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RINGEN HØIBJERG (Gard), « Repenser les systèmes de services et les écosystèmes de services »

RÉSUMÉ – Cet article se propose de clarifier la distinction entre les systèmes de services et les écosystèmes de services en tant qu'outils analytiques. Ces dernières années, ces deux concepts ont gagné en importance dans la recherche sur les services et sont fréquemment utilisés de manière interchangeable. Cet article plaide pour une approche où l'écosystème de services est envisagé comme le contexte plus large dans lequel divers systèmes de services existent. À travers cette distinction, le couplage théorique cherche à expliquer comment les systèmes de services sont influencés par et peuvent utiliser des acteurs qui ne font pas partie de leur système formalisé, ainsi qu'à mieux comprendre comment les systèmes de services sont affectés par des influences externes.

MOTS-CLÉS – Écosystèmes de services, systèmes de services, écologie, institutions

RINGEN HØIBJERG (Gard), « Rethinking service systems and service ecosystems »

ABSTRACT – This article aims to propose and clarify a distinction between service systems and service ecosystems as different components of analysis. In recent years, the two concepts have gained prominence in service research, and are frequently used interchangeably. The article argues for an approach where the service ecosystem is understood as the wider context in which various service systems exist. Through this distinction, the theoretical coupling seeks to explain how service systems are influenced by and can make use of actors that are not part of their formalized system, as well as better understand how service systems are affected by external influences.

KEYWORDS – Service ecosystems, service systems, ecology, institutions

RETHINKING SERVICE SYSTEMS AND SERVICE ECOSYSTEMS

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INTRODUCTION

In 2018, the local asylum center in a village where I conducted fieldwork was closed down. The asylum center had been part of a larger system of refugee related public services that included a local refugee administration unit and adult education center. Moreover, those housed in the center stayed there while government authorities, represented by the Directorate of Immigration (UDI), assessed their applications for asylum. The closure of the asylum center came as a result of restrictions on immigration made by the Norwegian government and EU-authorities following the 2015-16 influx of migrants to Europe and Norway. In Norway, the rapid increase in refugee arrivals caused a boom and consequent bust in the refugee service sector, as the services were massively scaled up during 2015 and 2016, thus causing a surplus level of service when the number of refugee arrivals and asylum seekers dwindled down from the spring of 2016. Following the closure of the asylum center, which had been in operation for close to thirty years, the village of some 600 people lost an approximate 100 surplus population

¹ I wish to thank the reviewers for their insightful comments on previous versions of this article.

of temporary residents that had stayed there through the years. As was argued by a local, this had an impact on – amongst other things – the local grocery store that overnight lost a reliable customer base.

Service providers operate in various fields that in different ways exist as parts of the societies where they are located. Over the centuries that have passed, different types of services and their providers have become obsolete and replaced by others, or adapted to the changing environments in which they operate (Schumpeter, 2003 [1943]). While the fact that service is provided in a wider context remains a self-evident truism, research on service and the webs of actors involved in service provision has remained introvert and largely focused on the actors directly involved in service exchange. This introvert focus, some have argued, has come been the result of a goods-dominant logic where tangible objects has been the loci of service exchange (Vargo and Lusch, 2004).

In a move to expand to context of service exchange, service ecosystems have emerged as an analytical lens in service research over the past decade. Through the service ecosystem concept, it has been argued, scholars and practitioners can recognize the structural intricacies of service exchange, and thus extended the scope of service from a dyadic producer-user perspective to include the several network connections that influence such exchange (Baron *et al.*, 2018; Mele *et al.*, 2018). The first consequence of applying the service ecosystem concept is hence seen as a changed focus from viewing service producers and customers as the loci of service, towards the inclusion of “many-to-many interactions with multiple actors” (Beirão *et al.*, 2017). The development of the service ecosystem concept in recent years has been connected with the larger theoretical framework known as service-dominant logic, where it has been defined as the system which connects actors who engage in value co-creation through mutual service exchange (Vargo and Lusch, 2016).

