Exploring power strategies for transformation in a service-ecosystem

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Abstract
Purpose – The paper covers the topic of power strategies between actors and the interplay between the service ecosystem and the actor(s), and vice versa. The paper addresses the lack of conceptual development concerning power considerations beyond dyadic, rigid and role-based models found in general marketing literature. Further, the paper opens the area of power relationships, using the service ecosystem as conceptual framework.

Design/methodology/approach – The paper has a systemic and sociological view on service-ecosystems using mainly Giddens’ structuration theory. Service-dominant logic literature from 2004 to 2021 is systematically reviewed for power issues and qualitatively analyzed. Mayring’s step model of, firstly, inductive and, secondly, deductive category development is applied. Subcategories were identified, subsumed and finally grouped into five categories to increase the level of abstraction.

Findings – The article investigates power considerations and enables marketers to create power through (1) imbalance, to find strategies and counterstrategies for (2) actor’s behavior, to understand the (3) actor’s embeddedness within a service ecosystem and its dynamic nature, to learn about (4) institutions and actor’s institutional work. A set of seven propositions is presented for the conceptualization of power strategies in a service ecosystem.

Research limitations/implications – The consideration of power on different levels supports both the zooming-in and zooming-out to observe and understand the power phenomena in a service ecosystem. Seven propositions about episodic as well as systemic power relations are presented. Power is conceptualized in service ecosystem as transformative capability of an actor to intervene on institutions and in some way alter them, recognizing that power relations are co-created, dynamic and context-dependent.

Practical implications – The article recognizes different levels (micro-meso-macro) of power considerations and helps practitioners and marketers to create power through (1) imbalance, find strategies and counterstrategies for (2) actor’s behavior, understand the (3) actor’s embeddedness within a service ecosystem and its dynamic nature, learn about (4) institutions and actor’s institutional work. This enables managers to find an appropriate choice of action in their specific context to transform the service ecosystem(s) they are embedded in.

Social implications – As all social systems are power systems, a service ecosystem can only be fully understood by integrating the elementary concept of power. As such, power considerations within actor strategies and the service ecosystem are relevant to improve the understanding of transformation of the service ecosystem. Power, in the sense of the transformative capability of actors, changes the social and material world.

Originality/value – Power issues are important to understand the “hows” of resource integration in service ecosystems and its transformation or stability.

Keywords Transformation, Service-dominant logic, Value co-creation, Concept of power, Market-shaping, Service-driven

Paper type Research paper

Introduction
This conceptual and exploratory paper problematizes and reconciles tensions in marketing literature of an actor’s power over other actors and the interplay between the service ecosystem and the actor(s) and vice versa. A literature review in S-D logic literature about power research makes obvious that aspects of power are nearly absent or only treated fragmentarily (Chowdhury et al., 2016; Edvardsson et al., 2011). The motivation for this paper is to research such power relations, with the aim to improve the understanding of what makes
a service ecosystem “a self-adjusting system” (Lusch and Vargo, 2014, p. 161). Giddens (1984) *structuration* theory (1984) serves as a theoretical foundation of this article as the theory is, partly, well incorporated in S-D logic. Why partly? Giddens (1987) classifies power, along with agency and structure, as an elementary concept in social science. The elementary concepts of structure and agency are comprehensively treated in S-D logic literature (e.g., Edvardsson *et al.*, 2011; Lusch and Vargo, 2014, 2018; Mele *et al*., 2015; Mele and Russo-Spena, 2018), but aspects of power can only be found sporadically and narrowly. However, service ecosystems are social systems. As all social systems are power systems (Giddens, 1987), a service ecosystem can only be fully understood by having integrated the elementary concept of power. As such, power considerations within actor strategies and the service ecosystem are relevant to improve the understanding of transformation of the service ecosystem itself.

The expression of power in this paper is episodic – in the sense of direct acts between actors that shape their behavior – as well as systemic – in the sense of more enduring institutional structures (Fleming and Spicer, 2014). Power, here, is the transformative capability and ability to directly or indirectly influence the behavior of actors, to intervene a given set of events (Stevenson, 2010) and in some way alter them (Giddens, 1979, 1987). The transformative capability of actors to challenge, alter and replace structures and institutions occurs by developing (re)new(ed) or reconfigured structures and institutions (Avelino, 2021).

In a literature review, firstly, light is shed on how power is conceptualized in good-dominant logic marketing literature. The limitations found there like a focus on dyadic power relations, a strong linkage between power and conflict and well-defined, stable power structures in a specific business context, make obviously that, secondly, a systematic approach on power relations is desirable. Thirdly, for this systematic view, S-D logic is proposed as theoretical framework. S-D logic’s view on service eco-systems is grounded on Giddens’ (1984) *structuration theory*. Actors’ agency and structure are already well explained and conceptualized. However, what appears incomplete in the conceptualization of a service ecosystem, so far, is the aspect of power. Lastly, a review of S-D logic literature identifies connections to power, without an explicit conceptualization of power. The identified articles are qualitatively analyzed, and theme categories are built (Mayring, 2015). Thereafter, the findings are considered together with the sociological literature of Giddens and synthesized to achieve conceptual integration (Jaakkola, 2020). Seven propositions are elaborated to conceptualize power relations from the micro to the macro level within a service ecosystem. S-D logic offers a framework to conceptualize power beyond a pre-concepted negative-view on power, beyond a specific business context and the recognition that power relations are co-created, dynamic and context-dependent. Finally, the propositions and their implications are discussed, and future research is proposed. The paper contributes theoretically by conceptualizing power in service ecosystems and improves the understanding of transformations of service ecosystems.

