The aim of this paper is to unveil the dynamics of multi-actor engagement in triadic constellation as part of a service ecosystem from a social practices standpoint. We conducted qualitative in-depth interviews with 22 experts of various kinds in the German Bundesliga. In this context, market-facing (e.g., firms), public (e.g., clubs) and private resource (e.g., spectators) integrators come together to create value collaboratively and form a team sports ecosystem. The study reveals four different engagement practices that actors in a team sports ecosystem employ to co-create value in triadic constellations. Our results show that actors engage in implementing, informing & discussing, performing and signaling to integrate their resources. We find that actors may have different roles in triads, and that mutual resource integration among actors can be designed as triadic interactions through simultaneous, sequential, and actor-led triadic value co-creation. Our study contributes to the theory of actor engagement in dynamic multi-actor constellations.

1. Introduction

Actor engagement is not only characterized by the fact it describes a highly interactive process of resource integration, but also includes the notion that actors from very different domains such as customers, firms, public actors come together and interact with each other (Storbacka et al. 2016). Networks with multiple actors are hard to manage for a focal actor as the dynamics of interactions may evolve and change over time (Li et al. 2017). The context of team sports can also be characterized as an environment where various actors engage and exchange resources in a highly dynamic manner (Woratschek et al. 2014). The authors argue that, in sport, various actors such as event organizers, customers, volunteers, federations, public bodies, form networks and co-create value. As such, value co-creation can also be studied from a service ecosystem perspective in the field of team sports (Tsiosou 2016). There are complex structures of relationships, practices and institutions that frame exchange among actors in this context.

The service ecosystem perspective of S-D logic further expands the notion of a dynamic and interactive value co-creation among various actors (Vargo and Lusch 2011; Lusch et al. 2016). This approach builds on the foundational premises of S-D logic (Vargo and Lusch 2004, 2008), but incorporates a sociological perspective (Giddens 1984) to study relationships and interactions among various actors. This perspective emphasizes the embeddedness of micro-structures (e.g., dyads) within more complex meso- and macro structures (Beirão et al. 2017; Chandler and Wieland 2010). Vargo and Lusch (2016) describe this development of S-D logic towards more interconnections between market actors as “zooming out” (p. 5). Team sports are characterized by a multitude of social groups of actors that are embedded in larger systems, which leads to increased complexity.

Value in the field of sport cannot be created by a single actor (e.g., an event organizer), being created by various actors who integrate different resources. Event organizers only make value propositions; customers play a decisive role in this framework as they are core resource integrators in many sport settings (e.g., creating stadium atmosphere). This shifts the focus away from the firm’s output towards many different actors. No one actor has all the resources so that value-creation through networks
is important to overcoming the problem of incomplete resources (Akaka et al. 2012). This actor-to-actor orientation automatically leads to a more dynamic and network-oriented view of value creation, because various actors rely upon the resource integration of other actors (Vargo and Lusch 2011). We believe that S-D logic’s ecosystem view can be beneficial for researchers, as well as for managers in and beyond sport management, as a meta-theory that guides us towards a more holistic, interactive, dynamic, inter-connected, multi-faced and reciprocal understanding of value creation.

However, these theoretical advances of S-D logic towards a more-encompassing theory of marketing (Vargo and Lusch 2016) lead to a very complex set of actors and practices. The result is a complexity of service ecosystems that is difficult to handle for both managers and for researchers. One explanation of these challenges is S-D logic’s inherent philosophy that value creation is not limited to a single service encounter, but continues over multiple ones (Vargo and Lusch 2016). The scope of value co-creation is thus open-ended (Ballantyne and Varey 2006). As this claim is theoretically important for our understanding of value creation, it is also a major challenge in research and managerial practice. Closely linked to the idea of infinite value creation is the fact that ecosystems themselves are also infinite to a certain extent (Akaka, Vargo et al. 2013). Each individual actor in a network (e.g., a football spectator) serves different social roles and thus is connected to many different social networks (e.g., fan club, family, workplace, local sports club) where resources of the individual can be integrated. As Akaka et al. (2012) sum up: “Like a service ecosystem, the process of value co-creation has no definite beginning or end.” (p. 44).

This leads to the question of the boundaries of a particular context, as value is always context-dependent. The context of value co-creation is an integral part of value co-creation (Vargo and Lusch 2008) and especially time and space have been found to constitute key determinants of any context (Hellkula et al. 2012; Jaakkola et al. 2015). Service ecosystems are not limited to any temporal or spatial boundaries (Lusch et al. 2010; Vargo and Lusch 2011). However, transactions are bounded, and represent temporary resource exchanges (Vargo and Lusch 2011), so there is a need to investigate single relationships and practices of value co-creation. In this paper, we propose a triadic view on value co-creation that bridges the micro-level and the meso-level of team sports ecosystems. Thus, we propose a middle course between the complexity of ecosystems and the simplicity of dyadic relationships. Triads go beyond the mere dyadic interaction between actors, as it is the simplest form of social network (Simmel and Wolff 1950). The basic unit of such a network is a triad, which builds a link between three actors (Choi and Wu 2009a; 2009b). Triads provide insights at the micro level that can be generalized to the larger ecosystem (Chandler and Vargo 2011). In the team sports ecosystem, triadic constellations of actors are ubiquitous. For example, a sponsor, the sponsored entity (e.g., an athlete) and the sponsor’s target audience form a triad (Dalakas and Levin 2005). As value co-creation does not follow a linear value chain, but is structured as a branched network of connections between actors (Stabell and Fjeldstad 1998), the triad may be the basic unit of value co-creation analysis. Thus, the triad is the connecting link between the micro-level of analysis, which refers to value creation between different individuals or organizations, and the meso-level of analysis, which has a broader perspective on the network of relationships. We believe that this might help both empirical researchers and managers to reduce complexity without losing much of the benefits of S-D logic’s ecosystem perspective.

Taking this together, our research goal is to investigate actor engagement practices in an interactive multi-actor environment. We want to further analyze value co-creation in triadic actor constellations through an S-D logic ecosystems lens in order to better understand the dynamic realities and underlying mechanisms of micro-level interactions (Akaka et al. 2012).