Many-to-many interactions with multiple actors has recently been exemplified through an article on a UK food wastage project named FoodShare (Baron *et al.*, 2018). There, the authors show how a focal organization – FoodShare – connected with a range of relevant actors and organizations in an effort to reduce food waste through surplus redistribution. The service ecosystem outlined in the article includes FoodShare regional centers, volunteers, and private sector organizations (such as restaurants) (Baron *et al.*, 2018). Within the established service

ecosystem, food is collected from surplus producers and distributed to food banks and similar charities through the service provided by FoodShare. In order to account for the success of the enterprise, it is argued that the multiple actors (including organizations) involved relied on a foundation of shared understandings – or institutions – which included norms, rules, practices, meanings, and symbols (Baron *et al.*, 2018). One of the norms, as an example of a shared institution, that helped bind the service ecosystem together was the belief that “no good food should be wasted—that is what drives everyone at FoodShare” (Baron *et al.*, 2018).

The FoodShare example illustrates the theoretical core of the current definition of the service ecosystem. Through sets of shared beliefs, a number of actors chose to cooperate and hence establish a service ecosystem consisting of said actors. The move from a dyadic to a systemic focus in the FoodShare example is illustrated through how the dyadic service provided by foodbanks (as a service producer) to people who need food (as beneficiaries) are made part of a larger network of actors. The redistribution of food is what is of interest, and to study such redistribution – the authors suggests – one needs to study the systems that makes this possible: thus including actors within the entire network.

The development of the service ecosystem as an analytical lens has proved a valuable tool in research on service, and has so far been used in private (Di Pietro *et al.*, 2018), non-profit (Baron *et al.*, 2018) and public (Petrescu, 2019; Trischler and Charles, 2019) sector contexts. While the applicability and advantages of studying service through the perspective of focusing on multiple actors within a system has been seen, a question still remains regarding how such nested service ecosystems (Mars *et al.*, 2012) relates to external actors and components: i.e., that which is not part of the formalized system connected through institutional agreements.

The aim of this article is to broaden the current definition of the service ecosystem in order to account for the ways in which systems of nested actors relate, or do not relate, to actors that are not included in such systems. This article seeks to add to a recent call for research that is grounded in a recognition that “services operate as a social phenomenon”, and that “the sociocultural ecosystems that services and customers function within are a critical and underresearched area of well-being” (Anderson *et al.*, 2018). What is offered as a response through this article

is thus a way to articulate services and functions within a system as separate from its context: i.e. the sociocultural ecosystem, environment, or as is argued here – the service ecosystem.

To do so, I question the purpose of institutions as the “glue” that has been said to hold service ecosystems together (Vargo and Lusch, 2014; Baron *et al.*, 2018; Wieland *et al.*, 2016). To rethink recent definitions and use of the service ecosystem concept, I compare its development from ecology until today, and argue that its current definition is incapable of capturing important intricacies. Therefore, I propose a new definition of the service ecosystem that more aligns with its ecological roots, in which both living (institutionally connected) and non-living (not-connected) components are included (Willis, 1997). The fundamental novelty of the ecosystem concept in taking entire systems of interrelated actors into account rather than focusing on a single aggregation, such as food-webs or plant communities in ecology/biology, is thus translated and transferred into the context of service. By doing so, actors connected through a common purpose – such as FoodShare – are recognized as being situated within a larger system, where the “community and the nonliving environment function together as an ecological system or *ecosystem*” (Odum and Odum, 1959).

1. THEORY

Service ecosystems have emerged as a theoretical tool through which scholars have attempted to extend the context of service provision (Baron *et al.*, 2018). In recent years, the concept has become intimately tied to the service-dominant logic, where authors have applied the ecosystem metaphor to outline a dynamic and self-adjusting system in which service occurs (Mars *et al.*, 2012). Recent developments have tried to bring the theory closer to the realities it aims to describe by using the concept to describe empirical realities (see e.g. Baron *et al.*, 2018). While the application of service ecosystems in empirical analysis has provided interesting insights, the role of the eco-prefix and its added value to the service system concept has yet to be fully discussed. Crucially, the

eco-absence is found in how current service research writings suggest that resource integration is inevitable in a service ecosystem. Two assumptions guide the current literature on the topic: (1) service ecosystems can be created and managed (Mars et al., 2012), and (2) generic actors within the service ecosystem are prone to integrate their resources by simply being part of the same system because of the role of institutions (Kaartemo *et al.*, 2017; Vargo and Lusch, 2016). This adds a sense of harmony to the current definition of the service ecosystem through the assumption that everyone wants to integrate resources all the time. At the same time, the metaphorical connotations brought through the ecosystem metaphor alludes to a natural environment that has proven difficult to control: as is seen through the current problems caused by climate-change. The effects of changing natural environments for organisms, such as prolonged draughts and waters that are becoming increasingly warmer, has already been debated and established for a long time in biology and related natural sciences (Walther, 2010).

