A Theoretical Framework for Studying Service Design Practices: First steps to a mature field

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Drawing on literature from three main perspectives on service, design and innovation - Perspectives on Service Innovation (Service Innovation and New Service Development studies), Perspectives on Service (Service Science and Service Research frameworks on services), and Perspectives on Design (Design Anthropology) - this paper presents a theoretical framework, to systematically study, position and interpret Service Design practices and outcomes. The research is the first-phase of an on-going 6-months Art and Humanities Research Council (AHRC) funded scoping study into the contribution of Design for Service Innovation and Development. The creation of the theoretical framework, drawn from a literature review is a first step to a Service Design priori knowledge, to conduct and produce six case studies from the public, commercial and digital sectors. This paper will present the initial formulation of the theoretical framework as part of the case study methodology to guide the on-going data collection and analysis of the six Service Design projects; leading to and supporting the survey study of Service Design innovation practices from a wider sample of design studios and designers working in the UK and internationally.

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Introduction

Service Design is a young discipline started in the 90s when a certain group of informed scholars in Italy, USA, UK and Germany (Hollins & Hollins, 1991; Buchanan, 1992; Manzini, 1993; Erlhoff, Mager & Manzini, 1997) started to describe it as a new design agenda. Since 2000 Service Design has emerged as a profession, with the first Service Design studios opening in London (Livework and Engine). Since then the interest in this field has grown across the international design research, education and professional community. In UK the number of studios working for services has increased representing an exemplar for the international scenery, but still counting for only 1% of UK design industry (Design Council, 2010).

Initial studies into Service Design have explored motivations for the emergence of this field (Pacenti, 1998; Sangiorgi, 2004). Further research has been experimenting with individual Service Design methods (Morelli, 2002; Clatworthy, 2011) or approaches such as co-design (Steen et al., 2011; Kankainen et al., 2011). Further studies have looked into specific dimensions of Service Design, i.e. service system design (Patrício, Fisk, Cunha & Constantine, 2011), service interaction design (Holmlid, 2007), service experience design (Bate & Robert, 2007), or into specific typologies of services, i.e. collaborative or relational services (Meroni, 2007; Cipolla & Manzini, 2009).

However, systematic studies on how Service Design agencies operate in practice and how they contribute to service innovation are limited. Examples of research work into Service Design practices are mostly focused on the commercial sector (Kimbell, 2011; Zomerdijik & Voss, 2009; Stigliani & Fayard, 2010). These studies have described Service Design as adopting a constructivist approach to service innovation (Kimbell, 2011), and as centred around the practice of understanding, mapping and communicating customer experiences (Stigliani & Fayard, 2010). With a wider perspective Meroni and Sangiorgi (2011) have mapped application areas and approaches of Service Design based on a collection of 17 case studies.

Few researchers have questioned and investigated the implementation and impact of Service Design projects. Significant exceptions are the studies on the implementation and impact of Experience Based Co-Design methodology in healthcare (Bate & Robert, 2007 and 2006; Tsianakas, Maben, Robert, Richardson, Dale & Wiseman, 2012). Isolated research has reported the processes and challenges of embedding design capabilities within public sector organization (Bailey, 2012). Freire and Sangiorgi (2009)

have discussed the successes and limitations of four Service Design projects in the application of the co-production principles in healthcare in UK.

Recently designers have been critiqued for their supposed "lack of attention to economics – ensuring that ideas are cost effective – and lack of attention to organizational issues and cultures, condemns ideas to staying on the drawing board" (Mulgan, 2013). The Design Commission report also states how Designers need to "uplift and upscale if they are to deliver design-led innovation effectively to public sector clients" (Design Commission, 2013: 19). An on-going AHRC funded networking project (www.servicedesignresearch.com/uk) into Service Design Research in UK, has similarly suggested the need to conduct research into how Service Design projects can be better implemented, embedded, measured or scaled up. There is agreement that to survive and develop Service Design as a discipline needs to develop 'legitimacy', meaning the "acceptance of the technical competence of the profession and the spread of knowledge about it" (Thether & Stigliani, 2013), and a culture of assessment (Maffei, Mager & Sangiorgi, 2013).