**Literature review**

(1) Research framework

Plenty of different concepts of power between marketing network members can be found. Most of these concepts use traditional labels for actors such as “consumers,” “manufacturer” or “suppliers” and other role-specific terms and have some characteristics in common. Firstly, a focus on dyadic relationships between network members can be observed (Anderson and Narus, 1990; Brown *et al*., 1983; Gassenheimer and Ramsey, 1994; Hunt and Nevin, 1974; Kim, 2000; Lusch, 1976). Secondly, a strong linkage between power and conflict among actors is noticeable. Thirdly, power structures are described as well-defined and somehow rigid,
meaning the balance of power is weighted heavily in favor of a network member type over another member type (Chen and Vargo, 2014; Gassenheimer et al., 1994; Hunt, 2015; Lusch, 1976). Fourthly, French and Raven’s (1957) typology of power is often applied, examining and exercising reward and coercion on expert, referent and legitimate power sources (Gaski, 1986; Kumar et al., 1998; Lawler et al., 1988).

The need for a system-thinking approach
The characteristics of power relations just outlined require a new approach to handle the imbalance in the exchange of service. The reduction of power consideration to dyadic relationships ignores strategies within the system: for example through the choice of no exchange with the dyadic actor but an alternative actor (e.g. competitor) within the system (Blau, 1964; Homans, 1961). Further, collective strategies such as divide and conquer (e.g. dual sourcing strategy), forming coalitions to interact (e.g. purchasing cooperative) respectively not interact (e.g. consumer boycott), or lastly mediating power through third parties (Blau, 1964), and brokerage (Siltaloppi and Vargo, 2017). The reduction of power consideration to dyadic relationships also ignores the impact of the context and, more generally, the system in which the resource integration process is embedded. Service ecosystem thinking offers a holistic study approach about power relations beyond the dyad.

The advantage of S-D logic as a service ecosystem framework
The theoretical framework of a market system facilitates the understanding of the complexity that influences and is influenced by social and economic exchange (Chandler and Vargo, 2011). Here are, briefly, some reasons that underline that the service ecosystem approach of S-D logic qualifies as a framework for a study about power strategies. Service-dominant logic provides a framework to explore the role of exchange, structure and value creation from a few central constructs (e.g., service-for service exchange, actors as resource integrators, value co-creation within a service ecosystem). S-D logic offers a perspective on a dynamic actor-to-actor co-creation of value (Brodie et al., 2019). S-D logic offers high-level generalization based on resources and resource integration.

This high-level generalization of actors avoids using traditional role-specific labels (such as “consumers,” “producers,” “firms” or “suppliers” typically found in traditional marketing literature) and allows to focus on the dynamic activities of entities involved in the exchange system (Lusch and Vargo, 2018). The generalized view on actors, however, does not mean that all actors or resources are equal or in the same way appealing for a resource integration process. Actors may also play different roles such as incumbents, challengers or governance units, with impact on the service ecosystem's stability, transformation and crisis (Layton, 2015). The framework of S-D logic allows to generally conceptualize power strategies in a service ecosystem without being distracted by challenges or apparent complications of particular contexts (Akaka et al., 2013; Badinelli et al., 2012).

(2) Power considerations within S-D logic, the unnoticed core element of a social system
Power in S-D logic's literature is a marginal issue. Journals of the “Scimago Journal and Country Rank” (subject area “business, management and accounting” and subject category “marketing”) published between 2004 and 2021 are systematically reviewed for the keywords “value co-creation” AND, “asymmetric,” “conflict,” “power” or “transformation.” The Scimago Journal Rank (SJR) is selected as it presents an indicator that measures the prestige of scholarly journals by accounting both, the number of citations received by a journal and the prestige of the journals where the citations come from.

Studies that are not linked to S-D logic or power issues (such as co-creation partnerships or co-creation of new products) are excluded from further analysis. In addition to the journal
articles, two handbooks about service-dominant logic (Lusch and Vargo, 2014; Vargo and Lusch, 2018) are reviewed for power issues. In total, thirty-three articles are qualitatively analyzed. Table 1 shows the sources and numbers of the analyzed articles.

Mayring’s (2015) step model of, firstly, inductive and, secondly, deductive category development is applied. Subcategories were identified (e.g., actor’s role, position, status, size), subsumed and finally grouped into five categories (e.g., previous subcategories grouped in category “actor’s embeddedness”) to increase the level of abstraction. The findings of the literature review about power linked to S-D logic are demonstrated in Table 2. The developed categories are ordered and start at micro level through meso level to macro level and vice versa. This order supports both the zooming-in (Leroy et al., 2013) or zooming-out (Alexander et al., 2018) to observe the power phenomena in a service ecosystem.

First theme category is generally about imbalance between actors. In S-D logic literature, we find many examples that illustrate imbalance between actors. This imbalance occurs due to specialization (Vargo and Lusch, 2004), information asymmetry (Hughes et al., 2018), uncertainty (Paulin and Ferguson, 2010), unequal attraction (Löbler, 2016), unequal distribution of capital (Lombardo and Cabiddu, 2017), property rights (Haase and Kleinaltenkamp, 2011), actors’ market-shaping capabilities (Nenonen et al., 2018, 2019; Windahl et al., 2020), different social status between actors (Chipp et al., 2019), tensions (Tóth et al., 2018), the perceived imbalanced feeling of success (Baker et al., 2019), injustice (Kashif and Zarkada, 2015), disrespect (Chipp et al., 2019), power distance (Gong, 2018) or power asymmetry, due to unevenly distributed market devices (Mele et al., 2018).