Through this section I first give a definition of institutions, before presenting the recent definitions of the service ecosystem as it has been established in service-dominant logic literature. Here, I describe the conceptual origin of the service ecosystem and challenge the role of the eco-prefix in its current articulation. Following this, I explore the origins of the ecosystem concept and discuss its initial intention as a concept that sought to capture a wider set of components in ecology. Through the section on ecological origins, I compare the different aggregations found in the ecological understanding of ecosystems and those found in recent writings on the service ecosystem. Finally, I argue for a conceptual distinction between service systems and service ecosystem as a particular analytical lens through which service provision can be studied. The distinction seeks to take both the formalized organization of service systems into account, as well as the influences, obstacles and opportunities that are found in the surrounding service ecosystem.

1.1. INSTITUTIONS

Ecosystems in both ecology and service sciences has been used as an analytical device to describe relations between a number of actors and related components. The main difference outlined in this article is the role of institutions as the thing that connects different actors and

components together. Institutions can be defined as “the humanly devised constraints that structure political, economic and social interactions”, where these constraints include a number of informal and formal constraints: such as sanctions, customs, codes of conduct, laws and property rights (North, 1991). Central to this definition is the understanding that institutions are something that emerge among things with the capacity to come to a conscious agreement. Institutions in the context of this article is thus broadly considered to be the various rules that guides social behavior in groups, and takes into account how different groups are connected through sets of institutions that make up institutional arrangements. At times, the shared understandings of various topics have been said offer an effective way to “reduce thinking” (Vargo and Lusch, 2016) and it has further been argued that the role of institutions has been “to create order and reduce uncertainty in exchange” (North, 1991).

Several types of shared behavioral patterns organized through institutions can be found, all of which share the common trait shaping behavior through expectations (Crawford and Ostrom, 1995). In an organizational setting, this can be exemplified through how an employee of one organization which collaborates with another can expect a positive response when requesting help on a certain matter, and furthermore the confidence that the request is appropriate in that particular setting. Several informal institutions might moreover underline this request: such as language, vernacular, expected time before the request is fulfilled, the way in which the request is fulfilled, and more.

The role of institutions in organizations have been discussed for decades. In a seminal article by Paul DiMaggio and Walter Powell, they used the concept organizational field to describe “those organizations that, in aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products” (DiMaggio and Powell, 1983). These fields, they further argue, “only exist to the extent that they are institutionally defined”. This institutional definition was based on a set of four premises, out of which the premise the “mutual awareness among participants in a set of organizations that they are involved in a common enterprise” (DiMaggio and Powell, 1983).

1.2 SERVICE ECOSYSTEMS

Service ecosystems have emerged as a synthesis of two other theoretical concepts, (1) service systems, and (2) ecosystems. From this coupling, the service ecosystem concept has been defined as

a relatively self-contained, self-adjusting system of resource-integrating actors that are connected by shared institutional logics and mutual value creation through service exchange. (Lusch and Vargo, 2014)

The definition gives rise to a question of what separates service ecosystems from “conventional” service systems. Indeed, the vanguard of service-dominant logic – long represented by its genitors Stephen Vargo and Robert Lusch – have admitted that there are several similarities (Vargo and Lusch, 2016, Akaka and Vargo, 2014). The close ties between service systems and service ecosystems have repeatedly been attributed to a conceptually preceding article by Paul Maglio and Jim Spohrer who define service systems

as value-co-creation configurations of people, technology, value propositions connecting internal and external systems, and shared information (e.g., language laws, measures, and methods) (Maglio and Spohrer, 2008).

