Service Design Practice and Its Future Relevance

Qian Sun[a], Phoebe Jenkins[a] , Ziwei Liu [a]

[a] Royal College of Art

This paper reports an empirical study which examines the future relevance of service design practice using a qualitative approach, consisting of in-depth interviews with design professionals predominantly located in the UK. The findings show the diverse views towards how service design is applied in practice and how it is perceived as a discipline, suggesting that service design is not considered as a unified practice, but a range of practice used in diverse contexts. It identifies the value of service design as delivering both knowledge and solutions whereby service designers can act as enablers and/or doers. It reveals a consensus amongst practitioners for the necessity of a collaborative process and mindset, as well as the use of a set of skills and tools. The research brought to light a move from a solely human-centric ethos towards an expanded one that includes systems thinking. One key finding, looking towards the future value of service design, is the shift towards a transdisciplinary approach, an under-noticed possible direction which could bring significant impact to solving complex and wicked problems that is worthy of continued investigation.

Keywords: Service design; transdisciplinary design; collaborative design; systems thinking

Qian Sun, Phoebe Jenkins , Ziwei Liu

Introduction

Design was traditionally associated with making visual artefacts and industrial products, but it has shifted towards creating intangible outcomes which focus on social, cultural, and business issues. As recognized by Klaus (2007), design had '*shifted gears from a preoccupation with appearance and surfaces of tangible products to designing material and social artefacts that have a chance to make sense to their users, aid larger communities, and support a society that is reconstructing itself in unprecedented ways and at record speed.*' Confirmed by Ceschin and Gaziulusoy (2016), it was suggested that design has progressively expanded from a technical and product-centric focus towards large scale system level changes.

With the boundaries of design expanding to include many new territories, designers often find themselves called into projects that tackle the major challenges we face, such as healthcare, wellbeing, sustainability, and digital transformation. A new frontier of design practice has emerged and service design is one of these.

There is a growing interest from both the business world and academia to explore service design. According to Sun (2020), the early research investigating the role of design in the service sector was mainly from a design management perspective to explore the service sector as a new territory for design practice in the early 1990s. Now, although its definition is still contested (Madano Partnership, 2012), many have agreed that service design entails a human-centred, holistic, creative, and iterative approach to creating new service futures (Meroni and Sangiorgi, 2011). It is closely associated with a design thinking process of problem solving—'a methodology that imbues the full spectrum of innovation activities with a human-centred design ethos' (Brown and Rowe, 2008). It derives from and overlaps with a range of terms such as system design, sustainability design, strategic design, social design, and policy design. As a hybrid term, it represents the frontier of design practice in service. From an innovation perspective, it facilitates a specific kind of design-driven innovation, which is oriented toward generating new service ideas and new or improved modes of experiencing the service offering itself, through the use of technology potentials or the interpretation and proposal of new models of behaviour (Maffei et al., 2005).

The value of service design has been explored in diverse contexts including health (Hyde and Davies, 2004, Freire and Sangiorgi, 2010, Bowen et al., 2013, Anderson et al., 2018), policies (Hartley, 2005, Bovaird, 2007, Radnor and Boaden, 2008, Jung, 2010, Commission, 2014, Trischler and Scott, 2016), organisational change (Junginger and Sangiorgi, 2009, Deserti and Rizzo, 2014, Iriarte et al., 2017, Deserti and Rizzo, 2018), and social innovation (Fassi et al., 2013, Manzini, 2014, Yang and Sung, 2016, Maffei et al., 2005, Joly et al., 2019).

As Sangiorgi et al. (2015)'s report suggested, there is a rich picture of how designers operate in practice and contribute to wider and ongoing service development processes in different contexts. They summarised three typologies of service design's contribution: (1) to address specific needs in the new service development process; (2) to introduce this people centred and systematic process to organisations; and (3) to facilitate transformation and organisational learning as a collaborative and people centred mindset and approach.