The paper is structured as follows. In the theoretical background, we outline how value is co-created in team sports ecosystems. We think that the team sports ecosystem of the German Bundesliga is well-suited to investigate how multiple actors engage in co-creation practices. We continue with a short review on actor engagement and its link to social practices theory. In the third part of the theoretical background, we introduce the concept of triads as triads are well-suited to analyze service ecosystems. We proceed with the background, the procedure and the results of our exploratory study before concluding with theoretical and practical implications along with some limitations and suggestions for future research.

2. Theoretical background

2.1. Value and value co-creation in team sports ecosystems

Recent publications acknowledge the benefits of studying sports from a perspective that affirm the highly interactive nature of value co-creation and the importance of a more interaction process of resource integration (Stie ler et al. 2014; Tsiotou 2016; Uhrich 2014; Woratschek et al. 2014). According to this notion, sport cannot be ‘produced’ in linear manner and simply ‘offered’ to customers. Value cannot be created inside the boundaries of a single firm; rather, the customer plays a crucial role in the co-creation of value. In the context of team sports, multiple actors co-create value as stated in FP10 of the sport value framework (Woratschek et al. 2014). Following the S-D logic and the sport value framework, value is created within a network of actors.

A shift from a relatively static value chain to a more dynamic value network seems appropriate for analyzing value co-creation with many actors (Cova and Salle
In networked structures, value is created through a complex process of interaction between firms, customers and other stakeholders (Allee 2000; Stabell and Fjeldstad 1998). Given that no roles are specified in the co-creation process, the S-D logic literature has established the term ‘actor’ for those entities that integrate their resources. Value co-creation is not limited to the boundaries of the firm. Instead, ‘value-in-exchange’ takes place beyond the boundaries of a single firm (Vargo and Lusch 2011). The value of relationships and interactions among actors has been referred to variously by researchers in the field of marketing (Frow and Payne 2011): value network (Akaka and Chandler 2011; Allee 2000; Lusch et al. 2010; Stabell and Fjeldstad 1998), value net (Parolini 1999), value constellations (Normann and Ramírez 1993), service ecosystems (Frow et al. 2014; Vargo 2009; Vargo and Lusch 2016; Wieland et al. 2012). What all conceptualizations have in common is that they move away from a linear value chain to a more complex system of multiple actors who create value collaboratively.

Moreover, signs, symbols and social roles have been found to be essential in value co-creation (Akaka and Chandler 2011; Arnould et al. 2006; Löbler and Lusch 2014). For instance, fans draw on these resources when they wear team merchandise, play a social role as a supporter of a team, or use context-specific sports language. Beyond that, the service ecosystem stresses the socio-historic aspect of contexts in order to better understand how social and cultural structures develop (Akaka, Vargo et al. 2013). Referring to the above example, the history of a club and its associated wins and losses, championship victories, and suspenseful matches with rival teams may be valuable resources for fans. Imagined value and relived experiences come into play. Thus, actors in a team sports ecosystem rely on the resources of other actors on various levels. Clubs and teams need opponents to create a competition or a league system. Team sports are characterized by so-called co-competition, which means that teams and clubs collaborate although, they are opponents on the pitch (Woratschek et al. 2014). This becomes clear when it comes to competitive balance (Horowitz 1997; Zimbalist 2002) or internationalization of leagues (Ratten and Ratten 2011).

In this paper, we adopt this broad conceptualization of value with all its facets. This also takes into account that value creation through the lens of S-D logic has “no definite beginning or end” (Akaka et al. 2012, p. 44). Service encounters are preceded by other encounters, and more will follow in the future, which raises the issue of the timely boundaries of value co-creation (Heinonen et al. 2010; Jaakkola et al. 2015). Fans have been visiting a stadium for 20 years surely integrate resources in a different manner to first-time visitors, because they have experienced a variety of matches, know the social rules of the team settings (e.g., specific shouts or activities) and are more attached to the club. Adding to this notion, a 90-minute football match is associated with many other services and occasions. From a temporal perspective, it seems obvious that away fans, for example, often have a long journey before and after the match. As a social activity, however, their travel creates value for them and reinforces bonding with the club.

When we think about the spatial dimension of value co-creation, the sport ecosystem may be regarded as a globally unbounded entity at the macro-level (Chandler and Vargo 2011; Tsiotosou 2016). Each actor is loosely coupled with any other actor through more or less distant links (Vargo and Lusch 2010). That is, a fan in the US who is blogging on Premier League’s match day and is temporarily and spatially separated still integrates his own resources and creates value in the network of his favorite club. Note, again, that the context of value co-creation is not limited to time and space as key dimensions, but is extended by relational, socio-historic, institutional, and imagined aspects of context (Akaka and Vargo 2015; Akaka et al. 2015).
2.2. Actor engagement and practices in team sports ecosystems

A broader conceptualization and expansion of customer engagement (Brodie et al. 2011) led to the development of actor engagement (Chandler and Lusch 2015). This direction does not only focus on the customer, but the fact that multiple actors integrate their resources in an engagement ecosystem (Breidbach et al. 2014; Chandler and Lusch 2015). An important notion is that these actors might engage as suppliers or customers (Brodie et al. 2016). For example, a customer in the team sports ecosystem buys a ticket for a match, but also engages in certain behaviors at the match day that clearly contribute to the overall experience value, e.g., singing and chanting with other customers. This further illustrates the reciprocal and social nature of engagement (Brodie et al. 2016; Jaakkola and Alexander 2014; Verleye et al. 2014).

In the investigation of relationships and interactions through the lens of service ecosystems, social practices play a major role (Akaka et al. 2013). Practices are recurring behaviors which are employed by individuals to shape their environment: “A practice is thus a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood” (Reckwitz 2002, p. 249). Practices comprise bodily and mental activities as well as certain objects that are needed to carry out these practices (Reckwitz 2002).

Recent developments of S-D logic step towards social constructivism and incorporate reoccurring practices as important means of value co-creation (Vargo and Lusch 2016). In this respect, they borrow from the seminal works on social practices theory (Bourdieu 1977; Giddens 1984) to argue that practices theory is an important theoretical lens through which the discipline of marketing might switch its perspective from outcome to process orientation (Vargo and Lusch 2016). For example, practices play a major role in the formation of markets, as certain activities reoccur and thus shape the market environment (Kjellberg and Helgesson 2007). In a service ecosystem, individuals construct, shape and transform their social environment through practices in a given framework constituting various institutions (Akaka, Vargo et al. 2013). In team sports ecosystems, actors with very different kinds of operand resources come together and integrate their resources through practices. Actors who come from different domains (private, public and market-facing) all are needed to co-create value. No actor alone has all the resources to create value and actors’ resource integration is reciprocal (Vargo and Lusch 2010). Fans, for example, employ their own set of practices to create value together (Uhrich 2014). Firms, such as stadium operator or sponsors surely integrate other resources.