Second theme category is actor’s behavior. In this category topics are clustered like the actor’s execution of market-shaping capabilities (Nenonen et al., 2019), as well as the actor’s ability to innovate new service design, new service practices (Mele and Russo-Spena, 2018) or new markets (Kaartemo and Nyström, 2021). Also, the actor’s “dark side behavior” is treated (Reim et al., 2018), for example, the misuse of resources, the intentionally confusing or unfair treatment (Skålén et al., 2015) and disrespect to other actors (Chipp et al., 2019). Based on the

<table>
<thead>
<tr>
<th>Journals name</th>
<th>Number of articles</th>
</tr>
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<tbody>
<tr>
<td>Industrial Marketing Management</td>
<td>4</td>
</tr>
<tr>
<td>Marketing Theory</td>
<td>3</td>
</tr>
<tr>
<td>Journal of the Academy of Marketing Science</td>
<td>3</td>
</tr>
<tr>
<td>European Journal of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Journal of Services Marketing</td>
<td>2</td>
</tr>
<tr>
<td>Journal of Macromarketing</td>
<td>2</td>
</tr>
<tr>
<td>Australasian Marketing Journal</td>
<td>1</td>
</tr>
<tr>
<td>International Journal of Bank Marketing</td>
<td>1</td>
</tr>
<tr>
<td>International Journal of Retail &amp; Distribution Management</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Business &amp; Industrial Marketing</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Business Research</td>
<td>1</td>
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<tr>
<td>Journal of Business-to-Business Marketing</td>
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<tr>
<td>Journal of Marketing</td>
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<tr>
<td>Journal of Marketing Theory and Practice</td>
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<tr>
<td>Journal of Service Management</td>
<td>1</td>
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<tr>
<td>Journal of Service Research</td>
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<tr>
<td>Journal of Service Theory and Practice</td>
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Table 1. Journals and distribution of articles for the qualitative analysis

<table>
<thead>
<tr>
<th>Books</th>
<th>Number of articles</th>
</tr>
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<tbody>
<tr>
<td>The SAGE Handbook of Service-Dominant Logic</td>
<td>2</td>
</tr>
<tr>
<td>Service-dominant logic: Premises, perspectives, possibilities</td>
<td>1</td>
</tr>
<tr>
<td>Category</td>
<td>Examples of S-D logic literature review</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Actor’s behavior</td>
<td>Subcategories like execute, innovate, lobby, advocate, misbehavior, or build coalitions:</td>
</tr>
<tr>
<td></td>
<td>(1) Execution of market-shaping strategies (Nenonen et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>(2) Innovation and design</td>
</tr>
<tr>
<td></td>
<td>a. of practices (Mele &amp; Russo-Spena, 2018)</td>
</tr>
<tr>
<td></td>
<td>b. of strategic design (Windahl et al., 2020) &amp; service ecosystem design (Vink et al., 2020)</td>
</tr>
<tr>
<td></td>
<td>c. business models</td>
</tr>
<tr>
<td></td>
<td>(3) A focal actor that transforms and generates new markets (Kaartemo &amp; Nyström, 2021)</td>
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<tr>
<td></td>
<td>(4) Lobbying public actors (Kaartemo et al., 2020)</td>
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<td></td>
<td>(5) Modifications to existing regulations by advocating (Baker et al., 2019)</td>
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<td></td>
<td>(6) “Dark side” behavior including information misuse, customer confusion, customer lock-in, unfair treatment and financial exploitation (Paulin &amp; Ferguson, 2010; Reim et al., 2018; Skålén et al., 2015)</td>
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<td></td>
<td>(7) Strategically aggressive actor will seek and collect possible resources to achieve (Laud et al., 2015)</td>
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<td></td>
<td>(8) Building coalitions:</td>
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<tr>
<td></td>
<td>a. With the aim to find and connect with other likeminded actors, gather information and interact collectively with them (Aksoy et al., 2019; Domegan et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>b. With the aim to lobbying public actors (Kaartemo et al., 2020)</td>
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<td></td>
<td>c. With the aim to boycott others (Naumann et al., 2017; Peeroo et al., 2017)</td>
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<tr>
<td></td>
<td>d. With the idea of distributed power and trust within communities (Aksoy et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>e. pluralistic design processes of collectives in service ecosystems design (Vink et al., 2020)</td>
</tr>
<tr>
<td></td>
<td>f. Collective self-organization stresses the empowerment of mutual interests and multiple perspectives (Domegan et al., 2019)</td>
</tr>
<tr>
<td>Actor’s embeddedness</td>
<td>Subcategories e. g. role, position, status, size, agility:</td>
</tr>
<tr>
<td></td>
<td>(1) Vague role expectations, unclear role descriptions and uncertain role scripts cause role ambiguities and role conflicts (Rönneberg Sjödin et al., 2016)</td>
</tr>
<tr>
<td></td>
<td>(2) Roles, positions, and statuses are dynamic in nature (Edvardsson et al., 2011)</td>
</tr>
<tr>
<td></td>
<td>(3) The distribution of resources among actors determines their relative positions in the network (Jaakkola &amp; Hakonen, 2013; Lombardo &amp; Cabiddu, 2017)</td>
</tr>
<tr>
<td></td>
<td>(4) Peripheral actors transform the market with disruptive ideas and practices (Baker et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>(5) Different status among members of society (Chipp et al., 2019) culture (Laud et al., 2015).</td>
</tr>
</tbody>
</table>