However, it is also recognised that, with the wide range of application of service design, its definition and boundaries are contested amongst practitioners and academia (Madano Partnership, 2012, Sangiorgi et al., 2015). In this, two views defining service design are distinct: 'designing services' (Secomandi, 2011) and 'designing for service' (Sangiorgi & Prendiville, 2017). 'Designing services' considers that services are the objects of design activities, just like products are the objects of product design. This view seems to be shared by the majority of service design agencies as demonstrated in their taglines, for example: 'Livework designs better services' (Livework, 2019) and 'Designing remarkable services and customer experiences' (Engine Service Design, 2019). The 'designing for service' perspective is more prevailing in academia. Service is considered as a context and platform where design activities take place. As Manzini (2011) argues, the term 'designing for service', instead of 'designing services', recognizes that what is being designed is not an end result, but rather a platform for action, with which diverse actors will engage over time. Similarly, Kimbell (2011) sees designing for service as an exploratory process that aims to create new kinds of value relation between diverse actors within a socio-material configuration. This view points out the collaborative nature of service design and its limitations in the wider process of service innovation.

Service design is also investigated from the perspective of service science (Vargo et al., 2008, Akaka et al., 2019) that consider service systems as value-co-creation configurations of people, technology, value propositions connecting internal and external service systems, and shared information (e.g., language, laws, measures, and methods). In Kimbell (2011)'s view, designers approached services as entities that are both social and material and through a constructivist enquiry in which they sought to understand the experiences of stakeholders and they tried to involve managers in this activity.

The value-co-creation perspective and relational nature of services is recognized in literature, e.g. (Cipolla, 2009, Cipolla and Manzini, 2009), which sees the service design discipline as an interpretative framework that reinforces its ability to deal with the interpersonal relational qualities in services. Pacenti (2004) clarifies in fact that services start to exist when relations evolve: *"the unique trait really defining the essence of service theory and design is that it produces itself in a relation between system and users. Services are first of all relations between service providers and users; interaction becomes the idea that underlies the definition of service."* (p. 151)

There are diverse views towards service design and how it contributes to innovation, as well as a rich picture of the application of service design in different contexts. More importantly, service design is evolving at a fast pace and we constantly see emerging areas of interest, issues, methods and tools. which become important forces moving design practice forward. In some cases, new concepts challenge the relevance of service design and suggest new future directions for design practice, e.g., transition design (Irwin, 2015, Irwin, 2019) which advocates design-led societal transition toward more sustainable futures, addressing complex challenges such as climate change, loss of biodiversity, depletion of natural resources, and the widening gap between rich and poor.

The changes on the horizon, such as the imminent Fourth Industrial Revolution, the urgency for acting on the UN's Sustainable Development Goals, climate change and the Planet Boundary Framework, requires change in various ways. The pandemic has certainly sped up this urgency for change. It is timely to discuss the relevance of service design's potential in delivering what is much needed to transform our thinking, norms, and systems in response to the COVID-19 related challenges.

This presents challenges as well as opportunities for service design as a practice that applies design thinking and methods to service innovation. This paper reports an empirical study to identify the contemporary issues and emerging trends of service design practice and discusses how they impact on the future of service design.

METHODOLOGY

The study is based on 14 in-depth interviews with service design professionals to capture their perspectives on emerging topics, areas of interests, and trends about service design practice. The interviewees include: (i) 10 design consultancies (6 in service design and 4 in unspecified areas relating to design); (ii) 2 directors or design leaders from large business organisations and NGOs; and (iii) 2 academics and commentators researching and teaching in design.

Open questions were used in the interviews to ask about their views towards service design and how they saw service design applied in practice based on their own experience. These included three key aspects: (i) what their design practice was and how it was relevant to the organisational or cultural contexts they were operating in, (ii) what the challenges were in relation to their practice, and (iii) what their views of the future were.

Each interview took 45-60 minutes online. Following the interview, three researchers reviewed the transcripts independently. Their notes were compared to develop a workshop with 30 service designers to reflect and discuss the findings. A second round of analysis was followed to generate key insights for the paper.