Value co-creation is influenced by institutions and resource-integrating practices (Akaka et al. 2012). Institutions in this context can be seen as rules, norms, laws and contracts that are created and negotiated between various actors in the service ecosystem. Resource integration itself is regarded as the key practice in which actors engage to co-create value (Vargo and Akaka 2012). Through practices and evaluations in a specific context, resources are transformed into value (Kleinaltenkamp et al. 2012). In this respect, Vargo and Lusch (2016) propose that practice theory is related to S-D logic, because it shifts the focus from an output orientation to processes and social activity. What practice-theory approaches have in common is that they try to reveal how individuals and a social structure interfere with each other (Warde 2005). Thus, practices help to demonstrate how value is formed under the assumption of a complex service ecosystem environment (Vargo and Lusch 2016).

From consumer research we know that literature based on social practice theory can deliver helpful insights about how consumers interact with their environment (Warde 2005). These studies reveal, for example, how consumers consume (Holt 1995) or how brand communities create value (Schau et al. 2009). In the recent past, research on social practices in market environments has contributed to our understanding of value co-creation (and co-destruction) in different contexts (Tab. 1).

2.3. Triads as fundamental components of team sports ecosystems

Service ecosystems consist of multiple layers of networks (Chandler and Vargo 2011). From a sociological perspective of network structures, the dyad is the simplest way to constitute a relationship between actors. The focal actor (‘ego’) is connected to another actor (‘alter’) through a direct link (Prell 2012). At the next level of relationship formation, the connecting link between a dyad and the other actors is the triadic analysis. Such triads are the simplest form of social group (Moody and White 2003). Moving from a dyadic to a triadic perspective takes into account indirect ties between three actors (Simmel and Wolff 1950). The role of triadic constellations among individuals in the group formation process was outlined by Simmel and Wolff (1950), who argued that “the triad as such seems to me to result in three kinds of typical group formations. All of them are impossible if there are only two elements.” (p. 145). Heider (1946) also reported a triadic view of interconnected entities (Person X – Another person O – Object Z) in an intrapersonal context of cognitive balance. This view was later adapted and extended into a more general conceptualization of interpersonal connections (Cartwright and Harary 1956; Newcomb 1953). Social network analysis is an instrument for identifying the actors within a network and their relational bonds, in order to design the entire system (Wasserman and Faust 1994). Possibly the most straightforward way to analyze the relationship between three actors is graph theory, which builds on nodes and ties (Holland and Leinhardt 1970). These linkages among actors are often graphically illustrated in a complex web of lines and nodes to show how the network is constructed (Love and Andrew 2012; MacLean et al. 2011; Quatman...
and Chelladurai 2008). Simmel and Wolff (1950) argue that the change from a dyad to a triad not only means a quantitative change, but also influences how the actors interact with each other qualitatively.

These combinations of three actors are also deemed relevant in the business environment (Choi and Wu 2009a; 2009b) and extend the classical dyadic relationship between firm and customer to a more holistic approach to value co-creation (Akaka, Vargo et al. 2013). Triads allow for generalization from a micro level to the entire network (Choi and Wu 2009a). The analysis of triadic constellations of actors has been applied in several studies outside the context of team sports (Nätti et al. 2014; Vedel et al. 2012; Wuyts et al. 2004) such as service triads (Modi et al. 2015; Wynstra et al. 2015; Zhang et al. 2015). The prototypical service triad consists of a buyer, a supplier, and the customer, so that each actor has a direct or indirect connection with any other actor (Wynstra et al. 2015). This constellation requires other management strategies than dyadic firm-customer interaction, because the firm regularly communicates through a third-party service provider with the customer (e.g., call-center or maintenance services) (Wynstra et al. 2015). Other triads involve firms only, such as the buyer-supplier triad in a firm’s supply chain (Choi and Wu 2009b; Wu et al. 2010). In this triad, the competition aspect we know from team sports also plays a central role between two supplying firms and negatively influences suppliers’ performance (Wu et al. 2010). Triadic analysis has been found to deliver additional insights that go beyond the dyadic level, especially in the business-to-business context (Choi and Wu 2009a; 2009b; Vedel et al. 2012). Research on triads in the business environment has focused on various aspects, such as structural balance among actors (Choi and Wu 2009b), the principal-agent problem (Zhang et al. 2015), different types of triads (Zhang et al. 2015), processes in triads (Salo et al. 2009), and also value co-creation (Nätti et al. 2014) (see Wynstra et al. 2015 for an extensive review of research on triads in the operations management and supply chain management literature). Nätti et al. (2014) identify specific practices that facilitate value co-creation in a triad consisting of a property housing firm, a property manager and a customer.

Regarding interaction between actors as prerequisites for value co-creation in triads, there are two conceivable options. The first is that value co-creation requires direct interaction between actors, which excludes indirect interaction through mere presence, for example (Grönroos and Voima 2013). The second view is inspired by the communication theory that claims “one cannot not communicate” (Watzlawick et al. 1967, p. 5). Transferred to the field of value co-creation, indirect interaction can also result in co-creation. In this paper, we adopt the latter view. Two actors who do not have a direct link between each other can be connected via a third actor (a mediator) and create value together. For example, two firms sponsor the same club, but they use the same type of commu-