As is seen, the two definitions more than partially overlap. Taking the two definitions as the respective authors’ understanding of their respective systems, a difference is found in the two slightly different ways they view the extension of service ecosystems and service systems. Whereas Vargo and Lusch emphasize a system that is relatively self-contained and self-adjusting, Maglio and Spohrer appear to take the actors distributed connections as what limits the system. The noticeable similarities between service ecosystems and service systems have been acknowledged by scholars, not the least because Maglio and Spohrer’s definition is founded in service-dominant logic thinking (Vargo and Lusch, 2016). The difference that makes the infamous difference, it is argued, is the way a service ecosystem “emphasizes the more general role of institutions, rather than technology” (Vargo and Lusch, 2016). The most important difference that is put forth as what distinguishes service ecosystems from service systems is thus how they take institutions and institutional arrangements as what holds the system together

(see Vargo and Lusch, 2014, Baron et al., 2018, Vargo and Lusch, 2017). Here, institutions are understood as humanly devised rules, norms and beliefs – or “rules of the game” – while institutional arrangements refer to “higher-order assemblages of interrelated institutions (sometimes referred to as ‘institutional logics’)” (Vargo and Lusch, 2017). Following this, what separates service ecosystems from service systems is thus a different methodological and analytical approach that sees institutions (and institutional arrangements) as the “glue that holds ecosystems together and makes joint value creation possible” (Vargo and Lusch, 2014).

The focus on institutions in service ecosystems has recently been exemplified through how the businesses KidZania and Eataly used their institutional practices as blueprints to expand and upscale their service (Di Pietro *et al.*, 2018). Through their article, it is argued that “[a] value proposition is an invitation from an innovator to other actors to participate in value-co-creation that will enable the ecosystem to scale up” (Di Pietro *et al.*, 2018). In the case of Eataly, the business is described as a service ecosystem that has been able to expand through making agreements with “local brands and suppliers”, thus situating and making each Eataly restaurant as part of a local environment consisting of different suppliers in different settings. The purpose and ability to franchise Eataly restaurants to different places is thus founded in a service ecosystem model that requires each franchise to establish local service ecosystems by inviting local actors to collaborate. This is done through a set of expectations (or requirements) that guides the relationship: i.e. an institutional arrangement is established. While the particular institutions that make up such arrangements are not fully described, besides a note that American buyers preferred filets instead of whole fish, they can be assumed to include a mutual expectation of supply and payments for this supplies, as well as expectations in regards to the quality of ingredients, handling and transportation.

The Eataly example underpins the introvert focus on service provision in service research mentioned in the introduction of this article. At the same time, it sustains the question of what the role of actors that are not made part of the business-as-service-ecosystem is. From another vantage point, it might have been argued that what has driven the upscaling of Eataly is a business model in which they seek to expand their operations through cooperating with actors that were not established to be part

of the company itself (as is the case with most other restaurants). Two aggregations are thus seen which can roughly be divided into those which are not part of the business organization, and those which are.

In summary, it is seen that the service ecosystem as an analytical concept has been used to describe actors that are connected through institutions, while at the same largely neglecting those outside it. The extension of a service ecosystem in its current articulation is thus limited to what in the private sector might be termed business partners, who work together in order to produce some sort of service for a beneficiary. This closed network of directly related actors, it will be argued, does not resonate with the original purpose of the ecosystem concept.

1.3 THE ORIGINS OF ECOSYSTEMS

The ecosystem concept was introduced by the British ecologist Arthur Tansley in a 1935 article – *The Use and Abuse of Vegetational Concepts and Terms* – in which he levied critique against the way his contemporaries sought to study vegetation and plant communities (Tansley, 1935). In short, Tansley went against a perception of seeing plant communities as an organism based on the fact that they shared a number of attributes with an organism (Tansley, 1935). This would be erroneous, he argued, not only because of the semantic confusion in attributing the same term to two substantially different parts of the environment – that is, the *organisms* and their *organization* – but furthermore because they were not sufficiently similar. At best, Tansley further argued, such communities could be defined as quasi-organisms, or better yet “ecosystems, as we may call them” (Tansley, 1935). The novelty of Tansley’s ecosystem concept lay in the inclusion of factors external to the organisms themselves: organisms that had received what he argued to be a human prejudice to consider such elements the center of the discussion. Thus, there was a need to include

not only the organism-complex, but also the whole complex of physical factors forming what we call the environment of the biome – the habitat factors in the widest sense (Tansley, 1935).