KEY FINDINGS

A range of diverse views and perspectives were revealed through the interviews. Some of the views were polarised and contested; some did not exclude each other, instead, both polarised views were supported suggesting that the remit of service design covers a wide spectrum of complex and intertwined issues.

Service designers deliver both knowledge and solutions and act both as an enabler and doer
The findings revealed that most agreed service designers dealt with 'wicked' problems as one commented:

'…the problems that we're facing in the 21st century are wicked problems and they're all interconnected and interdependent. We are also for the first time in human history completely connected globally and we wield very powerful technologies that can disturb one bit of this system and ratify unpredictably and exponentially throughout…'

The projects the interviewees were working on included a diverse range of contemporary challenges as wicked problems, including, for example, the future of education, city, mental health, policy and regulations, and

3

sustainability. Although it was a widely shared perception amongst the interviewees that service design was closely associated with wicked problems, one criticised that service designers were sometimes overly problem oriented whilst services were more diverse than that.

Two different views were revealed about how service design practice related to these problems. On one side, when service design operated at an early stage of innovation, it created value by reframing problems and revealing opportunities; and on the other side, when service design operated in a later stage of innovation, the value was about solving problems and delivering outcomes.

The outcomes from these two sides were significantly different. On one side, service design was used to '*design a service that better solves for a problem that a customer has'.* The outcome was phrased as solutions, services, and improved experience. On the other side service design was used to *'reframe the problem, to make sure that you're actually really going after the right thing in the first place'* and *'revealing opportunities' from a position of creativity and curiosity,* where the intention was not about problem solving, but to generate knowledge and insights for opportunities, strategy or transformation.

However, despite this difference, the majority agreed that service design created value inclusively across the whole spectrum. In many ways, this replicated the two distinct stages in the double diamond process (Design Council, 2005) the first one focused on 'discover' and 'define', and the second one on 'develop' and 'deliver'.

This was also revealed as to how service designers were employed in large organisations and one commented that they '*have designers who are oriented towards shaping work and designers who are oriented towards executing and delivering on work'.*

Service design entails a collaborative process and mindset as well a set of skills and tools

When talking about their own design practice, the methods and tools were considered powerful, for example, one commented that '*the creation of those two things (journey maps and system maps) generally unlocks most of the opportunity'.* However, the interviewees seemed to talk more about service design as a mindset, a process, than as a set of skills and tools, although it was recognized that service design could be '*as much a mindset and a collaboration as a set of skills…'.*

Considering service design practice as a process*,* it provided certainty and confidence in dealing with ambiguity, as one said '*I believe that the process will reveal all the answers*.' It allowed *'individuals to look at very ambiguous problems, to join the dots'*, with constant iteration and to 'zoom out and zoom in' within divergent and convergent approaches.

This became the protocol to collaborate with different experts because, as one commented :

'As an innovator, you're constantly collaborating with people who are not innovators. That's why you are there to do the job, you are there to steer them through that process so that they can arrive at an effective innovation altogether.'

'Ambiguity and embracing that ambiguity is something that people are really uncomfortable with. So as a service designer help them to develop the same confidence in the process'

The process of service design practice was recognised unanimously by the interviewees as being collaborative. Service designers were seen working in a highly collaborative environment As one commented, *'we really have a practice where service design meets journalism, service design meets architecture; and it's really bringing a series of those expertise and skills to the project.'*

Collaboration was seen as so fundamental that it was considered the way and the only way to tackle wicked problems, making changes, and achieving outcomes of a certain scale. One commented that *"working in a silo or individualistic way seems to be the road to failure"* and *"We have to collaborate. There's no way that we could do every job without doing it".*

In the projects that service designers were involved in, the collaboration was all-around, including collaboration with the users, experts from different disciplines, clients (in the case of consultancies) and different departments in an organisation (in the case of in-house) and laypersons.