<table>
<thead>
<tr>
<th>Source</th>
<th>Research context</th>
<th>Focus and contribution</th>
<th>Practices and practice styles</th>
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</thead>
<tbody>
<tr>
<td>Carù and Cova 2015</td>
<td>Collective</td>
<td>Co-creation of collective service experiences</td>
<td>Community driven: performing, judging</td>
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<tr>
<td>Echeverri and Skålén 2011</td>
<td>Public transport</td>
<td>Introduction of two dimensions of interactive value creation practices: value co-creation and value co-destruction</td>
<td>Joint: value sharing, informing, exulting</td>
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<tr>
<td>Hollebeck et al. 2017</td>
<td>Virtual brand</td>
<td>Typology and process model of virtual brand community engagement practices based on Schau et al. (2009)</td>
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<tr>
<td>McColl-Kennedy et al. 2012</td>
<td>Health care</td>
<td>Customer value co-creation practice style typology</td>
<td>Informing, greeting, delivering, charging, helping</td>
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<tr>
<td>McColl-Kennedy et al. 2015</td>
<td>Residential care</td>
<td>Conceptualization of service experience based on social practices</td>
<td>Greating, regulating, assisting, celebrating, appreciating, empathizing, mingling, ranking</td>
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<td>Schau et al. 2009</td>
<td>Brand communities</td>
<td>Collective value creation in brand communities</td>
<td>Practice styles: team management, insular controlling, partnering, pragmatic adapting, passive compliance</td>
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<td>Skålén et al. 2015</td>
<td>Firm-branded</td>
<td>Alignment of value co-creation practices</td>
<td>Representational practices: assimilating, producing, personalizing</td>
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<td>Ulbrich 2014</td>
<td>Team sports</td>
<td>Value co-creation practices among customers in the team sports sector</td>
<td>Normalizing practices: bonding, bridging, linking</td>
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<td>Exchange practices: accounting, evaluating, appreciating, classifying</td>
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<td>Community engagement: documenting, badging, milestoneing, sticking</td>
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<td>Brand use: customizing, grooming, commoditizing</td>
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<td>Social networking: welcoming, emphasizing, governing</td>
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<td>Impression management: evangelizing, justifying</td>
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<td>Interacting practices: questioning and answering, dialoguing, translating</td>
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<td>Identity practices: praising, branding, mirroring</td>
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<td>Organizing practices: managing, governing</td>
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<td>Associating-dissociating, engaging and sharing, competing, intensifying, exchanging</td>
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Tab. 1: Overview of selected empirical studies that investigated value co-creation through the lens of practice theory.
nication with the audience (e.g., banner advertising inside the stadium). Although they do not interact directly with each other, the club has to coordinate the promotional and leveraging activities of the two firms. Taking this further, as they act on the same platform, they have to share the attention of the audience.

Triadic analysis among individual actors seems to be more appropriate in a service ecosystem with regard to their role in the value co-creation process. First, the service ecosystems perspective within S-D logic stresses the importance of viewing value creation as an interactive process between multiple actors (Vargo et al. 2015). In team sports ecosystems, there are multiple actors or groups of actors from various backgrounds that integrate diverse resources. Thus, triads in team sports ecosystems can assume multifaceted shapes and relationships. It should be noted that, from an S-D logic point of view, this relationship is reciprocal rather than unidirectional, which means that firm and customer create value jointly (Vargo and Lusch 2004). Value in that sense does not result from a transaction from one actor to another, but from the relationship between at least two actors (Normann 2001). Second, the firm-customer relationship is not isolated from other actors in the ecosystem, but actors are tied together through both closer and more distant links (Vargo and Lusch 2010). In team sports ecosystems, a limited firm-customer perspective would be inappropriate, because any relationship among actors is embedded in a larger network and actors rely on the resources of others. Thus, the dyadic perspective is limited in that it neglects the embeddedness of interactions at the meso- and macro-levels (Chandler and Vargo 2011). Moreover, networks fluid constructs where actors engage can be described as an iterative process (Li et al. 2017). Triads can be viewed as the basic form of such a network, as they build a tie between a dyad and the third actors, which represents the larger collective (Choi and Wu 2009a).

In this paper, we argue that the triadic level is a promising way to incorporate the ideas form the service ecosystem view of S-D logic, so as to analyze value co-creation in team sports ecosystems.

3. Methodology

3.1. Research context

We chose a football match day in the German Bundesliga as a research context, because many market-facing, private and public actors come together at such an event to integrate their mutual resources. Furthermore, the German Bundesliga is also an economically attractive sports platform with revenues growing up to 3.3 billion EUR in the 2016/17 season (DFL, 2018). The league itself is not a dyadic firm-customer interaction, but multiple actors integrate their resources to co-create value. The setting fitted the criteria of a service ecosystem for various reasons. Value co-creation does not take place within the boundaries of a single firm (Prahalad and Ramaswamy 2004) and this is especially true for match day occasions which involve customers, namely fans, as well as firms, players, coaches, sponsors, journalists, media, associations among others. Spectator sports are generally viewed as collective hedonic services (Ng et al. 2007), which enables spectators of a sport event to interact in various ways and create value jointly.

Our research focused on a single match day, as it is a typical service encounter where reoccurring interactions take place and where these actors integrate their resources. We focused specifically on how co-creation takes place in triadic relationships between actors who integrate their resources during a day football match. By doing so, we looked into the relational practices to identify their value-creative nature. In this study, we want to explore which social practices various actors in the professional football team sports ecosystem in Germany employ, in order to create value through interaction. We then link these practices to the idea of triads as essential building blocks of team sports ecosystems.

3.2. In-depth interviews

In this paper, we use qualitative semi-structured interviews to address our research goal. Although semi-structured interviews seem to be a standard method that is very frequently used, we believe that they enable us to find out more about the structure of the service ecosystem and to gain deeper insights into how different actors interact. Firstly, the open-ended interviews enable us to talk about prepared topics without losing the flexibility of this approach to incorporate and discuss issues the respondents come up with. Secondly, respondents talk about their personal view and experiences which conform to the S-D logic notion that value is highly individual and can only be determined by the beneficiary (Vargo and Lusch 2004, 2008). Thus, we intentionally accept that answers are individually colored and that respondents talk about issues they find personally relevant. Thirdly, in our context, interviews with experts (Trinczek 2009) enable us to explore settings and issues that we could not access through participatory observation (e.g., security meetings of the police that are highly sensitive).

