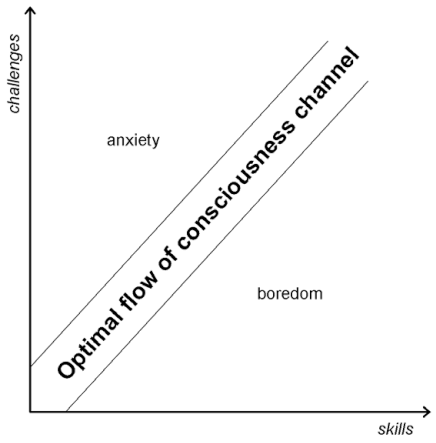

Figure 1 Quadrant I of Flow of Consciousness challenges/skill relation in an experience

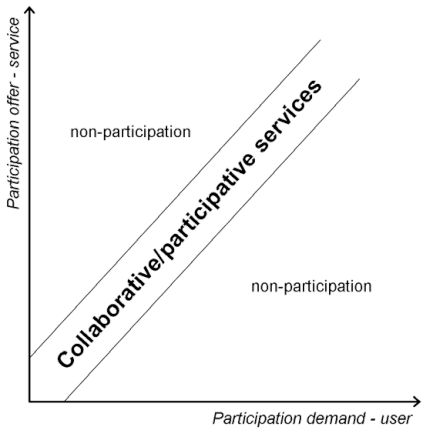

Figure 2 Quadrant I of Flow of Consciousness diagram about Collaborative Services

The first picture shows the relationship between challenges given in a specific situation and skills of the

subject in that situation. The balance between them is the Optimal Experience channel, when the subject perceives the flow of consciousness. The second one is an interpretation of the previous one, through the lens of collaborative services theory. It is about the service offering/user request relationship: in case of no correspondence between the two parameters there is no participation. This is the case of services where the user is the passive, final actor in each process, both design and delivery ones.

Finally, it is important to point out how some typical Service Design theory tools are strictly related to Cognitive Maps Theory.

Cognitive maps element: Paths. What someone goes along and attends to
Service Element: Activities. Service approach and delivery: How it is possible to get it, to take part into it and through which channels.
Service Example: Joining E-bay needs some Internet knowledge, trust in the system, and minimum on-line buying practice.
Cognitive maps element: Edges. Both cognitive and emotional, they are the boundaries of what someone really knows.
Service Element: Visibility Edge. Front office and back office interactions. What the user can see and interact with.
Service Example: In a bank the Visibility Edge is underlined by the desk, beyond there some activities take place. They are hidden to the user, but enable him to use his money in different ways (POS, Credit Card, ATM…)
Cognitive maps element: Districts. Areas through which knowledge is organised.
Service Element: Offering. What the service enables to do, which are its functions and the areas of intervention.
Service Example: In a hotel the offer is split up in different areas as welcoming, feeding, housekeeping, entertainment and business related activities support.
Cognitive maps element: Nodes. Points where the areas have some kind of interaction.
Service Element: Perceived Image. Coherence between the different parts of the offer and the activities
Service Example: IKEA has got a lot of coherences among the typology of the products, selling channels, stocking and transport system. All that aims to enable the user to manage his purchases in the most autonomous way as possible.
Cognitive maps element: Landmarks. Points of reference and of identification: they have both cognitive and emotional nature as well.
Service Element: Touch points. Evidences and material touch points which help to get around the immaterial nature of a service and allow the user to really feel the contact with the system.
Service Example: BioExpress (Italian food box): The service is the mere home delivery of local food, but the box, its aesthetic and its contents are what make the service to be recognised.

3 APPLICATION IN THEMATIC CONTEXTS

The hybridisation between the disciplines of Service Design and Urban/Territorial Planning occurs with the aim of defining a new possible paradigm to think about the nature of settlements. Service Design, being concerned with relations, inter-relations and interactions between different kinds of actors, introduces a different perspective in urban planning thinking. Instead of giving shape to mere quantitative, normative and functional criteria, it is interested in the shaping of the relationships among the actors in a given territory. To explore on the field this multidisciplinary and hybrid approach, it has been chosen a very critical context, that can be defined (using a French derived neologism) the rururban (Donadieu, 1998) territory, that's to say the peri-urban area in between the urban and the rural ones. In particular the research presents reflections conducted around the Agricultural Park South that surrounds the Southern part of the city of Milan. The work presented is the result of a multidisciplinary team in which designers have been working together with urban planners, agronomist and architects. Collaborative services have a lot to do with co-design practices: in the disciplinary urban planning tradition "participative assessments and practices" have a long story, because of the nature of the projects and the importance for them of

being fully accepted by the population. Even if with a slightly different meaning, the issue of co-design, which involves in different ways all the actors of the design discussion, from the institutions to the final user, is one of the most promising methodological contact points between the two disciplines. Service Design aimed at observing local social innovations (radical changes, promising activities) and interpreting them as forms of interaction and exchange of benefits that call for proper (or better) infrastructure and support. Whereas Urban Planning contribution helped Service Designers in generating a new paradigm of urbanisation, which grows out of an understanding and enhancement of local virtuous initiatives and a vision of connected and symbiotic networks, starting from the green spaces perspective, instead of the built ones.