Table 2. Theme categories for “power”-linked to S-D logic literature (continued)
Subcategories of institutional work e.g. governmental actors, lobbying, advocating and disruptive practices:

1. Institutions and actor’s institutional work (Kleinaltenkamp, 2018; Nenonen et al., 2019).
2. Non-traditional, peripheral actors transform the market with disruptive, alternative ideas and practices (Baker et al., 2019).
3. A focal actor that transforms or generates new markets (Kaartemo & Nyström, 2021).
4. Governmental and public actors’ activities to shape the structure (Kaartemo et al., 2020).
5. Economic actors are lobbying or advocating public actors and other stakeholders to shape the structure (Baker et al., 2019; Kaartemo et al., 2020).
6. Service ecosystem design to intentional, long-term change; (re-) think out of the box and stop re-producing existing ways of working (Vink et al., 2020).

Subcategories of institutions like:

**Technologies:**
- The technological infrastructure influences how actors collaborate (Kaartemo & Nyström, 2021).
- New technology which often encourage institutional entrepreneurs to undermine previously accepted arrangements (Baker et al., 2019).
- Technological infrastructures that enable customers to use industry’s products and/or services (Kaartemo & Nyström, 2021).
- Technology platforms which enable increasing access to resources (Baker et al., 2019).

**Economics:**
- Markets are conceptualized as socio-material systems created through processes of legitimation where institutions common habits, norms, routines, rules and laws – guide the relations between and interactions of individual and collective actors (Kaartemo et al., 2020).
- Disruption can result from macro-level influences such as economic shocks which often encourage institutional entrepreneurs to undermine previously accepted arrangements (Baker et al., 2019).

**Legislation:**
- New legislation that opens up the market (Kaartemo et al., 2020).
- New legislation that supports consumer choice, consumer protection and competition (Kaartemo et al., 2020).
- Managerial transactions take place within a framework set by the available legal system (Haase & Kleinaltenkamp, 2011).

**Culture:**
- A bureaucratic culture with rewards provided for actors that play the game “correctly,” often prevent creativity and innovation (S. L. Vargo & Lusch, 2014).
- The market considered as a sign system with signs, symbols, and meanings of human artifacts (S. L. Vargo & Lusch, 2014).
- The counterculture of the 1960s and ‘70s with a profound influence on the e.g. circus market (Baker et al., 2019).

**Social:**
- Disruption can result from macro-level influences such as social disturbance which often encourage institutional entrepreneurs to undermine previously accepted arrangement (Baker et al., 2019).

Table 2.

Source(s): Table created by author

Prior sub-points, Laud et al. (2015) mention more neutrally the strategic aggressiveness of an actor. Lastly, in this category, the topic of building coalitions is treated. Coalitions are built with the aim to find and be connected with other like-minded individuals (Löbler, 2017), to gather information and interact collectively (Aksoy et al., 2019; Domegan et al., 2019) or collectively boycott the service provider (Naumann et al., 2017; Peeroo et al., 2017). Mele et al. (2018) describe powerful actors that take the lead and act as drivers of the process, for example, they construct a cognitive, political community, in a role as a creator of the rules of the game (Fligstein, 2002). Coalitions on collaborative service ecosystems (e.g. platforms) are built on the idea of distributed power and trust (Aksoy et al., 2019).
Third theme category is actor’s embeddedness. Role ambiguities and role conflicts (Chowdhury et al., 2016; Edvardsson et al., 2011; Rönnberg Sjödin et al., 2016), are due to, for example, vague role expectations, unclear role descriptions and uncertain role scripts or role distance (Rönnberg Sjödin et al., 2016). The distribution of resources among actors determines their relative positions in the network (Jaakkola and Hakanen, 2013; Lombardo and Cabiddu, 2017). Dynamic emerges as all roles and positions are constantly reproduced through the service exchange (Edvardsson et al., 2011). Within society, members have different status (Chipp et al., 2019). The fourth theme category considers institutions and institutional work. Innovation by established actors (Kaartemo and Nyström, 2021) as much as non-traditional, peripheral actors transform the market with disruptive, alternative ideas and practices (Baker et al., 2019; Mele et al., 2018). Important for innovations is the method of service ecosystem design by thinking out of the box (Vink et al., 2020). Technologies influence includes how actors collaborate, use products and access resources (Baker et al., 2019; Kaartemo and Nyström, 2021). New technologies may encourage institutional entrepreneurs to undermine previously accepted arrangements (Baker et al., 2019).

Further, public actors employ institutional work that shapes markets (Kaartemo et al., 2020). Simultaneously, economic actors are lobbying public actors for new regulation, deregulation or standards (Baker et al., 2019; Flaig et al., 2021). With regards to legislation, transactions between actors take place within a framework set by the available legal system (Haase and Kleinaltenkamp, 2011). Changes within legislation may open up or close down markets (Baker et al., 2019).

Economically, markets are conceptualized as socio-material system (Kaartemo et al., 2020). Disruption in markets may result from macro-level influences such as economic shocks (Baker et al., 2019).