The interviewing procedure followed the guidelines proposed by McCracken (1988). We conducted 22 qualitative semi-structured interviews with various actors in the ecosystem, and the average interview duration was 51 minutes. The actors and their affiliations are listed in Tab. 2. We selected individuals from different job domains who integrate their resources differently. The assumption behind this selection was that these individuals serve as social hubs and have many interaction points with other actors. As fans and spectators play a crucial role in value co-creation in team sports (Uhrich 2014; Woratschek et al. 2014), our sample comprises individuals from this domain, such as two fan-relationship managers of a club or an executive board member of a fan club. In addition, we interview three different types of
fans (ultra-fans, supporters, and normal fans). In our study, supporters differ from fans, as these spectators are organized in fan club, whereas normal fans are just followers of the game. The fan groups are characterized by different levels of identification with the team, as well as by their supporting engagement. Note that our study intentionally incorporates experts from firms and organizations, as well as customers, so as to investigate broad interactional practices in team sports ecosystems that are not limited to a certain group of actors (e.g., fans). The respondents were contacted via email or at the stadium directly (fans).

The procedure followed an interview guide with a broad initial stimulus question to ‘break the ice’, as these individuals are generally not used to answering interview questions. This was done to start the interview with something familiar for the respondents to talk about to create a pleasant interview situation (Trinczek 2009). The initial stimulus question was: ‘Please tell me about how a normal match day looks like for you?’ The respondents did not talk explicitly with the interview partners about triads, but more generally about their relationships with other actors in the ecosystem, to avoid biased answers.

3.3. Data analysis

The data was transcribed and coded by two researchers with MAXQDA®. The general procedure of the data analysis followed the fundamental steps of categorization, abstraction, comparison, and integration, as proposed by Spiggle (1994) and McCracken (1988). The researchers coded and categorized interactional practices in the first step. At this stage, researchers coded independently and focused on practices that involved more than one actor indirectly or directly. Secondly, researchers formed higher-order practices with a specific focus on those that involve three actors. This was a necessary step, in order to find overarching practices that are not tied to specific situations or actors. The practices were discussed until agreement on practices and triadic pattern was achieved. The overall aim of the procedure was to find general practices and how they create value in triadic actor constellations. Integration (“mapping of relationships between conceptual elements” (Spiggle 1994, p. 495) was an important step in the data analysis, in order to reveal the triadic constellations and associated practices within the team sports ecosystem.

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<tr>
<th>Expert</th>
<th>Actor</th>
<th>Organization</th>
<th>Position/Responsibility</th>
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<tbody>
<tr>
<td>E1</td>
<td>German Football Association Representative</td>
<td>German Football Association</td>
<td>German Football Association Cup</td>
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<tr>
<td>E2</td>
<td>German Football League Representative</td>
<td>German Football League</td>
<td>Consultant</td>
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<tr>
<td>E3</td>
<td>Club-Management Representative</td>
<td>Bundesliga Club (1st German Professional Football League)</td>
<td>Sales Manager</td>
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<tr>
<td>E4</td>
<td>Agency Representative</td>
<td>Sports-Rights Agency</td>
<td>Marketing Consultant</td>
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<tr>
<td>E5</td>
<td>Journalist</td>
<td>Regional Newspaper</td>
<td>Sports-Journalist</td>
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<tr>
<td>E6</td>
<td>Sponsor</td>
<td>Sponsor of a Club of the Bundesliga (1st German Professional Football League)</td>
<td>Employee Marketing</td>
</tr>
<tr>
<td>E7</td>
<td>Player</td>
<td>Bundesliga Club (1st German Professional Football League)</td>
<td>Player</td>
</tr>
<tr>
<td>E8</td>
<td>Catering Representative</td>
<td>Catering Partners at Several League Clubs</td>
<td>Food &amp; Beverage Operations Manager</td>
</tr>
<tr>
<td>E9</td>
<td>Moderator</td>
<td>Sports Television Channel</td>
<td>Moderator</td>
</tr>
<tr>
<td>E10</td>
<td>Stadium Operator</td>
<td>Stadium Operator</td>
<td>Management of Stadium Boxes, Special Events, Customer Relationship</td>
</tr>
<tr>
<td>E11</td>
<td>Policeman</td>
<td>Preservation of Evidence &amp; Arrest Unit</td>
<td>District Officer</td>
</tr>
<tr>
<td>E12</td>
<td>Policeman</td>
<td>Fan Subculture Expert Team</td>
<td>Member</td>
</tr>
<tr>
<td>E13</td>
<td>Security personnel</td>
<td>Security service firm</td>
<td>Employee</td>
</tr>
<tr>
<td>E14</td>
<td>Representative of a Fan Club</td>
<td>Fan Club</td>
<td>Executive Board Member</td>
</tr>
<tr>
<td>E15</td>
<td>Fan Relationship Manager</td>
<td>Bundesliga Club (1st German Professional Football League)</td>
<td>Fan Relationship Manager</td>
</tr>
<tr>
<td>E16</td>
<td>Fan Relationship Manager</td>
<td>Bundesliga Club (2nd German Professional Football League)</td>
<td>Fan Relationship Manager</td>
</tr>
<tr>
<td>E17</td>
<td>Ultra-fan</td>
<td>Ultra-fan club</td>
<td>Capo (=leader of an ultra-fan club)</td>
</tr>
<tr>
<td>E18</td>
<td>Ultra-fan</td>
<td>Ultra-fan club</td>
<td>Member</td>
</tr>
<tr>
<td>E19</td>
<td>Supporter</td>
<td>Fan Club</td>
<td>Member</td>
</tr>
<tr>
<td>E20</td>
<td>Supporter</td>
<td>Fan Club</td>
<td>Member</td>
</tr>
<tr>
<td>E21</td>
<td>Normal Fan</td>
<td>no affiliation</td>
<td>-</td>
</tr>
<tr>
<td>E22</td>
<td>Normal Fan</td>
<td>no affiliation</td>
<td>-</td>
</tr>
</tbody>
</table>

Tab. 2: Background criteria of respondents.
4. Findings

The qualitative data revealed four general and overarching actor engagement practices in team sports. Firstly, our results show that actors engage in implementing, informing & discussing, performing and signaling in triadic constellation. Secondly, we found that the practices described have different effects from the triadic perspective. We found simultaneous, sequential, and actor-led co-creation to be present in team sports ecosystems. The data reveals both that actors or groups of actors have different roles in triadic constellations and how they interact with others. Sometimes, an actor alone initiates value co-creation through resource integration (actor-led triadic value co-creation). This actor engages in a certain practice (e.g., performing) and influences other actors to integrate their resources actively or passively. Other forms of resource exchange can only occur when three actors integrate their resources together (simultaneous triadic value co-creation).

