Towards a unified framework of service transformation elements

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Abstract

Service implementation has been receiving more and more attention in both academia and service design practice recently. In order to better study this topic of how services change over time, it is important to understand what different service transformation elements are as well as the flexibility of these service transformation elements. So far, different service transformation elements, such as touchpoints and institutions, have been addressed in research, but mostly in isolation. In this paper, I place these service transformation elements in relation to each other in a framework for service transformation. Such a framework is helpful for both researchers and practitioners, because it helps to articulate the kind of service transformation that is in focus in scholarly and practical service design work as well as to set expectations in terms of what transformations can be realised or studied given the time span of a project.

Keywords: service transformation, service implementation, service design

Introduction

Banking services have been around for centuries, but while some of the principles of the service have remained over time, other aspects of the service have changed. For instance, the bank teller has in many cases been replaced by websites and smartphone applications. This is one example of how different aspects of services change over time. In this paper, I refer to these different aspects of a service that change as service transformation elements. The rate at which a service transformation elements changes depends on how flexible the service transformation element in question is. To compare it to legislation, the constitution of a country seldom changes, but local laws and regulations change more often. In other words, the constitution is less flexible than legislation regarding specific topics.

In service design research, the topic of service transformation has so far been addressed by looking at specific service transformation elements, such as touchpoints (Clatworthy, 2011), service interfaces (Secomandi and Snelders, 2011), routines in a service (Akama, 2014), as well as institutions in organisations (Kurtmollaiev et al., 2018). In service marketing and management, the concept of the service delivery system has been used to address the service transformation elements that are required for the delivery of specific service concepts (e.g. Goldstein et al., 2002). These works address different service transformation elements, but these service transformation elements have not yet been addressed in relation to each other. Therefore, the aim of this conceptual paper is to begin the development of a framework that addresses service transformation from a holistic perspective by placing service transformation elements in relation to each other, in terms of their degree of flexibility. For the development of the framework I have drawn inspiration from the concept of *shearing layers* (Brand, 1994), which describes how different elements of buildings change at different paces, depending on their relative flexibility. Having a framework that relates different service transformation elements to each other helps those who work with service transformation as researcher or practitioner to be aware of which aspect of service transformation they address. Furthermore, it contributes to successful service innovation because it helps to set realistic expectations in terms of what parts of a service can be changed as part of a service innovation project; which service transformation elements are flexible enough to be transformed.

Background

Service transformation is a prerequisite for successful service innovation. In service design research, service transformation has been addressed in different ways. That which is seen as the object of service design is also what is (intended to be) transformed. As such, service transformation has been discussed in relation to service visions as a whole (Almqvist, 2018) but also to individual service transformation elements, such as the interface of the service (Secomandi and Snelders, 2011), the touchpoints of a service (Clatworthy, 2011) and service encounters (Snelders et al., 2014).

Yu and Sangiorgi (2014) posited that the *service delivery system* defines how service concepts are implemented. The concept of the service delivery system has been developed in service marketing and management literature. It describes the service transformation elements that define how a service concept is delivered, including structure, infrastructure and processes required to deliver the service concept (Goldstein et al., 2002; Roth and Menor, 2003; Ponsignon et al., 2011). Once these components have been specified and realised, a new service concept can be delivered to service customers. In order to realise service transformation through the assembly of a service delivery system, the requirements for the service delivery system that follow from the service concept need to be compared to the existing service system in order to determine whether the organisation can successfully perform the service transformation (Tax and Stuart, 1997).

Other authors have addressed changes in the habits and routines in a service as a way to transform services (Akama, 2014). Routines can change due to external causes, but the source of change can also lie in the routine itself. The field of routine dynamics studies these internal dynamics of routines (Feldman et al., 2016). Although routines were first considered as relatively stable and a way to create regularity in work, they are currently framed as performative actions that can vary over time (Howard-Grenville and Rerup, 2017). Routines are only stable in the short term; maintaining a routine requires effort from those involved in it (Feldman et al., 2016; Feldman et al., 2019). The abstract notion of a certain routine provides guidance for performing the routine and actions in that performance can confirm those structures or be a cause for changing them (Feldman and Pentland, 2003). There is thus a duality of structure and agency in routines (ibid., 2003), which allows room for adaptation, improvisation, creativity and flexibility in routines (Feldman et al., 2019).

Such variations can lead to changes in the routines, but they can also remain a one-off deviation (Feldman et al., 2016).

This view of services transforming as a result of changes in routines is related to the notion of service transformation through changes in the roles of different actors in a service (e.g. Peltonen, 2017; Overkamp and Holmlid, 2017). In this paper, I consider roles from a network perspective, as a position in a social structure (see e.g. Baker and Faulkner, 1991), such as *doctor* or *parent*. As defined in Role Theory, such roles come with expectations, which are drivers for the behaviour of those who occupy a certain role (Biddle, 1979). These expectations can be placed on the person who occupies a certain position (external expectations) or can be held by the person who performs the role (internal expectations) (ibid. 1979). Roles may transform as a result of role strain: pressure on a certain role for an extended period of time (Thomas and Biddle, 1966). Role pressure can come occur if expectations for those who perform a role are conflicting, too ambiguous or if there are too many expectations for a certain role (Biddle, 1979). Roles only change if the tension in the role is experienced by many and if the conditions for role change are met (Turner, 2001).