Culture influences markets, too. Markets can be considered as sign systems with signs, symbols and meanings of human artifacts (S. L. Vargo and Lusch, 2014). For instance, a bureaucratic culture with rewards provided for actors that play the game "correctly" may prevent creativity and innovation (S. L. Vargo and Lusch, 2014). Lastly, market and social institutions interact and overlap (Mele et al., 2015), and disruption often encourages institutional entrepreneurs to undermine previously accepted arrangements.

Building propositions about power relations

Table 2 illustrates many different, somehow “moving parts” found in the S-D logic literature related to power relations. For the building of propositions, the “moving parts” are considered together with the sociological literature of Giddens and synthesized to achieve conceptual integration (Jaakkola, 2020).

A brief reflection about S-D logic and Giddens’ structuration theory is given to show the integration. A service ecosystem is 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, p. 161). Edvardsson et al. (2011) imitated the integration of key concepts from social construction theories into S-D logic. A major contribution, here, is the integration of Giddens’ (1984) structuration theory into S-D logic (S. L. Vargo and Lusch, 2016). The subsequent theoretical work about institutional arrangements and institutions focuses mainly on agency and structure.

A summary about the understanding of agency and structure should help to clarify the underlying concepts within this article. To begin with, a conceptual challenge related to the term agency is addressed. Agency is defined differently in different dictionaries, sometimes related to action and sometimes related to power (Karp, 1986). In this article, agency is the capability of individuals to act independently, purposefully and to make their own free
choices. Having agency means to act deliberately and individualistically and form practices between actors (Mele et al., 2018). Practicing agency reflects the actor’s position and embeddedness in the service ecosystem and determines the resource access of an actor (Tronvoll, 2017). The actor’s agency is in a dialectical relationship with institutions and structures (Lusch and Vargo, 2014). All actors have agency, but they must act within structures.

Giddens regards structure as a process that is virtual and actual, becoming situated in time and space (Karp, 1986). The structure of networks can be understood technically as matrices of ties connecting nodes (Turner, 2006). Various properties or forms of ties appear in the structure, such as strength or weakness of ties, centrality or distance, density, transitivity, equivalence or imbalance. Brokerage, coalitions, or clusters and bridges can be visualized by creating maps of networks (Scott, 1988).

Edvardsson et al. (2011) state that “value co-creation is shaped by social forces, is reproduced in social structures, and can be asymmetric for the actors involved” (p. 327), and asks for more attention to issues of power in future research. Power issues are important to understand the “hows” of resource integration in service networks (Chowdhury et al., 2016; Jaakkola and Hakanen, 2013). The call for a closer look on power relations is also understandable as Giddens (1987) made clear that all social systems are power systems. Not in structuration theory (Giddens, 1984) but in Central Problems in Social Theory (1979), Giddens develops his theory of structuration further and relates it to contradictions in social formations as well as to power and domination.

In summary, the rules of the game in a service ecosystem are understandable with the concepts of agency and structure. What is not sufficiently explainable is the “self-adjusting” or the forces that shape the service ecosystem and change of the rule of the game. Therefore, an approach to integrate power is suggested. The lens on power relations provide explanations about the transformative capability of an actor to intervene on a given set of events and in some way alter them (Giddens, 1987).

Seven initial propositions to conceptualize power relations in a service-ecosystem
A set of propositions is presented for the conceptualization of power strategies in a service ecosystem. The propositions should be consistent among themselves and relevant to some aspect of the S-D logic research community (S. L. Vargo and Koskela-Huotari, 2020). If an actor engages or not within the service ecosystem is researched in different modes. A distinction is made between the mode single, dyadic and network. Further, power relations are not limited to the capability of actors to enact decisions which they favor. Power is also about mobilization of bias that is built into institutional arrangements and institutions (Edvardsson et al., 2014; Giddens, 1984; Schattschneider, 1975). The propositions are presented analogously to the categories in Table 2, starting at the micro level and gradually expanding to the macro level.

P1. Power relations between actors are co-created

Earlier sociological concepts of power (Blau, 1964; French and Raven, 1957; Homans, 1961) identify different types of power in a dyad, like (1) reward power, (2) coercive power, (3) legitimate power, (4) referent power, or (5) expert power. All these types of power have a power-over understanding of one actor with respect to another actor in common. Power-over means that “power is a resource to get things done through other people, to achieve certain goals that may be shared or contested” (Fleming and Spicer, 2014 p. 238).

A differentiation between having the power or becoming powerful is recommendable. Having the power implies power is something an actor can acquire and own, like a resource
itself. Whereas becoming powerful is a perception that is relational, and the degree of power is co-created between actors. Homans (1961) argues that status, as an indirect reflection of power, is determined by how people perceive others’ position in social exchange (e.g. in category “imbalance” different statuses among actors (Chipp et al., 2019) or attraction (Löbler, 2016)). Hickson et al. (1971) found that actors are not powerful by themselves but become so only when they create relational interdependencies through, for example, specialization (Lusch and Vargo, 2014) or unequally distributed resources, capital (Lombardo and Cabiddu, 2017) or properties rights (Haase and Kleinaltenkamp, 2011). Actors co-create relational interdependencies. Actors implicitly or explicitly negotiate the power relation by making value propositions, dealing and interacting with each other. An actor becomes powerful as other actor(s) believe to be giving esteem, obedience, assistance, monetary tribute or the like (Dahl, 1957; Homans, 1961). The engagement, interaction and value-co-creation process only starts if both actors agree somehow on the power settings and engage with each other.