4.1. Engagement practices in the team sports ecosystem

Implementing is a practice that includes a variety of activities that are carried out on the match day. This practice involves a variety of different actions that have been planned before the actual event, and is employed by many actors in the team sports ecosystem. Implementing stresses the fact that the match day is a platform in team sports where actors actively want to integrate their resources to stimulate exchange. Some actors also integrate their resources through implementing outside the temporal frame of the match day (e.g., a sponsor’s photo on the club). We found that implementing can take shape in various forms, and various actors engage in this practice:

• Implementation of sponsor’s leveraging activities. E6: “Well this was, yes, it was awesome, because of the idea that we came up with and planned ourselves, and everything worked out as we expected. And that the fans liked it and also acknowledged a little that it was an awesome idea. One gets a bit more known through all this.”

• Implementation of choreographies from fans. E15: “There are many examples, well I’ll put it this way, the fans are responsible for creating choreographies for example. Then some clever company had the idea that we should try choreography in the business area one day. Well, no... I just say no, they shouldn’t, let the fans do the choreographies, it is not an advertising medium, it won’t work, it’s just counterproductive.”

• Implementation of special events at the VIP boxes. E10: “And there are match days when we have to engage more strongly in coordination, because our catering firm plans a special event, a unique catering experience for the clients [...]”

Informing & discussing involves the transfer of information between two or more actors. We add ‘discussing’ to the practice of informing, to stress the reciprocal interaction between the actors. In the case of a match day, informing & discussing involves a majority of actors in place, including the stadium operator, catering team, sponsors, players and others. Informing & discussing is not only relevant on the match day, but also before and after the service encounter (match day) when actors align their activities or when they build up routinized ways of exchange. Note that informing is an engagement practice that has also been proven relevant in other settings (Caru and Cova 2015; Echeverri and Skålén 2011). The following encounters involve informing & discussing in the team sports ecosystem:

• Security staff and police meetings before the games. E13: “Depending on the risk category of the respective match, members of the security staff coordinate their activities.”

• New guidelines or rules implemented by the football federation. E1: “I have to be prepared for all the questions that could be asked. I have to find a good way to communicate with all those involved, with clubs, TV companies, broadcasting companies, and marketers. That way, I make everyone feel that their concerns are taken seriously.”

• Information flow from the stadium operator to the sponsors (e.g., about the schedule of an activation activity). E10: “It’s good to know what they plan at an early stage, so that we can align our own activities. This involves promotion, giveaways, and display material, so our facility managers can do their staff planning properly. These issues are really important.”

Many actors inside and outside the stadium engage in performing. As a practice, performing has been identified as fundamental in collective service settings (Caru and Cova 2015). They describe it as “presenting an artistic work or other entertainment” (p. 286). However, in our context, presenting is not limited to customer performances. Probably, the most conspicuous practice inside a football stadium is the athletic performance of two teams at the center of the entire service setting. Of course, as one of the main actors, the individual player also engages in a certain type of performance. Performing also involves the football fans who engage in joint activities, singing, chanting, or dancing around. For these fans, collaboratively jubilating clearly creates value. Mostly customer who want to enjoy the hedonic collective experience engage in a type of performance.

• Performance of players on the pitch. E7: “Of course, when we play well, the atmosphere at the home games is much better than when we perform poorly. When we are behind, the atmosphere will probably not be that good.”

• Performance of the fans on the stands (e.g., collective activities). E6: “From a sponsor perspective, I’d say
it’s important that the fans create a good atmosphere. Especially when they support and cheer on their team, when they perform choreographies, because that is important for the all the people we bring to the match. We usually do not bring our own staff to the matches, but business clients or lottery winners, and for them, it is really impressive to see what’s going on.”

- Performances of other groups of actors during halftime shows, before the whistle, or in the VIP boxes. E6: “The match starts at 3:30 pm, but the fans come to the venue at 1:30 pm, because they know that something is being offered, also by the sponsors. And they like the event that surrounds the match.”

**Signaling** is a practice that is intended to show others something through symbols, gestures, behaviors or mere presence. We found that policemen with their helmets, bullet-proof vests, batons etc. signal security on the on hand side, but can also be provocative for die-hard fans. Through their security signaling practice, they show that this is a safe stadium for visitors. On the other hand, signaling is an important practice in the domain of the fans, such as merchandising articles (e.g., jerseys, flags, or scarfs) of the club, as well as self-made fan equipment (e.g., banners in the stands), because they show belonging to a certain group and strengthen team identification. Beyond that, some items are designed to transport a specific message and target a certain group of other fans (e.g., rival fans). The following examples illustrate how actors engage in signaling in team sports ecosystems:

- Police signaling security outside and inside the stadium. E4: “They [police] try to demonstrate presence. In fact, that is a double-edged sword, because, as I’ve just said, many fans feel provoked by the martial appearance and impression.”

- Fans clothing and merchandising articles signaling belongingness to the club. E20: “A flag is an ‘eyecatcher’ and others see what’s on it [e.g., the club’s logo]. You will be more recognized as a group of fans.”

- Ultra-fans signaling superiority over rival fan groups. E17: “Members of normal fan clubs do not value fan equipment so much as ultra-fan organizations. If one ultra-fan club steals fan equipment [e.g., captures the flag of the other organization], the item will be presented in the stands.”

**4.2. Triadic value co-creation in team sports ecosystems**

*Simultaneous triadic value co-creation* describes all actors of a triad engaging in the same practice and jointly co-creating value at the same time. The focal actors affect each other reciprocally and concurrently. The key characteristic of this triadic pattern is that they create something on a meta-level they were not able to achieve alone. The result is something that two actors alone could not achieve. Actors gain from each other when the others also integrate their resources through practices. For example, a thrilling stadium atmosphere is created through at least three different actors (home fans, away fans, players) that engage in performing. In this case, through reciprocity of simultaneous resource integration, actors are directly affected by the action of focal other actors, so that they might encourage each other (e.g., through the process of emotional contagion). Three actors or group of actors jointly engage in the same practice during a particular period of time.