Here, ecosystems were defined as the totality of the organism complex and its habitat factors, or living and non-living components, that co-exist

in a dynamic equilibrium (Tansley, 1935). By including the habitat factors of living organisms, Tansley offered a way to study how components in the system were mutually dependent. The analogy of seeing plant communities and their habitat factors as an organism in itself, as some of Tansley's contemporaries argued, or as a system of biotic and abiotic components (living and non-living) (Tansley, 1939) resonates with the current debate on service ecosystem. In the previous section, it was seen that scholars in the service-dominant logic literature have moved towards seeing service ecosystems as an integral whole in which everything is *directly* interconnected because every element in the system are essentially doing the same thing: i.e. integrating resources. As a theoretical consequence, every service ecosystem is an integral part of itself. Indeed, in the service-dominant logic literature, it can seem as if the service ecosystems themselves partake in resource integration, as Vargo and Lusch has argued that "economic (and other social) networks tend to be self-governed, self-adjusting *service ecosystems* engaged in value cocreation at various levels of aggregation" (Vargo and Lusch, 2016). The notion of an "active" service ecosystem has been suggested in an article where the authors conclude by asking "should the identity of the CEO shift from that of chief executive officer to that of chief ecosystem officer? If so, what would the shift entail and look like?" (Mars *et al.*, 2012). While ecosystems in ecology are likewise understood as self-adjusting (if not self-governed), the perception that these ecosystems are engaged in resource integration rather than existing as the environment in which such integrations occur differ in the two perspectives.

Analogous to the argument of this article, Tansley was not interested in abolishing the concept of the plant community altogether through the introduction of the ecosystem concept. On the contrary, Tansley writes about plant communities as an important component and system on its own, and as part of the wider ecosystem. In a later article, he clarifies the position of plant communities within the larger system through how

we usually call the part of the system composed of plants a *plant community*, and the usefulness of this conception is far from exhausted, because the plants of which it is composed live together gregariously in a certain harmony, and such an aggregation of plants, for example in a natural forest, is a very real sense the kernel of an ecosystem. (Tansley, 1939)

From this statement it becomes clear that ecosystems and plant communities comprise different aggregations of components which include equally valuable parts and are mutually dependent. The organization, which remains the key term, lies in the organizing factors, which “are on the one hand the total net action of the effective environmental factors, on the other hand the combined actions of the individual organisms themselves” (Tansley, 1935): aggregated as the ecosystem. A final characteristic of the different components in the ecosystem can be found in the distinction between auto- and allogenic factors of change (Tansley, 1939). Here, the types of changes that “depend directly on the activities of the plants themselves” are defined as autogenic (or endogenous), while changes that are driven by other (external) factors are defined as allogenic (exogenous). The two types of change relates to the assemblage of ecosystems as a particular aggregation, in which altercations might come as the result of autogenic change within plant-communities or food-webs (i.e. the living components of the system) or allogenic (i.e. when “the dominant factors are external to the plants” (Tansley, 1935) or similar biotic communities).

Finally, in recognition that ecosystems primarily function as an analytical concept, limitations must be made. In the case of ecosystems, Tansley – and others following him – argued how

... the systems we isolate mentally are not only included as parts of larger ones, but they also overlap, interlock and interact with one another, the isolation is partially artificial, but is the only way possible in which we can proceed (Tansley, 1935).

This emphasizes how the ecosystem as an analytical concept is an analytical abstraction used to describe the relations between components in a limited field: ranging from the pond to the planet as a whole. That which exists within the field is naturally present, while the limitations set is inescapably artificial yet required in order to conduct a meaningful study.

2. SERVICE ECOSYSTEMS AND SERVICE SYSTEMS: A CONCEPTUAL COUPLE

The recently developed definition of the service ecosystem, it has now been shown, is the result of a long intellectual heritage in which concepts and understandings from ecology, organizational and service research has been combined. Through the conceptual review, I argue, the purpose of the eco-prefix in service ecosystems has been challenged through how this to a large extent appears to reify the idea of an integral whole connected through institutions as the aggregation of interest. Service ecosystems have consequently been framed as the aggregation of a number of actors engaged in forms of mutual service exchange, while not taking that which is external to this system into account.

Service and the actors who work together to provide service operate as aggregations within a larger sociocultural field, which in turn influences service provision in a number of ways. By introducing service ecosystems and service systems as a conceptual couple, this article aims to provide a new way to talk about the dialectic that exists between systems of aggregated actors and their environment. The idea of taking the wider context of service into account has been suggested and pursued previously (e.g. Anderson *et al.*, 2018, DiMaggio and Powell, 1983). Nevertheless, the recent development of the service ecosystem as an increasingly popular concept in service research has been seen to neglect this wider context, and returned to an introvert perception of service provision despite the obvious possibilities for studying external influences found in the ecosystem concept.