By agreeing with the settings, both actors justify the power relation and persist in it. By not agreeing on the settings, at least one actor must resist. Following this logic, the power relation between the actors in the specific setting can be considered as co-created. The proposed understanding of power is not limited to power-over (Fleming and Spicer, 2014; Giddens, 1984; Morriss, 2006), but is broadened to a perspective of power-with, which also includes cooperation and transformation.

P2. Asymmetrical interdependence between actors is a source of power

In the category imbalance of Table 2, ten examples of imbalance between actors are illustrated. Major reasons for imbalance are the unequal distribution of resources (Lombardo and Cabiddu, 2017), information (Hughes et al., 2018), talent (Lusch and Vargo, 2014; Nenonen et al., 2019), capital (Lombardo and Cabiddu, 2017), property right (Kleinaltenkamp, 2018) or social embeddedness of actors within a service ecosystem (Hogg et al., 2021a, b, c; Laud et al., 2015).

The reason why actors exchange and specialize is because they have limited but often advantageous and individual capabilities (Lusch and Vargo, 2014). The capability to leverage resources from their service ecosystems allows actors to avoid having to create the resource by themselves. This implied positive dependence enables actors to save energy, to specialize or to focus on other things which they otherwise would not be able to do (Iansiti and Levien, 2004). Simultaneously, specialization leads to the interdependency of roles and the lack of self-sufficiency (Durkheim and Lukes, 2013; Wallace and Wolf, 1986). Merely having resources does not necessarily give an actor power over another actor. To get power, there must be some imbalance in the way that one actor (receiving actor) needs something another actor (giving actor) has to offer, but the receiving actor has nothing the giving actor needs to reciprocate. Consequently, power between actors emerges in case of the interdependence between actors becomes asymmetrical (Blau, 1964; Durkheim and Lukes, 2013). Actors may have the potential to act and change a particular institutional arrangements of domination, as "... all forms of dependence offer some resources whereby those who are subordinate can influence the activities of their superiors" (Giddens, 1984, p. 16).

P3. Technology shapes the power relations in a service ecosystem

Having in mind proposition 2, it can generally be said that resources are a means through which power is exercised. Since the introduction of S-D logic, the distinction between operand resources and operant resources is a key concept (S. L. Vargo and Lusch, 2004). Foundational premise 4 of S-D logic states that operant resources are the fundamental source of strategic benefit (S. L. Vargo and Lusch, 2016). Operant resources are processional, like knowledge and skills, on a resource level. Actors innovate and apply technologies to design service processes (Vink et al., 2020; Windahl et al., 2020), practices (Mele and Russo-Spena, 2018) or business
models. Technology contributes, especially, to the co-creation of value by enabling the sharing of information and knowledge within and across the service ecosystems (Akaka and Vargo, 2014). Akaka and Vargo define “technology as a collection of practices and processes, as well as symbols . . . , that are drawn upon to serve a human purpose . . .” (2014, p. 367).

Important from a power perspective is the understanding that knowledge is never neutral. Knowledge shapes the power relations between individual actors or group of actors (Fox, 2014).

By using disruptive technologies, actors constitute or shape markets. Methods for disruptive innovation are, for example, (re-) think out of the box (Vink et al., 2020) or the strategic design process (Windahl et al., 2020). Disruptive innovations can either transform existing markets through behavioral changes or create new markets (Nenonen et al., 2019). Non-traditional, peripheral as much as focal actors are able to transform existing markets or create new markets (Baker et al., 2019; Kaartemo and Nyström, 2021).

Duality of technology argues that actors not only innovate technologies to constitute structures, but that technologies also become part of the structures constraining actors (Orlikowski, 1992). As shown in Table 2 (category, “institutions and actor’s institutional work”, subcategory, “technologies”), some authors emphasize the importance of technology to intervene and shape the market (e.g. how service is used (Kaartemo and Nyström, 2021), how resources are accessed (Baker et al., 2019) or how actors collaborate (Kaartemo and Nyström, 2021). A change in institutional arrangements can be triggered through technology by altering institutionalized roles and patterns of interaction (Orlikowski, 1992).

P4. Power-relations are context related and dynamic

Opening the dyad (proposition 1) to more actors within the service ecosystem creates multidirectional and complex relationships that itself constitute contexts for collaboration or competition (Siltaloppi and Vargo, 2017) and increase the complexity of the beneficiary’s decision-making process. The referent beneficiary (A1) at the center reveals that value creation is a multi-resource-integrator phenomenon including a broader and more comprehensive configuration of actors and resources around A1 (S. L. Vargo and Lusch, 2016). A1 seeks for alternatives and competition to A2 by considering awareness, accessibility, adaption and integration capabilities of other actors (Akaka et al., 2012; Caridà et al., 2019; Nenonen et al., 2019). This is important to consider, as resources and actors do not automatically enter the reproduction of social systems nor in the co-creation of value. Context represents the resources and actors that are relevant at a given time and space depending on the actor’s task goal (Bazire and Brézillon, 2005). As context changes over time, actors’ roles, positions and statuses are dynamic (Edvardsson et al., 2011), and power relations between actors become dynamic in nature. The distribution of relevant resources among actors determines their relative positions in the network (Jaakkola and Hakanen, 2013; Lombardo and Cabiddù, 2017). So far, peripheral actors might transform the market with disruptive ideas and practices (Baker et al., 2019).