**Sequential triadic value co-creation** starts with the interactional practice between two actors in a dyad. This interaction of both actors has an effect on a third actor accordingly. Two actors in a dyad engage in practice and the result automatically affects a third actor directly or indirectly. Sequential triadic value co-creation is thus a two-step process. The third actor is not directly involved in the initial value co-creation practice. For example, police and security personnel engage in informing and discussing, so as to align their activities and responsibilities inside the stadium. The group of fans is only affected passively, because they are not directly involved in the interactional practice between the actors. Still, the fans are an important part of this triad, as police and security personnel ensure security for the fans inside the stadium.

**Actor-led triadic value co-creation** entails one actor engaging in a certain practice alone and this might affect two other actors. Thus, the focal actor is the initiator of interaction and value co-creation. The focal actor actively integrates his own resources. For example, public authorities pass new regulations about financing the police during the match day (informing and discussing). If clubs have to cover the costs for this service, this also affects fans, because the ticket prices may rise. If one actor engages solely in one practice, co-creation at the triad level is a result of indirect resource exchange. This could result in further interactions between the other two actors that the focal actor initially did not intent. The focal actor starts with resource integration and the other actors are affected indirectly.

Tab. 3 illustrates examples from our data on how the four actor engagement practices create value in triads. The bold lines surrounding an actor means that this actor plays an initial role in the triadic value co-creation. The double-headed arrow between the squares illustrates reciprocal interaction between actors.

**5. Discussion**

**5.1. Theoretical implications**

The service ecosystem approach of S-D logic (Vargo and Lusch 2011), as well as the literature on actor engagement (Chandler and Lusch 2015; Li et al. 2017) stress the highly interactive nature and dynamic value co-creation among various actors. However, team sports are characterized by a variety of elements such as co-operation, volunteerism, profit vs. non-profit orientation, or highly en-
<table>
<thead>
<tr>
<th>Triadic constellations of actors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simultaneous triadic co-creation</strong></td>
</tr>
<tr>
<td>- The resources of three actors are needed at the same time to implement a pre-designed activity.</td>
</tr>
<tr>
<td>- Example: Stadium operator, the catering firm and the club implement a special VIP event. Resources from three firms are needed to carry out the event.</td>
</tr>
<tr>
<td><strong>Sequential triadic co-creation</strong></td>
</tr>
<tr>
<td>- Two actors jointly implement an activity and influence the third actor accordingly.</td>
</tr>
<tr>
<td>- Example: Two fan clubs protest against the football federation (e.g., because of rising ticket prices).</td>
</tr>
<tr>
<td><strong>Actor-led triadic co-creation</strong></td>
</tr>
<tr>
<td>- One single actor implements a pre-planned activity mainly with his own resources and the other two actors are influenced passively.</td>
</tr>
<tr>
<td>- Example: Sponsoring activities (e.g., free drinks in front of the stadium).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actor engagement practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implementing</strong></td>
</tr>
<tr>
<td>- The resources of three actors are needed at the same time to implement a pre-designed activity.</td>
</tr>
<tr>
<td>- Example: Stadium operator, the catering firm and the club implement a special VIP event. Resources from three firms are needed to carry out the event.</td>
</tr>
<tr>
<td><strong>Informing &amp; discussing</strong></td>
</tr>
<tr>
<td>- Simultaneous triadic co-creation occurs when three parties share and exchange knowledge at the same time.</td>
</tr>
<tr>
<td>- Example: Meeting before the game with police, security personnel and club representatives to discuss security issues and inform each other.</td>
</tr>
<tr>
<td>- Two actors exchange information in a dyadic constellation and the result affects a third actor.</td>
</tr>
<tr>
<td>- Example: Clubs and football association discuss new ticket price regulations and fans are affected respectively.</td>
</tr>
<tr>
<td><strong>Performing</strong></td>
</tr>
<tr>
<td>- A triadic constellation is present when the resources of three actors are needed at the same time to stage a performance.</td>
</tr>
<tr>
<td>- Example: Fan groups jointly create a choreography and show, for example, a large cover with the logo of the club in the stands.</td>
</tr>
<tr>
<td>- Sequential triadic performing refers to two actors that co-create a game.</td>
</tr>
<tr>
<td>- Example: Two fan groups (opposing or allied) perform chants with reference to each other. This could mean that the fan group in one stands shouts and the other responds to this.</td>
</tr>
<tr>
<td><strong>Signaling</strong></td>
</tr>
<tr>
<td>- Individual actors jointly engage in signaling to convey a message through signs and symbols.</td>
</tr>
<tr>
<td>- Example: Sport fans and groups of fans constantly engage in signaling to differentiate themselves from each other. This not only refers to home and away fans, but also to different fan clubs.</td>
</tr>
<tr>
<td>- Two actors engage in signaling and either explicitly or implicitly refer to each other through signs and symbols.</td>
</tr>
<tr>
<td>- Example: Two fan groups with specific symbols that refer to each other (e.g., crossed out club logo).</td>
</tr>
<tr>
<td>- One actor engages in signaling and influences two other actors through signs and symbols.</td>
</tr>
<tr>
<td>- Example: Presence of a group of policemen standing in front of the stands.</td>
</tr>
</tbody>
</table>
gaged customers (e.g., ultra-fans) that induce multifaceted interactions among actors in the ecosystem. However, a framework is lacking that highlights how value co-creation between three actors constituting the triad, is the fundamental component of any network. Research on triads from other research streams focuses on specific triads, such as the buyer-supplier-supplier triad (Choi and Wu 2009b). Our framework proposes four overarching practices that describe value co-creation in the team sports ecosystem, regardless of the actor’s background.

This study contributes to the theory of multi-actor engagement and value co-creation in complex service ecosystems in several ways. It is the first study which refers explicitly to triads as an integral component of service ecosystems, in this case the team sports ecosystem. We specifically designed our sample heterogeneously, in order to incorporate interactional practices from fans, firms, organizations and other actors that are often deemed relevant in team sports (e.g., sponsor, media). Of course, these actors do very different things, but their re-occurring activities aggregate into four actor engagement practices in triads: implementing, informing & discussing, performing and signaling. In this respect, our study is in line with other research that offers broad categorizations of practices on how value-in-use is co-created (Ballantyne and Varey 2006) or how markets are formed (Kjellberg and Helgesson 2007).