Framing service ecosystems and service systems as a conceptual couple underpins the importance of taking either into account into a systems-study of service. As such, a service ecosystems perspective should aim to take into account which parts of the system is aggregated through institutional arrangements. Service systems, on the other hand, should take into account and question why the current aggregation has come to be, and why certain actors are included in that aggregation or not in the environment or service ecosystem in which it operates.

Service systems in the proposed conceptual couple can be defined along similar lines as the service ecosystem in recent service research, and thus as “a relatively self-confined, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange” (Vargo and Lusch, 2016). This definition, moreover, is recognized to resemble previous definitions of an organizational field, defined as “those organizations that, in aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products” (DiMaggio and Powell, 1983). What is to be recognized as the service system is thus actors (including organizations) that are connected through a common purpose: such as the production of a particular service. Such service systems follow the logic of organizational fields and “only exists to the extent that they are institutionally defined” (DiMaggio and Powell, 1983). Service systems make up empirically observable structures that can be mapped through following the institutions that binds actors that are part of the system together. These institutions may be rules, legal frameworks, shared practices, beliefs, norms, and more.

Differing from service systems as connected structures that can be observed empirically, the service ecosystem can be defined as the larger context in and with which service systems operate. Service ecosystems are thus characterized by having a number of actors aggregated through institutional arrangements *and* actors that are not part of such aggregations. Translating the conceptualization of ecosystems in ecology, service ecosystems may include a number of living and non-living components that in various ways has an influence of the operation and dynamics of the service system.

3. SERVICE SYSTEMS AND SERVICE ECOSYSTEMS DYNAMICS

In the following, I present a few examples to illustrate differences between service systems and -ecosystems outlined in this article. Here, the service system will be traced through the multidirectional formal

connections established between different actors and entities within a larger system of potential actors: the service ecosystem. Through the examples it will be made clear how latent parts of the service ecosystem may or may not be “activated” through the establishment of connections with the core service system followed in this chapter.

3.1. PRIVATE SECTOR CASES: THE SHARING ECONOMY

From the distinctions now made between the service system and service ecosystem, I have argued that these can be considered as different aggregations of people and other components within a set area. The extension of this area, it has further been argued, is in the service system case limited through the direct connections that exist between actors and other components that are nested within a set service system, while the extension of the service ecosystem is limited by the researcher. As such, the service ecosystem remains an analytical tool to better understand the context within which a specific service occurs.

The case of Eataly serves as an example of how a company as a service system can include service ecosystem actors into their services. The process of expansion described in the case of Eataly (Di Pietro *et al.*, 2018) illustrates how the company has recognized their own needs and sought through the local service ecosystem of new franchise restaurants to establish partnerships that can help them deliver the services they promised. This example is similar to several others found in private sector organizations, such as hotels, where the service provided is the result of a cooperation between a large number of actors: such as cleaning companies, bakeries, farms, suppliers of various types of goods, accounting agencies and so forth. These types of configurations usually takes the form of a service system that consists of actors that have come to some type of agreement that allows a certain predictability in their operations, and might either be the result of convenience (there is only one cleaner in town) or through negotiations. The fact that businesses collaborate with other businesses serves as a simple example to illustrate a service system. The nestedness of such systems (Mars *et al.*, 2012) can be revealed in the cases where the constellation of the service systems changes. For instance, one of the service system partners might become bankrupt.

The sharing economy has disrupted previous distinctions between business providers and consumers by empowering the latter through new platforms. Central to the sharing economy, it has been argued, is the “sharing of idle capacity” (Frenken and Schor, 2019). This idle capacity has been exemplified through how a taxi will not make a trip without an order, while a car-sharing service (such as Uber) seeks to make use of the idle resources (in this case a car seat) for a trip that is going to be made either ways (Frenken and Schor, 2019). Similarly, others have described the way in which the home-sharing services offered through apps such as AirBnB “is strongly linked to the reconfiguration of existing resources and their integration practices within a broader service ecosystem” (Koskela-Huotari et al., 2016). A commonality among various platforms that offer private citizens to share their idle resources with others is how it is driven by a perceived under-utilization of resources (Frenken and Schor, 2019). In the case of AirBnB, this might be represented through how someone might have an extra room in their house that they wish to rent out to people who need a place to stay. Car-sharing services, on the other hand, might come as a result of a daily commuter who realizes that they have vacant seats on their drives to and from work.