Finally the growth of Service Design towards a mature field of research and practice also requires a comparison and positioning within existing studies of service innovation, New Service Development and the wider international and multidisciplinary field of Service Science and Service Research. "Enhancing Service Design" has been mentioned as one of the research priorities for the Science of Services (Ostrom et al., 2010), with an emphasis on the need to integrate design thinking and performing and visual arts into service innovation. Notwithstanding this recognition, very few interdisciplinary research collaborations are developing within Service Research with a common aim to legitimate and position Service Design's contribution: i.e. comparing Service Dominant Logic with Design Thinking and Service Design (Wetter Edman, 2009; Wetter Edman et al., 2013), or the conceptualization of user involvement in Service Design and Service Management (Wetter Edman, 2011). Interest in Design comes also from the New Service Development literature, aiming to understand how to better integrate customer experiences in service development (Edvardsson, Tronvoll & Gruber, 2011), but demonstrating a still limited understanding of Design practices and approaches.

Drawing on literature from three main perspectives on service, design and innovation - Perspectives on Service Innovation (Service Innovation and New Service Development studies), Perspectives on Service (Service Science and Service Research frameworks), and Perspectives on Design (Design

Anthropology) - this paper presents a theoretical framework and propositions, to systematically study, position and interpret Service Design practices and outcomes. The research is the first-phase of an on-going 6-months Art and Humanities Research Council (AHRC) funded scoping study into the contribution of Design to Service Innovation and Development. The creation of the initial theoretical framework drawn from literature is a first step to Service Design priori knowledge, to conduct and produce six case studies from the public, commercial and digital sectors. This paper will present the formulation of the theoretical framework as part of the case study methodology to guide the on-going data collection and analysis of the six Service Design projects; leading to and supporting the survey study of Service Design innovation practices from a wider sample of design studios and designers working in the UK and internationally.

Perspectives on Service Innovation

Defining Service Innovation

Generally innovation is described as 1) doing something new, and 2) developing this new so that it becomes accepted and applied in an organisation, market, or in society (National Audit Office, 2006). Studies into the specificities of Service Innovation are recent, moving away from an initial consideration of service organisations as laggards and appliers of manufacturing innovation. The journey from a manufacturing centred approach to recent accounts on services, is reflected in the emergence of four perspectives generally described as technologist, assimilation, demarcation, and synthesis (Droege, Hildebrand, & Forcada, 2009). A technologist approach focuses on the introduction and use of technology (e.g. purchase of a technological equipment) as a main source of innovation in the processes and practices of service provision, as a reverse cycle to traditional manufacturing innovation (Barras, 1989); similarly to the technologist approach the assimilation approach considers service innovation using manufacturing models and metrics, not acknowledging how most of service innovations are 'non-technological' in their forms and sources (Gallouji & Weinstein, 1997); the demarcation approach instead has been highlighting the idiosyncrasies of service innovation activities, acknowledging for example the 'interactive character' of service innovation (Gallouji & Weinstein, 1997, p. 135). Finally the synthesis approach instead recognises how the learning from studying service companies, could

illuminate aspects and dimensions of innovation happening within manufacturing, that have been mostly neglected and not measured so far.

This scoping study will adopt an extended understanding of innovation and aims to recognise both the 'hard' (traditional technological driven innovation practices) and 'soft' dimensions of innovation, acknowledging how in services "innovation is more likely to be linked to change in dis-embodied, non-technological innovative processes, organisational arrangements and markets" (Howells, 2007, p. 11). What is generally defined as non-technological innovation includes many other forms of innovation e.g. "social innovations, organisational innovations, methodological innovations, marketing innovations, innovations involving intangible products or services" (Djellal & Gallouj, 2010, p. 7). Furthermore we recognise the "multidimensional character of innovation", and the difficulty to artificially separate goods from services, considering how increasingly organisations are developing "bundling of services and manufactured goods into 'solutions'" (Howells, 2007, p. 15). Also organisations often work in complex networks, as part of "a set of interrelated activities" (ibid).

Finally innovation within service organisations has been qualified for its 'interactive character' (Djellal & Gallouj, 2001), and for what has been called 'invisible innovation'; this is a kind of innovation that is not captured by traditional innovation metrics focusing on scientific and technological innovation happening mostly in R&D departments. Gallouj and Weinstein (1997, p. 549) for example report: "Ad hoc innovation can be defined in general terms as the interactive (social) construction of a solution to a particular problem posed by a given client". In contrast with a common understanding of innovation as something intentional that can be replicated, ad hoc innovation describes an emergent process that can lead to more consolidated practices and new knowledge.

Similarly Fulgsang (2010) describes different levels of innovation practices considering their level of intentionality: 1) Innovation as an intentional activity (e.g. as a result of a new policy), 2) innovation as a semi-intentional activity (e.g. a project team working on an emergent problem), and 3) innovation as 'bricolage' (as conducted by staff to adjust to emerging problematic situations).