Most of the interviewees considered that the value of collaboration was multifaceted enabling the designers to, for example, embrace ambiguity, get buy-in and alignment for sustainable outcomes, unlock creativity, and gain multiple perspectives. The value of collaboration as enabling reflection and learning was summarised in one particular comment: *' The way in which they're looking at this problem helps me interact with the way I'm looking at this problem as well and how we can use both of them together.'*

Apart from collaboration as a way of enabling designers to achieve their goals, the outcome from collaboration was seen as fundamental in changing organisations and societies towards more inclusive and equal ones. As commented by one interviewee collaboration

> *"… creates new postures and justice that take us away from the dominant paradigm of leadership which is hierarchical and top down. … managing teams to allow for distributed power, rather than hierarchy and a method of collective decision making and achieving equality. It's a way to allow and accept diversity and a way to embrace the principle that everyone is extraordinary.''*

A certain 'mindset' was considered to be the prerequisite in achieving this kind of desired collaboration. Embedded in this mindset was an acknowledgement and appreciation of the value of different views and perspectives. Therefore, the designers needed to be open, self-reflective, and willing. There seemed to be a call for moving away from a discipline mindset to a much more interconnected and interactive one to achieve this mindset. One interviewee clearly stated that service design should not be considered as a discipline, instead, '*as a capability alongside with a range of other capabilities.*'

It was also recognised that service designers took on the role of a facilitator, leader, and enabler of the collaboration, as evidenced by the following comments:

> *"It's been my job to make sure that all the stakeholders are able to meet at the same place, which is a place where everybody shares the same collaborative thinking. There is alignment, internal alignment, that you have to sort of lead on"*

> *"…doing this coordination across and choreography across a lot of different disciplines."*

> *"The ability to navigate a space that is end to end, and front and back... requires a level of collaboration between all of the people who would be experts about any one part of that and therefore serves as a collaborative design effort that is incredibly valuable."*

> *"Is like linking things and being that kind of connector. And I guess between projects as well as teams as well because often these organisations are working really siloed and things aren't necessarily linked up, being able to kind of connect those things up."*

One even commented that "*a good service designer is because he insists on a collaborative approach.*" The main skill for service designers is being able to work with different people because services are so complex.

Human-centric ethos is expanded towards systems thinking

A human-centred ethos was considered fundamental to service design practice, differentiating service design from other kinds of consulting work. This human-centric service design practice was initially considered valuable in shifting organisations from thinking in terms of a production line which dehumanises people and to understand the value of an alternative way of doing things. One interviewee commented that '*I think our organisation uses service design as a shorthand of saying we're going to base ourselves around people's needs.*'

Acknowledging people were experts in their lived experience, a human-centred approach allowed service designers to understand their experience and behaviours. In the collaborative design process, designers had to bring together a different range of people, different perspectives, and different expertise. A human-centred ethos was considered what it took to achieve this kind of collaboration. It was also seen as important in achieving desired behavioural change as the key design outcome. In this, one said '*if you want to change people's behaviour, you need to understand their motivations, you need to understand their context, you need to give them the information to make the choice that is better for them.*'

Although a human-centred ethos was seen as having gained increasing attention from the business sector and other sectors, '*not every organisation believes that*', as commented by one interviewee who commented about the trade-offs for applying this human-centred ethos, such as business profit in some cases. Its limitation was also reflected in one comment that '*users don't necessarily have the right answers and you don't have the time or the resources to investigate.*'

A human-centred ethos was challenged by many interviewees. Not denying the importance of considering people's needs in designing services, they believed that overly focusing on people created limitations. One commented that *'we need to understand that there's other beings and other things in that ecosystem that might not just be human, or might not just be a user, it's bringing other people or other things…we forget about other less human forms of our design'*. Another interviewee explained that *'I'm not as centric towards the individual user and their experience; I'm much more interested in the entirety of the system, how it all fits together and how it moves and interacts over time.'*