In service science, service transformation is considered to take place through institutional work of service actors (Koskela-Huotari et al., 2016 Vink, 2019). Institutions are socially constructed rules, values and norms (Friedland and Alford, 1991). Institutional work is the actions of individuals to create, maintain or disrupt these institutions (Lawrence and Suddaby, 2006). The institutional logics of an organisation, or organisational logics (Spicer and Sewell, 2010), are affected by the institutional logics of the (professional) field that the organisation is part of (Lawrence and Suddaby, 2006). For instance, institutions on the level of a professional field affect what roles are considered legitimate within a certain practice (Hampel et al. 2017). Institutions and institutional work can also be used at the level of organisations to talk about how the (institutional) logics of an organisation change. An example of such research in the context of services is the work by Kurtmollaiev et al. (2018), which studied institutional work at a telecommunications company.

So far, the service transformation elements discussed above have been addressed mostly individually. The aim of this paper is to develop a framework that relates these service transformation elements in terms of how flexible these different service transformation elements are and thus how much effort is typically involved in changing them. To do this, I build on the concept of *shearing layers* (Brand, 1994)*,* which describes how

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different layers of a building change. Brand (ibid.) called these layers *stuff, space plan, services, skin, structure* and *site*. These different layers change at different paces, depending on how easy or hard it is to make changes to the architectural elements in the layer (i.e. how flexible the elements of a specific layer are). The *stuff* changes quickest and the *site*, the "geographical setting, the urban location, and the legally defined lot" (ibid., p.13) is considered most stable over time. The *structure* of the building refers to the foundation of the building and other load-bearing elements. Since it is expensive to change them, they are rarely altered. *Skin* refers to the outside of the building, which changes, for instance, as a result of a focus on, or desire for, better insulation. The *services* of the building are the plumbing, wiring, communication, heating, ventilation, air conditioning. The penultimate layer, the *space plan*, includes the ceilings, floors and doors of the building. These elements may change quickly if users of the building substitute one another in quick succession and have significantly different demands for the space plan. Finally, *stuff* refers to everything that can easily be moved around, such as furniture and appliances that are not built-in. The *shearing layers* concept has also been used to address adaptability and flexibility in the built environment beyond individual buildings (Estaji, 2017).

Service transformation framework

In this section, I introduce the service transformation framework consisting of four layers of service transformation elements: *Regimes*, *Roles*, *Routines* and *Interfaces*. In the framework I have placed the service transformation elements that were introduced in the previous section in relation to each other in terms of their flexibility, *Regimes* being the least flexible and *Interfaces* being the most flexible (see Figure 1). I elaborate the different layers below.
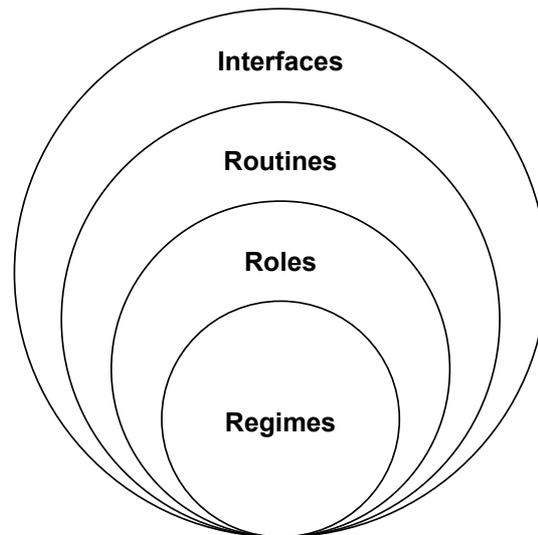
Figure 1 – Service transformation framework consisting of four layers of service transformation elements

Regimes

The first layer in the transformation framework contains the structural service transformation elements that shape a service practice: institutions as well as technological and economical regimes that shape the actions of actors in the service system. An example of such a transformation is the transition from a product-oriented organisational logic to a service-oriented one—also known as *servitization* (Baines et al., 2017) or a transition from transactional to a relational economic model. By transforming the *Regimes*, the structure of service practices is transformed. *Regimes* are located on a societal level and require the engagement of a large group of people to be transformed, which makes them inflexible.

Roles

The second layer concerns roles of the actors in the service. This includes changes in the participants that are involved in the service, as part of the service delivery system. Roles are defined by the institutional logics of a field or organisation; what roles are considered a legitimate part of the (service) practice (Hampel et al., 2017). For instance: if an organisation changes from a product-oriented logic to a service-oriented logic, a sales role that focuses on product sales may no longer be required. Instead, employees need to focus on providing solutions that fit the customer's practice. This new role can be enabled by changing the reward structure from bonuses for exceeding sales targets to a metric that is customer-centric instead. Service transformation elements in this layer are related to

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roles that are determined for professions. These professions are part of a society and are therefore more localised than service transformation elements in the *Regimes* layer, making them also easier to transform.