As summarised by Droege et al. (2009) there have been different proposals of service innovation frameworks that point to different innovation dimensions, classifying where innovation happens in services.

Djellal & Gallouj (2001) consider four main dimensions: 1) product/service innovation (both tangible and intangible); 2) process innovation (e.g. technical systems or consultants methods); 3) (internal) organisational innovation (structure in which activities take place); 4) external relational innovation. In this paper though we agree with Den Hertog (2000) on the interrelated character of innovation in services, where change in one dimension (e.g. new technology), will have necessarily impact on other aspects of service (e.g. new knowledge, skills and processes); while it is useful to identify a dominant innovation dimension, it is also useful to look at innovation as a combination of different changes.

To acknowledge this multidimensional nature of service innovation and to go beyond a distinction between manufacturing and service organisations, we consider Gallouji and Weinstein (1997) description of innovation as the combination of changes in factors such as service characteristics, service provider competences, service provider technology (tangible or intangible such as models), and client competencies (including co-production abilities). In addition DeVries (2006) recognises also the increasing role of providers' networks and clients themselves, with their own competences and technologies, contributing to the co-creation of the final solution. The combination of changes in these factors can generate different kinds and levels of innovation described as: radical, incremental, improvement, combinatory (architectural), formalisation, and ad hoc innovations (Gallouji & Weinstein, 1997; DeVries, 2006).

Finally when reflecting on the issues about measurement and performance in services Djellal and Gallouj (2010) debate on how performance can't be just measured in terms of productivity as services performance can be related again to its multiple dimensions: e.g. "technical performance, commercial performance, civic performance (equity, equal treatment, social cohesion, respect for the environment..), and relational performance (interpersonal relations, empathy, trust, etc.)" (p. 10).

Knowledge Intensive Business Services

This research project is also looking at another kind of service innovation called 'innovation through services' that describes the work of Knowledge-Intensive Business Services (KIBS) for and with their clients (Den Hertog, 2000). Service Design agencies are a particular kind of KIBS, belonging to the 'Design' consultancy services as indicated by Miles et al. (1995). KIBS are described as service organisations that are heavily based on professional knowledge, that are the direct source of knowledge (e.g. training) or that

create intermediary products using their own knowledge (e.g. design services) for their clients (Miles et al., 1995).

There is a recognition that KIBS "function as facilitator, carrier or source of innovation, and through their almost symbiotic relationship with client firms, some KIBS function as co-producers of innovation" (Den Hertog, 2000, p. 491). The quality of this co-production relies heavily on the quality of interaction between the KIBS and their client, which generates reciprocal learning (interactive learning). In this research project we suggest how looking at the dynamic nature of knowledge conversion processes (from tacit to explicit, disembodied to embodied, tangible or intangible) facilitated by design agencies could unveil fundamental roles played by these consultancies (see Nonaka & Takeuchi, 1995).

New Service Development

Similarly with studies in innovation, research that was originally focused on New Product Development started to look closely at the differences when developing services and what general principles and factors enhance success (Edgett, 1994; Zomerdijk & Voss, 2011). Within these studies service design is generally described as a phase within New Service Development (NSD) characterised by a set of activities, tools and competences (Goldstein, Johnston, Duffy & Rao, 2002; Johnson, Menor, Roth & Chase, 2000). The term 'service design' has been introduced and described as "a form of architecture that involves processes rather than bricks and mortar" (Edvardsson, 1997, p. 31). This study is instead focusing primarily on Service Design as a professional practice to position it within existing innovation and organisational existing service design practices.

In an initial comparison between NSD studies and Service Design research, Yu and Sangiorgi (2014) distinguish three main research areas Service Design could relate to: research into NSD processes (where and how Service Design practitioners contribute to NSD processes and practices); research into NSD objects and outcomes (what is the focus and object of Service Design professional practice); and research into the facilitators of effective and successful NSD (in which way Service Design professionals facilitate service innovation and development).

The NSD process has been described using different kinds of models, initially following a similar structure as New Product Development as a linear sequence of steps from strategy development to commercialization (Booz & Hamilton, 1982). Recently more open and iterative models have been suggested representing the recursive nature of service innovation, not necessarily happening within traditional R&D offices, but as part of service

development and improvement day-to-day activities. In particular Johnson et al. (2000) proposed an iterative, cyclic and nonlinear NSD process model consisting of four basic phases–design, analysis, development and launch–that embrace diverse sub-phases proposed by other models.