4 APPLICATION IN SPECIFIC CASES

Moving to an applied research project, the third case is a service design - scenario building exercise for the Norwegian company Q-Free, dealing with ETC (Electronic Toll Collection) technology. This research aimed to explore new service ideas for the Italian mobility context. To develop such a system of services, Designers asked for the help of a group of mobility engineers to provide them with technological state of the art of the mobility related functional actions, technology potentialities and feasibility hints. The research group has been established, with the aim of having a multidisciplinary team: strategic designers, service designers, mobility and management engineers. The overall design process appeared to be a sort of continuous strategic conversation about the in progress scenarios among the different actors involved in the research. A conversation that has brought forward the ideas with the structured contribution of the entire group. In order to handle the complexity of selected scenarios, the research team has work on three main interrelated levels – context, technology and users – and have moved back and forward the analysis and design within real contexts to the visualisation and design of abstract scenarios. Designers and engineers worked together using different methodologies, appropriate to the different project stages and levels:

1. In field and desk research for context analysis (the so-called metacontext and mobility profiles definitions). At this step designers provided an understanding of the context and of the opportunities of intervention and built the so-called mobility profile, in order to understand who the solution could be addressed to. Meanwhilrsengineers' task was to point out all the technology issues and provide possible integration with the existing ones.
2. Personae construction, moving from the mobility profiles. This was a specific design task, where mobility profiles have been explored in order to understand typical users in the given context.
3. Creative workshops to generate scenario ideas. At this step designers were committed to generate creative scenarios for each given contexts with the support of engineers for technology issues, as availability, reliability, possible implementations, etc.
4. Development of the scenarios into detailed service and solution concepts. Designers had to develop the final service solutions starting form the creative scenarios and engineers supported them with feasibility hints.

5 CONCLUSIONS

Since Service Design, and in particular Collaborative Service Design, is such a young discipline, it is possible to build its theory starting form different research levels.

It is necessary to explore new tools and make them available for the design practice, sensing some affinities between design issues and other, more consolidated, disciplines, and opening to the contamination, starting from well-established tools to build new ones.

In given thematic contexts, it is needed to refer to other disciplines, which are in that field since a long time and have a strong knowledge of it, picking up from them the guide and the perspective useful to work in a given context as a designer.

Finally, in Service Design applications in specific cases, it is worth working together with other expertises from different disciplines to animate the round table of the strategic discussion and to develop both creative and reliable solutions to be implemented with the given resources.

REFERENCES

Burns C., Cottam H., Vanstone C., Winhall J., (2006), Transformation Design, RED paper 02, Design Council, London
Cottam H., Leadbeater C. (2004), HEALTH: Co-creating Services, Design Council, London, UK, November
Csikszentmihalyi, M. (1991) Flow: The Psychology of Optimal Experience. New York: Harper Perennial
ESRC (Economical and Social Research Council) (2007), Wellbeing and International Development, University of Bath, UK
Donadieu P. (1998), Campaignes urbaines. Ecole nationalresupérieure du paysage, France
Horn, P. (2005) The new discipline of Service Science, interview in BusinessWeek.
Hugo G., Champion T. (edited by) New Forms of Urbanisation: Beyond the Urban-Rural Dichotomy, Ashgate Publishing, UK, 2003
Inghilleri, P. (1995), Esperienza soggettiva, personalità ed evoluzione culturale, UTET Libreria, Torino IT
Landry, C. (2000), The Creative City. A Toolkit for Urban Innovators. London, UK: Earthscan
Manzini E., Jégou F, (2003), Sustainable Everyday. Scenarios of urban life, Edizioni Ambiente, Milano
Mancini, E.. (2008) Collaborative services and enabling solutions -
Meroni A. (2007), Creative Communities. People inventing sustainable ways of living, Edizioni Polidesign Milano
Rifkin, J. (2000), The age of access: The New Culture of Hypercapitalism, Where all of Life is a Paid-For Experience. Tarcher/Putnam
SEP, Sustainable Everyday Project, http://www.sustainable-everyday.net/cases [online]
Young Foundation (2006), Social Silicon Valleys. A Manifesto for Social Innovation, 2006, http://www.discoversocialinnovation.org [online]

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