Further, all strategies employed by an actor call forth dialectically counter strategies on the part of the responding actor(s) (Giddens, 1981). A necessary condition with regards to dynamics is to consider a time lag between the action of one actor and the response of the responding actor (Dahl, 1957). Parsons’ concept of double contingency (Parsons et al., 2013) is helpful to understand the interplay of strategy and counter strategy. S-D logic is seen as a dynamic stakeholders’ framework (Domegan et al., 2019).

P5. Actors are responsible for the stability of the service ecosystem

Giddens (1984) stresses the importance of power that is directly involved in the actions of every actor and with that the responsibility for the action. Actors in their role as incumbents, challengers or governance unit have, through their actions, an impact on service ecosystem’s
stability, transformation or crisis. The different roles are helpful to understand the actor’s motivation to transform the service ecosystem, or not. Incumbents tend to seek to maintain system stability as they benefit from the current arrangements. Challengers may strive for a change or a crisis that might work to their advantage. Governance units such as regulatory agencies, ratings agencies, commercial associations and voluntary groups tend to form in response to pressures by both incumbents and challengers. Power, in the sense of the transformative capability of actors, changes the social and material world. Transformation that even rejects long-standing practices can be produced by a movement that starts small, but with a kind of bandwagon effect (Schmitt-Beck, 2015), and results in massive social changes in markets and politics. Social and collective movements are often born from dissatisfaction with formal institutional forums because certain concerns remain unvoiced (Fleming and Spicer, 2014). Actors coordinate their efforts to improve their resource integration, agree or disagree on practices and ultimately shape their service ecosystem (Taillard et al., 2016). In S-D logic literature (category “actor’s behavior”), actors are responsible for their behavior. Actors decide how aggressively they execute (Laud et al., 2015), misbehave (Paulin and Ferguson, 2010; Reim et al., 2018) innovate (Vink et al., 2020; Windahl et al., 2020), lobby public actor (Kaartemo et al., 2020), modify existing regulation through advocating (Baker et al., 2019) or build coalitions to connect with other like-minded actors (Aksoy et al., 2019; Domegan et al., 2019) to execute power and transform or stabilize the service ecosystem.

P6. The service ecosystem perspective offers extended power relation strategies

The service ecosystem perspective offers further strategies to actor A1 illustrated in Table 3 by seeking alternatives, divide and conquer, forming coalitions or optionally mediating power through third parties (Blau, 1964) or brokerage (Siltaloppi and Vargo, 2017). Divide and conquer (case 2 in Table 3) follows the strategy that in an imbalanced exchange, the actor with fewer resources (A1) divides the relationship with A2 by installing a relationship to a further actor (A4). The aim is to strengthen A1’s power perception by reducing his dependency from A2.

Mediation (case 3 in Table 3) is applied to understand the mechanisms by which a dyadic relationship (A1-A2) affects and/or is affected by a relationship with a third party (M). In that constellation, an actor (M) must make a choice that will affect the behavior of A1 and A2 (Thaler and Sunstein, 2008). The function of M is to mediate a conflict (Blau, 1964) or more generally mediate the relationship between A1 and A2 (Siltaloppi and Vargo, 2017). In S-D logic literature, the lobbying of public actors (Kaartemo et al., 2020) and the modification to existing regulations by advocating (Baker et al., 2019) fall into this category of actor’s behavior.

Building coalitions (case 4 in Table 3) aims to reduce the imbalance in exchange and to resist the dependency from A2 (Blau, 1964). These cooperative ties within a service ecosystem can be an important way for actors to bypass resource dependencies and network weaknesses (Fleming and Spicer, 2014). S-D logic literature considers the building of coalitions by different aims of coalitions, for example, to find, connect, gather information and interact collectively (Aksoy et al., 2019; Domegan et al., 2013), to lobby collectively public actors (Kaartemo et al., 2020), to boycott actor(s) (Naumann et al., 2017; Peeroo et al., 2017), to distribute power and trust within communities (Aksoy et al., 2019) or to design the service process collectively and pluralistically (Vink et al., 2020).

Brokerage (case 5 in Table 3) illustrates that the position within the service ecosystem might be powerful for an individual actor in terms of having the capability to deploy a range of resources. Broker B, a choice architect, takes the position of a focal actor for both A1 and A2. B plays an essential part in shaping the stability and capabilities of A1 and A2 by orchestrating the resources and influencing A1 and A2. B may also increase the network
robustness through load balancing and reallocation of resources between potentially more actors he serves as a broker. The behavior of B can have profound effects on the health of the entire system (Tronvoll, 2017). B can act potentially as a keystone and facilitator or as a controlling gatekeeper and dominator, depending on its strategy (Iansiti and Levien, 2004).

P7. The institutional arrangements of a service ecosystem influence the power perception of its embedded actors.

The category “institutions and institutional work” (Table 2) shed light on disruptive innovation and practices (Baker et al., 2019; Kaartemo and Nyström, 2021), the activities of governmental institutions (Kaartemo et al., 2020) and the influence on them through lobbying or advocating (Baker et al., 2019) as possibilities of institutional mediation of power.

Actors within a service ecosystem can be rendered, disciplined, obedient or normed by institutions. As such, actors transact their managerial business within a framework set by the available legal system (Haase and Kleinaltenkamp, 2011). Existing markets, economically, offer processes of legitimation where common habits, norms, routines, rules and laws guide the relations between and interactions of individual and collective actors (Kaartemo et al., 2020). A bureaucratic culture exists with rewards provided for actors that play the game “correctly” (Lusch and Vargo, 2014). The power system consists of relations of autonomy and dependence between actors or collectivities of actors (Giddens, 1981). A social system of any duration involves an institutional mediation of power. Rules for example are stable forms of control that are sustained by routines and practices.