NSD objects relate to the development of the 'prerequisites' that can be planned and designed to increase the potential for quality in the final service delivery (Edvardsson & Olsson, 1996). Following the phases of NSD, Yu and Sangiorgi (2014) identify two main elements of New Service Development: the Service Concept and the Service Delivery System. Service design is considered as developing service concepts that should provide all the necessary information to inform the development of the service idea into a business and effective service performance. Clark, Johnston & Shulver (2000) describe the service concept as made of key components: value, form and function, experience and outcomes. The service delivery system is instead built upon the service concept and specifications. This has been summarised in Yu & Sangiorgi (2014) in three main aspects: the structure (physical, technical and environmental resources), the infrastructure (people), and processes (a set of activities that use the structural and infrastructural resources to deliver services) (Goldstein et al., 2002; Roth & Menor, 2003). Finally NSD is enhanced by 'facilitators' such as methods and tools, staff and user engagement, and organizational dimensions (Yu & Sangiorgi, 2014).

Perspectives on Service

Previous sections have looked at service innovation research studying its characteristics, dimensions and processes; this section takes a higher perspective considering what do we actually mean with 'service' and how this understanding has been changing and developing lately. Using and discussing this meta-level framework can inform the nature and future development of designing for service itself.

According to Edvardsson, Gustafsson and Roos (2005), there are essentially two different approaches in service research: one perceives "service as a category of market offerings," whereas the other describes "service as a perspective on value creation" (p. 118). Furthermore Grönroos (2008) suggests a third approach, which describes "service as a perspective on the provider's activities (business logic)" (p. 300). The first perspective has been guiding the so-called 'demarcation' studies, aiming to look at the specific properties of services and service organisations in their key differences from physical good and manufacturing. The second and

third perspectives are instead adopting a 'synthesis' or 'integrative' perspective as they focus more on value creation, instead of physical goods or services; this view is the result of a general shift in the conception of value from considering value as embedded into tangible goods toward conceiving value as co-created among various economic and social actors (Vargo & Lush, 2008), reviving original studies of customers as co-producers (Eiglier & Langeard, 1975; Grönroos, 1978). In this growing perspective, value is not in the object or person, but "resides […] in the actions and interactions which the acquired resource makes possible or supports" (Vargo & Lush, 2008, p. 51). Value is described as co-created in social contexts through customers' value-creating practices or even individually created by the customer (Edvardsson et al., 2011),

Following this consideration, if value is associated with use and context, the focus necessarily shifts from the units of output to the interactions. A service, therefore, represents "the process of doing something beneficial for and in conjunction with some entity, rather than units of outputs– immaterial goods- as implied by the plural 'services'" (Vargo & Lush 2008, p. 26). Goods become aids to the service-provision (Norman & Ramirez, 1989), while a service is considered as the common denominator in exchange and not as some special form of exchange (Vargo & Lush, 2004). As Gummesson describes it "activities render service; things render service" (1995, p. 250).

As a result of these considerations services are then proposed as "a conceptual framework within which to think in a different way of value creation and does not entail a distinct set of activities" (Ramirez 1999, p. 54). The original dichotomy between products and services is resolved by proposing a higher-order concept of service. Vargo & Lusch (2004) describe this shift with the concept of a Service Dominant Logic as opposed to a Goods Dominant Logic, where the focus was on tangible goods and resources, embedded value and discrete transactions. Key elements of this novel Service Dominant Logic paradigm are *resources*, in particular *actant resources* (people and their competences), and the *integration of available resources* in specific value co-creation activities and *contexts*, within *service systems*, which are the entity where value creation takes place. Grönroos (2008) further elaborates this paradigm in his *Service Logic Revisited* article, describing a supplier service logic (as distinguished from a customer service logic) as "a perspective on how, by adopting a service approach, firms can adjust their business strategies and marketing to customers' service consumption-based value creation." (p. 302). In this sense the focus is not on what the firm produces as an output but how it can better serve

customers and support their own value-generating processes (Lusch, Vargo & O'Brien, 2007).

When aiming to position Service Design research and practice within the Service Logic paradigm, there have been questions of what designers are actually doing then when designing for services. Wetter Edman has suggested how 'design practice using designerly tools and methods might be a way to realize a service logic for the organization' (2011, p. 100). Sangiorgi has similarly suggested how designers can apply a Service Logic "to support organizations to explore, understand and work with more relational and softer aspects of a service, helping them to reframe their businesses and provision around customers' own processes of value co-creation." (2011, p. 103).