While people have had empty rooms and vacant seats prior to the introduction of apps that allows them to offer these to a general public, a crucial facilitator of the sharing economy can be found in the apps that facilitates connections between different actors in the system. In earlier times, it has been argued, the status of being a stranger would serve as an obstacle through a lack of mutual trust between different parties (Frenken and Schor, 2019). With the internet as a facilitating technology combined with peer-reviews of actors that are members of a particular sharing economy service system (Uber, AirBnB and so forth), the distance between strangers can be lessened. Moreover, different sharing economy service systems outline terms and conditions that (optimally) creates a mutual understanding of expectations among those providing and using a particular service. Combined with the knowledge created through reviews and descriptions of the service, participants in the sharing economy are hence allowed to operate through shared institutions: which might include how to behave (practices), transparency in exchange (norms) and beliefs (it is good to make use of under-utilized resources).

The sharing economy serves as an illuminating case to explore the ways in which actors within a particular location makes use of pre-existing resources in novel ways through institutional reconfigurations. While the advent of the sharing economy, represented by the mentioned companies, caused positive connotations and a sense of consumer empowerment, its later consolidation has proved to be challenging through how this new type of service exchange disrupts previous economic arrangements. At the micro-level, this has been manifested through protests in cities such as Barcelona where residents have argued that their neighborhoods are ruined by the introduction of rowdy tourists (Santolli, 2016). At a higher level, the economic empowerment of private citizens through sharing economy platforms have challenged the taxation systems of governments. These responses shows the wider context – as the service ecosystem – in which service systems such as AirBnB and Uber operates.

3.2. PUBLIC SECTOR CASE: REFUGEE QUALIFICATION

During 2018, I conducted fieldwork on the refugee related services among employees and settled refugees in four Norwegian municipalities over a total period of seven months. Throughout the fieldwork, I followed the everyday practices and interactions among people involved in these services, and thus obtained a deep understanding of the way in which the organization of the public services were affected by changes outside its control. Moreover, the fieldworks produced empirical descriptions regarding the processes through which those operating within the public services provided to refugees actively engaged with actors outside their institutional framework.

Refugee integration comprises an interesting arena to explore the relations between different aggregations of actors, as those described in this article. In Norway, municipalities take on responsibility for refugee integration efforts through accepting to settle refugees who have been granted protection in the country. The core services related to refugee integration consist of a refugee administration in charge of social and housing issues, as well as adult education centers in which those settled are to receive basic qualification (such as language education and a 50-hour civics) course. The aim of the services provided have been articulated through the Introduction Act (Kunnskapsdepartementet, LOV-2003-07-04-80), whose aim it is to prepare newly arrived immigrants

with need of basic qualification for self-sufficiency when their two-year program is finished. Though parts of the Introduction Programs the municipalities are mandated to offer settled refugees are organized to be provided through the public services, such as housing and language education, the program also consists of a third measure through which the participants (i.e. settled refugees) are supposed to become acquainted with working life in Norway. All of the municipalities who partook in the study had partnerships with different organizations both within the public sector and with private sector enterprises. These partnerships were organized by those working in the refugee administration, who would spend much time trying to mobilize such enterprises to offer unpaid positions to their users.

In one municipality, the refugee administration and refugee administration – which were organized as a single unit – had initiated an ambitious project in which they sought to engage a variety of actors in the pursuit of providing their users with vocational training during the course of their early years in the country. Similarly to other municipalities featured, the municipality had become frustrated with the silos caused by the organization of refugee services in Norway, which largely has come as the result of how responsibilities are distributed. “Earlier we would send students straight from the adult education center to the high schools without providing any type of following up. This has not proved to be a recipe for success”, the woman in charge of the program stated. To organize the new program, she and the headmaster had asked themselves the question “We have refugees who need a job, what does the municipality need?” Following this, the project leader contacted a number of businesses in the vicinity and thus started a process of exploring the wider service ecosystem in which the refugee service system were located. A number of possibilities opened up following the relocated focus of their operations, and at an early stage they got a response from companies who needed people working with logistics. After contacting the high school, however, it soon became apparent that they did not have the appropriate teaching staff to pursue that direction. A number of local factories, however, had also reported the need for chemical process operators: a vocation that being taught at the local high school.