Routines

The third layer addresses the processes, or routines in a service. The structure of routines is provided by institutions; they motivate and explain the actions of service actors (i.e. the performative part of routines). Due to the sociomaterial nature of routines (Feldman et al., 2019), technology that is part of the service also affects the actions of service actors. This layer includes service transformation elements related to *processes* in the service delivery system. Routines relate to service processes in a specific organisation, which makes them easier to transform than roles, which are shaped as part of a profession as a whole.

Interfaces

The last layer of service transformation elements involves the interfaces in a service. Interactions take place at the interface between service provider and customer. Such touchpoint can be digital, such as websites or software applications, but also physical, relating to the physical facilities of a service delivery system. These touchpoints and the content of the interactions at these interfaces are the most flexible service transformation elements and can be changed relatively easily. Interfaces are part of specific services and the most localised of the service transformation elements, which gives service actors more control over them than over the elements in the other three layers of the framework.

Discussion

So far, service transformation has been discussed by addressing different service transformation elements, such as touchpoints, service processes or institutions, in isolation. My aim with this paper is to begin developing a framework for service transformation that puts these service transformation elements in relation to each other. This service transformation framework is inspired by the concept of *shearing layers* (Brand, 1994) and categorises service transformation elements in terms of their degree of flexibility.

By addressing different service transformation elements, this framework highlights the plurality of service transformation: service transformation

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contains many different aspects and can take place in many different ways. In the framework, service transformation elements that have been addressed in previous research have been integrated: on the *Interfaces* layer, service encounters (e.g. Snelders et al., 2014), touchpoints (Clatworthy, 2011; Secomandi and Snelders, 2011), and physical parts of a service delivery system (Tax and Stuart, 1997; Roth and Menor, 2003; Ponsignon et al., 2011), such as the servicescape (Bitner, 1992) are located. The *Routines* layer contains processes as part of service delivery system (Goldstein et al., 2002; Ponsignon et al., 2011) and routines in services (Akama, 2014). Changes in the positions in networks of service actors are part of the *Roles* layer, such as who the participants in the service are (Tax and Stuart, 1997). The *Regimes* layer contains structure of the service practice, such as institutions (Koskela- Huotari et al., 2016; Vink, 2019) and technology (Ponsignon et al., 2011). These structures enable and limit actions of actors in the service practice. For instance, the choice for a certain technology has a lock-in effect in the sense that future services will need to be built on it (Ehlhardt, 2013). The framework reflects also the individual level (*Interfaces*), organisation delivery process level (*Routines*) and network/ecosystem level (*Roles*, *Regimes*) at which service design can contribute to service transformation (Prestes Joly et al., 2018). Furthermore, the framework leaves room for both a reductionist and pluralistic view on services and service actors (Agid and Akama, 2018), as well as different perspectives on service transformation, such as assembling the prerequisites for service delivery or shaping value co-creating relationships (Overkamp, 2019).

For researchers, the service transformation framework presented in this paper provides support for more precise discussions about service transformation. It shows the plurality of service transformation and how different service transformation elements are related. The framework helps researchers to point to where their research is related to and contributing to service transformation literature. Furthermore, the framework provides starting points for future research, including further development of the framework itself. The framework presented in this paper is a first version and there is thus room for further development. This includes elaborating the content of the different layers of service transformation elements and their boundaries, testing the framework using service transformation case studies and exploring the factors that affect the flexibility of service transformation elements in a specific layer. For instance, long-term contracts may limit the possibilities for actually making changes to touchpoints, even though on paper the change seem relatively easy to make.

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Practitioners can use the service transformation framework to address what kind of transformation they are aiming at. Firstly, this helps to set realistic expectations in terms of what service transformation elements can be addressed in a service innovation project. The notion of different levels of flexibility of service transformation elements helps designers to develop an understanding of the effort that is required for changing the different transformation elements and to set realistic expectations for themselves and the organisations they work for or with, in terms of what can be changed: if the intended service transformation is related to *Regimes*, it will likely take more effort to realise the service transformation than if it is related to *Interfaces*. This helps to prevent tension between the ambitions of a service innovation project and the resources that are available for realising the service transformation. Secondly, outlining different service transformation elements helps designers to plan the ways in which they can best support the intended service transformation. Service designers can contribute to service transformation in different ways (Overkamp, 2019) and being aware of these different roles helps designers to adjust their role to best support the service transformation efforts.

Conclusion

In service design literature, service transformation has so far been discussed mostly by addressing service transformation elements in isolation. In this paper, I have made a start in synthesising these discussions into a holistic service transformation framework, putting the different service transformation elements in relation to each other in terms of their flexibility. This framework contributes to research in service design and service innovation, as it provides guidelines for a structured approach to studying different aspects of service transformation in future research. For service design practitioners, the framework helps to set realistic expectations in terms of which service transformation elements they can realistically change and adapt their role to best support the intended service transformation.

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