Perspectives on Design(ing)

To assist in the theoretical framing to evaluate Service Design practices, in this section two anthropology perspectives are presented; the emerging area that is design anthropology and the proposal by Blomberg and Darrah's of an Anthropology of Services (2014). As the concept of design expands to areas such as service design, a field that is extending its methods and practices to the ideation of new service configurations, business models and organizational and social change (Sangiorgi & Prendiville, 2014), the frame for evaluating service innovation also needs to expand. For the purpose of this research, anthropology's focus on what it means to be human situates innovation within a human centred lens, capturing and illuminating the incidental and embodied practices that can easily be overlooked in innovation discourses. Design anthropology also provides a frame for considering the institutionalization of insights and how they are made tangible and how deliverables are mapped (Rabinow & Marcus, 2008). According to Gunn and Donovan (2012, p. 11) design anthropology focuses on different ways of designing and different ways of thinking about designing.

Literature from design anthropology offers the potential for new insights to frame and evaluate service design's role in service innovation. For Lenskjold (2011) design anthropology has something more to offer than the already familiar ethnographic methods subsumed into design practice and design's role of going beyond the future with its imagining. Here "design provocations offer a mediation of ethnographic accounts and anthropological knowledge to broaden the scope of the design process"(p.7). Petersen et al. (2001) define design anthropology as a

'piercing together' or a 'bricolage of its own' to explain the relationship between anthropology and design. Their focus is anthropology *in design* where its purpose is to make sense of what is there, with remaking what is there into something new (p.41).

From an institutional perspective, Jacoby (1990, cited in Gunn & Donovan 2012, p. 71) distinguishes between exogenous and endogenous institutions. "Exogenous are those institutions that affect people and organisations from outside, external bodies such as government that enforce laws and regulations" (p. 71). In contrast endogenous institutions more commonly "affect and evolve within communities". Endogenous institutions are the "local procedures and traditions the how we do things round here' approach" (Gunn & Donovan, 2012, p. 72). The authors also note how endogenous institutions may also change as a result of learning within the communities and how they also respond to exogenous institutions. For Gunn and Donovan (2012) the tendency to explore innovation practice from a Science and Technology and Innovation (STI) mode means that the role of local learning is not typically captured in these formal variables (p. 72).

Blomberg and Darrah (2014) propose an anthropology of services that have lessons for service design and service science. Noting the challenges facing service design through their characteristics of uncertainty in outcome and "the limits of intentionality in design", the paper presents services from a broader anthropological perspective, one that is intrinsic to the human condition that have existed long before the arrival of formal services. Most importantly Blomberg and Darrah (2014) make the connection between the human condition and the way in which humans adapt by providing services to one another. For the author services are never bounded as they are entangled in social institutions and broader practices of society that can be difficult to distinguish; social systems have always been material and immaterial and they are therefore by nature entangled.

This messier view of services raises questions regarding the current conceptualization of service value and the overly neat way in which services are conceptualized; there is an appreciation for the need of the service systems metaphor to suggest that services can be engineered but equally this omits "the openness and emergent quality of social life". Instead anthropology of services presents directions to improve service design and service innovation that is based on a longer-term more historical view of services as part of the human condition. Furthermore the paper identifies the need for anthropologists to focus on the work processes of the designer

not just about the people whom they are designing but also the institutional and relational structures that support the designing of services. Most importantly Blomberg and Darrah (ibid) suggest that the conceptualization of service value from a business and information technology perspective limits the focus of design, predetermines the skills and knowledge considered necessary for the design of services and fails to acknowledge the costs and benefits that are distributed and absorbed by different members of society.

This section presents the emerging discussions on anthropology's role within service design and service innovation. Challenging the more common conceptualization of services and opening up the dialogue for a messier, human and socially framed view of service innovation, this expansion of service design considers Blomberg and Darrah's view of services as "less designed and more assembled from fragments of practices, institutions, life-styles and networks" (p.127).

Theoretical framework

This study will conduct six case studies into service design agencies work in UK. The unit of analysis for each of the case studies will be a Service Design project chosen by the agency that best represents their approach to delivering and implementing a client project. To support the data collection and analysis, a theoretical framework is here introduced as emerging from the literature review to guide semi-structured interviews with the service design agencies and the client organisation. Collection and analysis of design materials and evidence from their design processes and outcomes will complement the qualitative interviews.