For some, system thinking was 'a *constant compliment'* to service design practice, whilst some considered that systems thinking be the ultimate principle of service design, as one said that '*the ultimate system is the system of everything and if we're not considering everything or designing our systems and our solutions within everything, we've just failed in the ultimate principal service design.'*

From this perspective, service design was about *'choreographing every single piece of the entire system'* and *'creating an environment or systems in which some collaboration and interaction can happen',* as the interviewees explained. It suggested service designers to look at a lot broader issues, for example, *'at how we can support organisations through that, so not just thinking about a project level but also like a company organisation level looking at their values and how they can think of it more strategically.'*

The systemic perspective was seen as valuable in different contexts of business, society, and environment.

> "it brings us that ability to be able to take a step back from like a specific project has been designed or a specific project and seeing how they impact other pieces of work that are happening or and what like systematic change, it might affect and rather than being kind of like grounded and the details was the ability to zoom in and zoom out."

Although these two views were quite different, they were equally prevalent amongst the interviewees. More importantly, it was recognized that there was '*a spectrum in service design from experience design to system design'.* Service design was either about '*'the design of multiple interactions over time to create an experience',* or *'creating a different ecosystem …',* or both: *'ecologies of activities and artefacts and experiences and relationships that we're all connected to the delivery of the service'.*

However, it was questioned whether service designers were equipped with the right sets of understanding, tools and methods to take on a systemic approach as one criticised that as '*we're all embedded in systems…what we've been lacking are tools and ways of mapping and understanding the entire system.'* Therefore, service designers need to be more '*systems literate',* and *'to be more aware of ecological principles and then simultaneously develop tools and approaches that could be used with transition and trans-disciplinary teams and other types of experts.'*

DISCUSSION

The collaborative process

Firstly, service design practice was seen as a process that could be adapted by many people. Through this collaborative process, different specialists and experts were brought into the project to deliver, including, for example, anthropologists, psychologists, technicians, and UX/UI designers. The specialism of service designers could therefore be challenged. This was demonstrated by the experience of an interviewee who had a background in anthropology. He was drawn into service design when anthography was found by early service designers fifteen years ago as a useful toolkit for doing user research and had since worked alongside service designers. However, he saw the clear difference between what service designers considered as user research, and that by an anthropologist. Although service designers were seen as the expert in bringing user perspectives into innovation, the lack of expertise in delivering user research was apparent when comparing it to what an anthropologist could deliver. This lack of specialism went beyond user research to include a wide range of experts that service designers collaborate with. One service designer commented that:

> *'There are more specialisms coming up around user research and interaction design and I don't know what that means for service design. It kind of feels like that's falling behind, or becoming like I am dated or not needed in the same way anymore'*

Secondly, a trend was observed that service designers were less occupied with designing services for clients, but more about introducing service design into the organisations and supporting their capability building through training. Here are some of the comments:

'our job was to bring service design skills and training into the organisation for other people to then use them themselves'

'the work that I've been focusing on recently is less designing services for customers to purchase to participate in to experience and more working with organisations so that they can design their own services.'

'We teach people how to think, or we teach people how to adjust their own practice to solve the issues at play, rather than sort of applying specific approaches to a specific set of problems.'

The role of service designers changed from a doer towards being enablers and facilitators, with the aim to empower and to enable the organisations to develop their own services. One of the interviewees recognized that in large organisations, *'… it is not just designers that are involved in designing'*, just as what was recognized in 'silent design' argument (Gorb and Dumas, 1987). This is also consistent with what Junginger (2015) argued that *'service designers need to pay more attention to organisational design legacies that are already in place – those design principles, methods and practices that are already deeply embedded in organisational life. These design legacies, however flawed and poorly suited, need to be articulated, visualised and engaged with to effect real change in real organisations*.'

Thirdly, when focusing on rephrasing problems and generating new understandings of the issues, the outcomes of service design became even more intangible, as recognized in literature (Klaus, 2007; Brown, 2007).