Following the search for possible work demands in the municipality, the adult education center in cooperation with the local high school set up

a coordinated program in which those enrolled would receive simultaneous vocational and Norwegian training. By harnessing a wider number of latent resources in the service ecosystem in to the refugee service system, it had been made possible to shorten the duration of an educational lap that otherwise would have taken two or more years more. The participants would get a job sooner, and the refugee administration and adult education center would free up their time and resources to focus on other students.

While the initial idea and process underlying the expansion of the local service system by making use of resources that lay latent in their wider service ecosystem, the public service organization had now reached a solution that seemed beneficial for both them, the municipal budget, and for the local businesses that needed labor. A distribution of responsibilities had been made between the different actors, thus making up an institutional arrangement consisting of mutually agreed upon norms, beliefs and practices. The norms were fulfilled through a shared belief that the education offered through the high-school and adult education center would sufficiently train the participants to be qualified for their position, and a belief that it is better for people to work than not to work – often termed the “work-line” in Norway (Djuve, 2011) – was shared by all participants.

After having established the set of institutions on which the scheme would operate, the participants in the chemical process operator program started their training and the people involved were optimistic. Early on in the process, however, the two contact persons that scheme had at the local business quit and retired. At this point, the project leader realized that they had not made any written agreement with the factory that was going to take part in the education of the chemical process operators and hopefully become their future work place. This became relevant as new demands were asked by the company that had not been part of the initial agreement. While the initial agreement had presupposed that the students would reach a satisfactory language level through their training, the new contacts at the local factory now set the language requirement to the B2-level: a level required for being enrolled at universities and colleges. The new requirement came as both a result of a lacking formalization of the first agreement made, and the consequent employment and contact person change at the factory as a potential partner from the service ecosystem.

CONCLUSION

This article has argued that the current use of the service ecosystem as an analytical device has failed to translate crucial conceptual components of the ecosystem term found in ecology. As a consequence, I have argued, the service ecosystem concept has reified rather than disrupted an introvert perspective on service exchange without taking into account the importance of actors, components and events that are external and in various ways influence such service exchange. Through the current definition of service ecosystems found in recent service research literature, such systems has been defined as a “relatively self-contained, self-adjusting system of resource-integrating actors that are connected by shared institutional logics and mutual value creation through service exchange” (Lusch and Vargo, 2014). Through the cases discussed, it has been argued that the applications of this definition has served to describe what otherwise might have been described as a business network of mutually benefiting actors that are connected through institutional arrangements that makes their interactions predictable for its various parties. While this definition and the dynamics within such systems are of importance in the study of service exchange, and the focus has served to expand studies of service from a dyadic to systemic perspective, it has also been argued that the introvert emphasis that comes as a result fails to capture influences from outside this system.

From the exploration of the ecological origins of ecosystems, it has been seen how the profound novelty that came with Arthur Tansley’s introduction of the concept in 1935 lay in the inclusion of non-living components in the study of living things. His holistic emphasis in the study of ecosystems was seen to come as a way to counter the “human prejudice” to consider organisms “as the most important parts of these systems” (Tansley, 1935). This human prejudice, I have argued, have been transferred to the current service ecosystem understanding fronted by scholars writing in the tradition of the service-dominant logic, whom consequently have failed to capture the “habitat factors” that in various ways influence service exchange within a system of actors connected through mutual agreements: here defined through the institutions that connects them together.

In an attempt to better translate the ecosystem metaphorically from the study of nature to the study of humans and services, I have argued for a conceptual distinction between service systems and service ecosystems, in which the former is used to describe actual systems of actors and organizations that are connected and engage in service exchange through shared institutions: that is, norms, practices, beliefs and more that creates mutual expectations among a number of actors. Service ecosystems, on the other hand, have been described as the wider context in which service systems operate, and have been presented as an analytical tool that can be used to better understand external influences on service systems. Service ecosystems thus remain an analytical abstraction, and its extension is limited by the researcher. The limited extension of a service ecosystem in analysis is implemented as a lesson from ecology, as the analysis ecosystems and its influence on organisms and biotic communities demands such limitation for the sake of conducting studies.

Through the articulation of service systems and service ecosystem offered through this article, I have proposed a new approach to the study of how service systems exists within a larger context – or operating environment – that in various ways influence its internal operation. Service systems have been argued to be formed through sets of institutions that make up institutional arrangements, in which actors and organizations from a particular area cooperate to produce and deliver a certain outcome. The broadened perspective of service provided through the conceptual couple seeks to take into account the way in which aggregations of actors – as service systems – are prone to both internal and external change.

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