In particular the previous sections have summarised perspectives on Service Innovation, Service and Design as a background for the development of this theoretical framework. These three levels of research - marked on the diagram (see Figure 1) - have been chosen to consider different levels of data gathering: 1) Innovation processes and activities; 2) Innovation dimensions and patterns; 3) Service and Design theories and frameworks. As illustrated in Figure 1, these levels will inform different kinds of questions, and will address the two main aims of our research work:
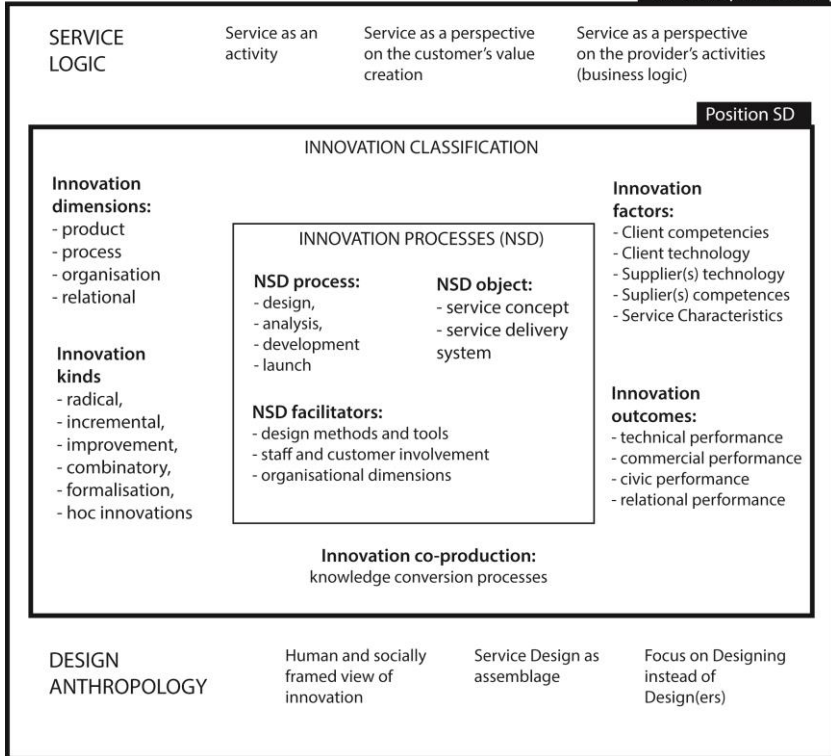
Figure 1. Initial theoretical framework to inform study of Design for Service Innovation and Development

1. <u>Positioning Design for Service Innovation and Development</u>: this scoping study aims to position Service Design practice within existing theories of NSD and Service Innovation, to initiate and facilitate a dialogue across disciplines; this means investigating service design case studies looking at innovation processes, dimensions and outcomes to identify and discuss designers contributions, qualities and limitations also in relation to general descriptions of KIBS' work;

2. <u>Reconceptualising Design for Service Innovation and Development</u>: on another level our aim is to re-interpret these innovation practices acknowledging recent theorisations of Design and Services. These theories suggest an expanded understanding of both Design, interpreted as an

assemblage rather then a design; and of Service, described more as a business perspective (service marketing perspective) or as a socially and culturally framed human activity (anthropological perspective) then as a market category.

Conclusions

When aiming to position and discuss Design role and contribution within and for service innovation and new service development theories, there are inevitable contradictions that lie at the core of studies of service innovation and of service itself. The aim to measure and classify service innovation as well as to describe, and formalise its processes, is in contrast with the awareness of its interactive and intangible nature that can emerge from intentional as well as unintentional and 'ad hoc' processes, that are often the result of evolution, revolution, disappearance, appearance, association mechanisms (Gallouji & Weinstein, 1997). Similarly the need to capture the specific role of designers for and within service innovation practices, is now in contrast with a general reflection on a wider understanding of service and design itself.

In addition most of the studies of service innovation are strongly anchored to traditional organisational settings, while service design projects might navigate beyond organisational boundaries (e.g. social change projects), generating different kinds of innovations and innovation practices that do require a different language for their description or classification.

In order to acknowledge these contradictions and study requirement we have decided to integrate in the same framework, the different perspectives (Service logic framework, Design Anthropology, service innovation classification and NSD processes) and use different lenses when collecting and interpreting case study data. We will then use emerging contradictions across these perspectives as materials for reflection to inform, question and develop our understanding and reconceptualization of Design for Service Innovation and Development. Finally this initial framework will be tested and further developed considering its fit for purpose and the contextual specificities of each innovation project.

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