The findings suggested the outcomes of service design had become even more intangible than what the concept of 'service' entailed. Because of this, a few interviewees who were involved in the early stage of the formation of service design expressed their disappointment toward what the concept 'service' entailed. It was valuable to move design into the new area of service at the beginning, as one interviewee commented that:

'The core value is really enabling us to design things that need to be designed that are the fabric of our lives that before weren't being considered in terms of the value of service design in our practice.'

However, it seemed that the term service design was now considered limiting to embrace the ambition and potential of design practice.

As a result, service design practice could be easily under-valued. One interviewee commented that *'if a project team is short on money and if the project really is focused on output, it can be really hard for them to see the value of service design.'* Most of the service designers or design managers ended up spending a lot of their energy and time advocating to enable the organisations and project partners to understand what service design could do. One commented that *'one aspect of my job is to try and make space for service design to happen. A lot of my job is trying to advocate.* and *'50% of the time is doing the actual like literal design work and 50% of the time is persuading people to let you do the work'.* This was also recognised in Sun and Runcie (2016)'s work which suggested most of the service designers felt they were struggling to position themselves professionally in the organisation due to a low awareness of service design practice and had to convince at every moment to be able to take the actions they needed to.

Moving towards trans-disciplinarity

By losing its specialism, service design is moving towards a much wider arena of being trans-disciplinary. Trans-disciplinarity is viewed as a practice of bringing together knowledge from the physical and social sciences, from practitioners, users and the broader community to confront increasingly complex problems (Beckett and Vachhrajani, 2017). It is positioned as essential to understanding and finding ways for global challenges by enabling a holistic view, integrating diverse knowledge and transcending disciplinary approaches (Nicolescu and Ertas, 2013). There is consensus that transdisciplinary approaches involve integrating and transcending individual disciplines, thereby enabling development and application of new research strategies and knowledge, as set out by Rosenfield (1992).

There is ample design literature focusing on rationalising and justifying the trans-disciplinarity nature of design. The trans-disciplinarity nature of design is underpinned by the reality that design has no special subject matter of its own apart from what a designer conceives it to be, whilst the design problems are 'indeterminate' and 'wicked'

(Buchanan, 1992:16). Designers use a 'designerly way of knowledge' (Cross, 1982) to generate understanding of the design problem. This 'designerly' paradigm of knowledge generation is guided through design process logic and design is supported by phases of scientific research and inquiry (Jonas, 2007). In this process, Dorst (2018) considers that the frame-creation process provides designers with a thoughtful way to re-interpret and rethink existing problem situations, and to identify practices from various fields and disciplines that could be brought to bear. From this deep rethinking, designers can access the broadest possible collection of principles, methods, and actions, while considering how they may assist them. This type of deeply considered innovation-between-fields leads to the adoption of principles and practices that are completely new to the problem situation.

Service designers work on wicked problems which are complex and interdependent, requiring collaborative innovation between different disciplines, between experts and users, and between researchers and practitioners. The design process enables collaboration beyond disciplinary boundaries to include a wide range of players in the system. The collaboration generates shared understanding, new knowledge, and sometimes solutions to the challenges. As such, one interviewee suggested that service design should '*move away from a discipline mindset and to a much more interconnected and interactive way of working…*' and '*…it shouldn't be seen as (a discipline), as it doesn't trump the disciplines.*'.

CONCLUSION

This paper reports a research project exploring the discourse within the service design community to understand its future relevance. The findings showed that service design was not considered as a unified practice, but a range of practice used in diverse contexts. As such it included different views and opinions of its definition, value and boundaries, and its specialism was contested. The diversity of the practice suggested its future direction would not be one way or another, but any possibilities for service design. However, this paper argues that by losing its specialism, service design – the frontier of design practice – moves towards a new direction, bringing together knowledge from different disciplines, from practitioners, users and the broader community to confront the increasingly complex problems we face. Its potential in transdisciplinary innovation could be important in realising the value of design in the future, when we will be faced with even more complex challenges like ethics, health, technology, and sustainability. In achieving this transition, service designers need to be facilitated with the right knowledge, skill sets and mindset. System literacy and ethics were considered to be the concerns that services designers could engage with going into the future.