However, new legislation opens up markets and supports, for example, consumer choice, consumer protection and competition (Kaartemo et al., 2020). Economic shocks encourage
institutional entrepreneurs to undermine previously accepted arrangements (Baker et al., 2019).

Discussion
As Dahl (1957) noted, “the whole study of power is a ‘bottomless swamp’” (p. 201). Conceptualizing power raises the question, where to start and how to end. The aim of the article is to improve the understanding of power by conceptualizing the phenomenon of power in a service ecosystem. From a methodical approach, the article synthesizes research streams of S-D logic literature with sociological literature. The author is aware that the sociological literature covers a long period of time and is influenced by the respective state of thinking at different times. But social theory has come to comprise a varied, often confusing, array of approaches (Giddens and Turner, 1988). Thus, the author’s intention is to use the commonplaces of the used theories and take, if appropriate, advantage of the theoretical development within sociology. Caveats or limitations of this approach of analysis may arise from further use and reflections.

Theoretical implications
Power has received relatively little explicit attention in the S-D logic literature, even though it is prevalent in the general marketing, strategic management and organizational literature. The article offers three theoretical implications. First implication is to address the lack of conceptual development concerning power considerations. The seven propositions draw a multi-level perspective on power within a service ecosystem. Power relations between actors are conceptualized as co-created, dynamic, context-depended phenomena. Asymmetrical interdependencies between actors are identified as a foundational source of power. The innovation and application of technologies play a central role in shaping markets. Further, actors are responsible for the stability of their eco-system. Lastly, the institutions of a service ecosystem influence the power perception of its embedded actors.

Second implication of this article is to advance the understanding of service ecosystems as social systems by shedding light on the “hows” of resource integration in service ecosystems (Chowdhury et al., 2016; Jaakkola and Hakanen, 2013). The propositions improve the understanding of the “self-adjusting” and shaping of a service ecosystem as much as the change of “the rule of the game.” Institutional work of actors aim to, firstly, transform the business by the innovation and application of technologies; secondly, challenge the service ecosystem’s stability by building coalitions to shape the system; and, thirdly, lobby public actors for new regulations, deregulation or standards to modify the legal system.

Third implication is to extend the narrow view on power in S-D logic literature that was strongly linked to conflict between actors to a “transformative” understanding of power. In this sense, conceptualizing power supports S-D logic research on the way to a positive theory of exchange. The implication is offered by using S-D logic as framework to conceptualize power beyond a pre-concepted negative view on power (e.g., power-over), limited on a specific business context (e.g., Hingley et al. (2015) questions why power is considered so often in retailing and food supply relationships), recognizing that power relations are co-created, dynamic and context-dependent, broadened to a perspective of power-with, that also includes co-peration and transformation.

Lastly, as all social systems are power systems, a service ecosystem can only be fully understood by integrating the elementary concept of power. As such, power considerations within actor strategies and the service ecosystem are relevant to improve the understanding of transformation of the service ecosystem itself. Power, in the sense of the transformative capability of actors, changes the social and material world.
Managerial implications
The managerial implication is to improve the manager’s understanding of transformation within the service ecosystems. The article recognizes different levels (micro-meso-macro) of power considerations and helps practitioner and marketers to create power through (1) imbalance, find strategies and counterstrategies for (2) actor’s behavior, understand the (3) actor’s embeddedness within a service ecosystem and its dynamic nature, learn about (4) institutions and actor’s institutional work. The power strategies elaborated in proposition 6 and shown in Table 3 help the managers to find an appropriate choice of action in their specific context to transform the service ecosystem(s) they are embedded in.

Limitations and future research
Five topics are presented as limitations and outlook for future research of this article. Firstly, other sociological theories with regards to power considerations, and other disciplines in science (e.g., research areas political science, psychology and organization theorists), are examining power issues, too. The article focuses very much on Giddens (1984), because his work is already integrated well in S-D logic. Future research with other theoretical streams may help to challenge the presented propositions. Secondly, the article investigates effects on different levels within the service ecosystem. Schools of thoughts within sociology consider the efforts of bridging the gap between individual interaction and emergent structures as premature (Giddens and Turner, 1988). Both levels – micro and macro – are equally “real,” but for each requires its own concepts, propositions and models. Future research is recommended to enhance the bridging of the micro and macro levels, for example, the question of how power can be linked to the field of emergence in a service ecosystem (Edvardsson et al., 2014). Further, the research on the dynamics of actor’s strategies and counterstrategies, and of innovation and imitation, appears promising. Especially, the consideration of time lag between the action of one actor and the response of the responding actor (Dahl, 1957) or Parsons et al’s (2013) concept of double contingency is a promising field to understand the interplay of strategy and counter strategy. Fifthly, additional research to the existing literature about building coalitions, considering different types of coalitions (e.g. in the firm’s context opportunistic or strategic coalitions) and the power relations within the coalition is suggested. Next to building coalitions, the actor’s behavior option of mediation or brokerage, as much as the possibilities of institutional mediation, appears underdeveloped in S-D logic literature. Lastly, with regards to propositions 7, the influence of institutional arrangements on the power perception of its embedded actors and potential counter strategies appears interesting for future research.

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