We show how market-facing, public and private actors co-create value in a triadic constellation. Our data reveals that there are different broader categories of practices regarding how value can be created in triadic constellations of actors. Furthermore, we present value co-creation in triads as a middle course between the complexity of ecosystems and the simplicity of service interaction in dyads. Triads are the simplest form of a larger network. So any practices that can be found in triads are also likely to be found in more complex structures.

The focal actor in actor-led triadic co-creation also serves as the connecting entity between two other actors. As such, this actor has a mediating role between actors who may not even know each other. On an abstract level, this actor could represent various ones, so that any actors is connected with any other actor of the ecosystem. Only value co-creation analysis beyond dyads can reveal such interdependencies (Li et al. 2017). We contribute to a more holistic understanding of actor engagement and value co-creation in the team sports sector, as our study highlights triads as a middle course between complexity and simplicity. In addition, the analysis of triadic interaction offers a useful way to understand interdependencies between actors. We believe that our results are largely transferrable to any team sports setting and the triadic value co-creation framework can be helpful to analyze value co-creation in complex service ecosystems where a multitude of actors from distinct domains come together, e.g., on different levels of the health care sector (Beirão et al. 2017; Frow et al. 2016).

5.2. Practical implications

Our framework suggests that there is a variety of possible constellations of resources integration in triadic constellations. This refers not only to different practices of how interactions between actors create value, but also that actors have different roles in such a triadic setting, with regard to resource integration. Managers have to determine what role certain actors play in a triad to understand how they can create value collaboratively. Actor-led co-creation is a prominent form in the sense that one actor initiates value co-creation through a certain practice, mainly alone. An advantage of this form is that one actor decides when and how his own resources are integrated. However, the actor has only limited control over the interaction between the second and the third actor in the triad. The focal actor in actor-led triadic co-creation also serves as the connecting entity between two other actors. As such, this actor serves as mediator between resource-integrating actors.

Sequential triadic co-creation starts with an interactional practice between two actors. Actors in this constellation should take into account the consequences for the third actor, as he is not directly involved in the initial interactional practice. The question arises as to who the third actor in the triad is, and who is actually affected by the practice. Sometimes, this is not clear and management efforts should identify actors who might be affected and determine whether it is beneficial to integrate these actors at the initial stage. Simultaneous triadic co-creation requires the most coordination efforts in a triadic setting, because resources have to be aligned and coordinated to co-create value.

Stieler et al. (2014) show that the same practice, activity or stimulus may affect different actors in unexpected ways. Extending this notion, focal actors in triadic value co-creation should think about their own role as an initiator of value co-creation, in terms of how their practices affect relationships between the two other actors. As Ulrich (2014) highlights, some activities fans engage in cannot be controlled by the management of a team sport entity, because they take place on platforms that cannot be accessed. However, from a team sports ecosystem perspective, actors are connected with each other, potentially through a third actor (e.g., a fan relationship manager or a social group). Management activities should then focus on the role of an actor, in order to target this group and potentially collaborate with or influence them.

A potential approach to dealing with complexity in service ecosystems is to employ a network orchestrator (Ve- lu 2015) to coordinate resource integration in team sports, through the practice of informing and discussing. This idea has also been described as a strategic capability that allows firms to stimulate interaction with and between other network actors (Karpen et al. 2012). The stadium operator or the club itself usually comes close to this role, as they have many interactions with various
actors. However, according to our framework, this would also incorporate indirect value co-creation effects through a third actor. As actors and resources are often widespread throughout a team sports ecosystem, it is important to constantly monitor the relationships and interactions in the entire ecosystem.

5.3. Limitations and future research

We believe that the four actor engagement practices identified in this study are well-suited to explaining value co-creation between various actors from the ecosystem. The universal nature of the practices may indicate that they are also basic interaction forms between actors in other networks. A limitation of our study is that we focused on a specific time of measurement. Thus, we did not incorporate the dynamic nature of interactions and how relationships and interactional practices evolve over time. However, this might be beneficial to better understanding how team sports ecosystems develop.

As with any qualitative study, we selected a specific research setting, so that it might be worthwhile investigating whether these practices occur between actors in other settings as well, and how cultural and social differences influence these practices. Another potential limitation is the selection of respondents. Although they were carefully selected to ensure heterogeneity of the answers, one could argue that we omitted important ecosystem actors. From a methodological standpoint, the qualitative approach seemed suitable to achieve our research goals. Our findings pave the way for either qualitative or quantitative follow-up research. As we conducted semi-structured interviews, it would be worthwhile to enrich our data with observational data on interactional practices. This approach can help to shed light into how actor engagement behavior takes place in a natural environment without relying on potentially biased answers from interview data. A quantitative investigation of multi-actor engagement in the team sports ecosystem can lead to the development of suitable measurement instruments which has already been done for various forms of customer engagement (Hollebeek et al. 2014; So et al. 2014; Vivek et al. 2014). This route might then help to work out the relative impact of different actor engagement practices along with the identification of actors who serve as social hubs within a service ecosystem.

In this paper, we identify three types of triadic constellations of actors. Future studies might further investigate how triads are formed and how value is created in these constellations. In this respect, we did not focus much on the co-destructive nature of practices, so that this aspect could be a future research endeavor. To expand our framework, future research might incorporate elements of triads, such as the balance among actors, actor power, or interaction frequency. As our analysis is still at the micro-level, the next step would be to show how different triadic constellations are connected with each other, and how triads are embedded in the meso-level of the network.

A useful topic for future research would be to investigate the institutional arrangements that govern resource integration and practices in triads and ecosystems in general, as they are an integral component of the value-in-cultural-context concept and S-D logic in general (Vargo and Lusch 2016). Especially team sports ecosystems consist of many soft and hard contracts (Vargo and Lusch 2010) that are ideal bases for analysis. For instance, in team sports, social norms of fans (e.g., unwritten laws or moral codes of fandom) meet the requirements of profit-oriented firms (e.g., contract between the club and the sponsor comprising specific rights). These institutions do not necessarily co-exist peacefully, but might conflict with each other, for instance, in the case of ticket prices for football throughout Europe.

References


Ng, S., Russell-Bennett, R., & Dagger, T. (2007). A typology of mass services: the role of service delivery and consumption pur-


**Keywords**


Stieler/Germelmann, Actor Engagement Practices and Triadic Value Co-creation in the Team Sports Ecosystem