The contribution of this study is threefold. First, there are few up-to-date reports on the contemporary issues and emerging trends of service design practice in academic research. This study fills the gap in our knowledge by presenting the most coherent perspectives from practitioners that clarify the issues around its definition, practice, and future relevance. Secondly, in discussing these issues around service design, the paper provides abundant quotations from research participants to evidence the nuance in the discourse that helps understand the current perspective of design service practice with an empirical basis. Thirdly, the paper recognizes the importance of collaboration and the difficulty with ambiguity and involving non-discipline partners in a design culture. Pointing out the potential of service design in transdisciplinary innovation opens up new ways of utilising or looking into service design practice, enabling it to create a greater impact on complex issues in our society.

References

AKAKA, M. A., KOSKELA-HUOTARI, K. & VARGO, S. L. (2019) Further Advancing Service Science with Service-Dominant Logic: Service Ecosystems, Institutions, and Their Implications for Innovation. *Handbook of Service Science, Volume II.* Springer.

ANDERSON, S., NASR, L. & RAYBURN, S. W. (2018) Transformative service research and service design: synergistic effects in healthcare. *The Service Industries Journal,* 38**,** 99-113.

BECKETT, R. C. & VACHHRAJANI, H. (2017) Transdisciplinary innovation: connecting ideas from professional and user networks. *Journal of Industrial Integration and Management,* 2**,** 1750016.

BOVAIRD, T. 2007. Beyond engagement and participation: User and community coproduction of public services. *Public administration review,* 67**,** 846-860.

BOWEN, S., MCSEVENY, K., LOCKLEY, E., WOLSTENHOLME, D., COBB, M. & DEARDEN, A. (2013) How was it for you? Experiences of participatory design in the UK health service. *CoDesign,* 9**,** 230-246.

BROWN, T. (2007). The challenges of design thinking. *InterSections* NewcastleGateshead: Design Council.

BROWN, T. & ROWE, P. G. (2008). Design thinking. *Harvard Business Review,* 86**,** 252.

CESCHIN, F. & GAZIULUSOY, I. 2016. Evolution of design for sustainability: From product design to design for system innovations and transitions. *Design studies,* 47**,** 118-163.

CIPOLLA, C. (2009). Relational services : service design fostering sustainability and new welfare models. *proceedings of the 2nd international symposium on sustainable design (IISSD)***,** 1-6.

CIPOLLA, C. & MANZINI, E. 2009. Relational Services. *Knowledge, Technology & Policy,* 22**,** 45-50.

COMMISSION, D. (2014). Restarting Britain2: Design and public services. *Annual Review of Policy Design,* 2**,** 1-10.

CROSS, N. (1982). Designerly ways of knowing. *Design Studies.*

DESERTI, A. & RIZZO, F. Design and organisational change in the public sector. Design Management in the era of disruption, (2014). DMI (Design Management Institute), 2293-2313.

DESERTI, A. & RIZZO, F. A (2018) service design experiment in the Municipality of Turin to overcome organisational silos. Service Design Proof of Concept, Proceedings of the ServDes. Conference, 18-20 June, Milano, Italy. Linköping University Electronic Press, 230-233.

DESIGN COUNCIL (2005). The Double Diamond Design Process Model. Accessed on 12 Jan 2022.

DORST, C. (2018). Mixing practices to create transdisciplinary innovation: A design-based approach. *Technology Innovation Management Review*.

FASSI, D., MERONI, A. & SIMEONE, G. (2013) Design for Social Innovation as a form of Design Activism: An action format. Social Frontiers: The next edge of social innovation research conference proceedings. 14-15.

FREIRE, K. & SANGIORGI, D. (2010) Service design and healthcare innovation: From consumption to co-production to co-creation. Service Design and Service Innovation conference. Linköping Electronic Conference Proceedings, 39-50.

GORB, P. & DUMAS, A. (1987). Silent design. *Design studies,* 8**,** 150-156.

HARTLEY, J. (2005). Innovation in governance and public services: Past and present. *Public money and management,* 25**,** 27-34.

HYDE, P. & DAVIES, H. T. (2004). Service design, culture and performance: Collusion and co-production in health care. *Human relations,* 57**,** 1407-1426.

IRIARTE, I., ALBERDI, A., URRUTIA, E. & JUSTEL, D. (2017). Beyond customer satisfaction. Supporting organisational change through Service Design. A case study in the insurance industry. *The Design Journal,* 20**,** S424-S434.

IRWIN, T. (2015). Transition design: A proposal for a new area of design practice, study, and research. *Design and Culture,* 7**,** 229-246.

IRWIN, T. (2019). The emerging transition design approach. *Cuadernos del Centro de Estudios en Diseño y Comunicación. Ensayos***,** 147-179.

JOLY, M. P., TEIXEIRA, J. G., PATRÍCIO, L. & SANGIORGI, D. (2019). Leveraging service design as a multidisciplinary approach to service innovation. *Journal of service Management*.

JONAS, W. (2007). Design Research and its Meaning to the Methodological Development of the Discipline. *In:* MICHEL, R. (ed.) *Design Research Now.* Basel · Boston · Berlin: Springer.

JUNG, T. (2010). Citizens, co-producers, customers, clients, captives? A critical review of consumerism and public services. *Public Management Review,* 12**,** 439-446.

JUNGINGER, S. (2015). Organizational Design Legacies and Service Design. *The Design Journal,* 18**,** 209-226.

JUNGINGER, S. & SANGIORGI, D. Service design and organisational change. Bridging the gap between rigour and relevance. International Association of Societies of Design Research, 2009. KOR, 4339-4348.

KIMBELL, L. (2011). Designing for Service as One Way of Designing Services. *International Journal of Design,* 5.

KLAUS, K. (2007). The semantic turn: A new foundation for design. *Artifact,* 1**,** 56-59.

MADANO PARTNERSHIP (2012). Scoping Study on Service Design. AHRC; Design Council; ESRC.

MAFFEI, S., MAGER, B. & SANGIORGI, D. (2005). Innovation through service design. From research and theory to a network of practice. A user's driven perspective. *Joining forces***,** 1-9.

MANZINI, E. (2014). Making things happen: Social innovation and design. *Design issues,* 30**,** 57-66.

MERONI, A. & SANGIORGI, D. 2011. *Design for services*.

NICOLESCU, B. & ERTAS, A. (2013). Transdisciplinary theory and practice. *The Academy of Transdisciplinary Learning & Advanced Studies, TheAtlas*.

PACENTI, E. (2004). Design dei servizi. *Design multiverso: appunti di fenomenologia del design. Milano: Edicioni Poli. Design***,** 151-63.

RADNOR, Z. & BOADEN, R. (2008). Lean in public services—panacea or paradox? : Taylor & Francis.

SANGIORGI, D., PRENDIVILLE, A., JUNG, J. & YU, E. U. N. 2015. Design for Service Innovation & Development Final Report.

Qian Sun, Phoebe Jenkins , Ziwei Liu

SUN, Q. (2020). Towards a new agenda for service design research. *The Design Journal,* 23**,** 49-70.

SUN, Q. & RUNCIE, C. (2016). Is Service Design in Demand? *Design Management Journal,* 11**,** 67-78.

TRISCHLER, J. & SCOTT, D. R. (2016). Designing Public Services: The usefulness of three service design methods for identifying user experiences. *Public Management Review,* 18**,** 718-739.

VARGO, S. L., MAGLIO, P. P. & AKAKA, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal,* 26**,** 145-152.

YANG, C.-F. & SUNG, T.-J. (2016). Service design for social innovation through participatory action research. *International Journal of Design,* 10.