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A triadic framework for collaborative consumption (CC): Motives, activities and resources & capabilities of actors



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ABSTRACT

Collaborative consumption (CC) is an increasingly prevalent form of exchange. CC occurs within a triangle of actors: a platform provider (e.g., Uber), a peer service provider (e.g., an Uber driver) and a customer. The platform provider's main role is matchmaking, so that a customer can access assets of a peer service provider. This paper has three objectives. First, this article identifies three criteria to delineate CC from related constructs such as access-based consumption, sharing or renting. Second, it introduces a literature-based framework explicating the roles of the actors in the CC triangle along three dimensions: motives, activities and resources and capabilities. Third, it highlights areas for further research, such as the dynamics of CC, context-dependent motives and the emergence of professional (peer) service providers.

1. Introduction

Exchange has long been considered a cornerstone of marketing thought (e.g., Bagozzi, 1975) and, as noted by Belk (2014), is "as old as humankind" (p. 1595). While having taken various forms including sharing, bartering, and trading, in a more recent customer context, exchange is typically considered a dyadic process occurring between two parties (e.g., a company providing a good or service and a customer providing some financial consideration). Furthermore, exchange over the past century can be characterized as "aspirational exchange," meaning that customers "trade up" in buying more luxurious goods (Sheth, Sethia, & Srinivas, 2011). Recently, however, there has been an increase in a very different form of exchange which can be labeled "collective exchange," whereby many customers access goods and services that are provided by a peer (Bardhi & Eckhardt, 2012; Belk, 2014).

This form of exchange has been referred to by an almost dizzying number of labels including access-based consumption (e.g., Bardhi & Eckhardt, 2012), access-based service (e.g., Schaefers, Wittkowski, Benoit, & Ferraro, 2016), non-ownership services (e.g., Wittkowski, Moeller, & Wirtz, 2013), sharing (e.g., Belk, 2014), commercial sharing programs (Lamberton & Rose, 2012), two-sided markets (Rochet & Tirole, 2006) or shareconomy or sharing economy (e.g.,

Hamari, Sjöklint, & Ukkonen, 2015). Perhaps the most common being collaborative consumption (CC) (e.g., Botsman, 2015; Hamari et al., 2015). The firms engaged in this new market mechanism have become some of the most talked about in the business press. An example is Uber, which operates a well-known ride-sharing service. Uber drivers utilize their own vehicles and work hours that are most convenient for them. Customers access the service via an app on their smartphone or some other device. As such, Uber provides a technology platform (the app) that efficiently coordinates underutilized assets (owner's vehicles) to serve customers who need transportation. Similarly, Airbnb provides an app/online presence that coordinates people seeking short-term accommodations with people who have underutilized space (e.g., room, apartment) available to be rented. Thus, CC is fueled, in part, by social media platforms that easily connect peers (Belk, 2014; Matzler, Veider, & Kathan, 2015).

Academic research regarding this new phenomenon is just emerging and as it does, it seems to be moving in a number of different directions. The goal of our paper is to make three primary contributions. First, although research regarding CC has been accelerating, there has not been a formal conceptualization of CC in the academic literature. To help alleviate this confusion, we introduce three criteria that can be used to aid in the characterization of CC as a triadic exchange involving customers, peer service providers and platform providers. Second, we

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Table 1	Letelan han a situation and a stitute della Co

	Buying	Renting	Non ownership/access based services	Collaborative consumption	Sharing or co-owning
Number and type of actors Nature of exchange Directness of	tumber and type Dyadic, between provider and customer of actors Dyadic, between provider and customer of actors Transfer of ownership, Usually assets No ownership transfer, exchange for financial exchange are exchanged for financial of agreed consumption contribution, sense of finality pirectness of Predominantly mediated through Predominantly mediated	Dyadic, between provider and customer No ownership transfer, longer, fixed period of agreed consumption time, mostly investment goods, sequential use Predominantly mediated through market	ler and customer Dyadic, between provider and customer longer, fixed period No ownership transfer, shorter time, mostly periods of agreed consumption time, sequential use through market	Triadic, between a platforn provider, a peer service provider and a customer. No ownership transfer, shorter periods of agreed consumption time of underutilized assets from the peer service provider, sequential use Mediated through market mechanisms	Two or more individuals, e.g. within families or friends No ownership transfer, Often shared ownerships, therefore simultaneous or sequential use Not mediated through market, but
exchange	market mechanisms	mechanisms	mechanisms		social mechanisms

provide a discussion of the roles of these actors as manifested in their motives for CC, their activities, and their resources and capabilities (see Table 2). Finally, we present a number of avenues for potential research relative to this area.

2. Conceptual foundation for collaborative consumption

The goal of this section is to present three characteristics of CC that we believe delineate it from other, more traditional forms of exchange. These are: 1) the number and type of actors, 2), the nature of the exchange, and the 3) directness of exchange (see Table 1).

A key differentiator of CC from traditional forms of exchange is that due to the *number and type of actors involved*, CC can be characterized as triadic rather than dyadic. Specifically, (a) a platform provider enables exchange, (b) a customer seeks access to assets and (c) a peer service provider grants this access. In other words, two different service providers serve customers in CC: the platform provider (e.g., Uber) and a peer service provider (e.g., the Uber driver).

Characterizing and delineating CC this way helps to define it as activity whereby a platform provider links a consumer that aims to temporarily utilize assets with a peer service provider who grants access to these assets and with this delivers the core service. For example, Zipcar, a firm that is frequently included in discussions of CC, would be considered as an access-based service company because Zipcar has inventory of cars to provide transportation rather than relying on peer-to-peer exchange. Further, this definition of CC excludes sharing, which might occur in a triangle of actors, but usually occurs among individuals so that no (professional) platform provider and no monetary contribution are involved (see Fig. 1).

A second characteristic of CC concerns the *nature of the exchange* between the three actors. As in traditional exchanges CC exchange entails (a) customers gaining access to tangible/intangible resources (Wittkowski et al., 2013) (b) when monetary compensation is exchanged for goods or services. However, with CC there is no exchange of ownership. Rather, the actor who owns the resource (e.g., car) grants *temporary* property rights to other actors (e.g., those in need of temporary transportation) (Haase & Kleinaltenkamp, 2011).

Our third criterion is that CC differs from related phenomena (such as sharing, non-ownership or access-based services, renting and buying) because it is mediated by market mechanisms. For example, sharing is not market-mediated, but rather relies on social mechanisms for coordinating exchange (Hill & Wellman, 2012) and occurs within socially connected groups, such as families (Belk, 2010). Moreover, sharing does not necessarily involve triadic exchange. Purchasing and renting usually occur within a dyadic relationship between a company and a customer. For both a company owns the sold, rented or accessed good. The core of the transaction is either the transfer of ownership (buying) or the access to the good or service (renting or access-based services). When customers obtain ownership, a full transfer of property rights takes place (Haase & Kleinaltenkamp, 2011). The transfer has a sense of finality and the customer has to make a monetary contribution that equals the value of the good (Durgee & O'Connor, 1995). Renting generally entails access to investment goods (e.g., house or flat) for longer periods of time, whereas access-based services customers usually obtain relatively short-term access to consumption (Moeller & Wittkowski, 2010).

Following the CC triangle presented above, the rest of our paper will focus on the three actors (customer, peer service provider and platform provider) involved in the triadic exchange that characterizes CC. The theoretical foundation for our conceptual framework is the capabilities approach (Day, 1994, 2011) stating that the most distinctive features of market-driven companies are their market sensing and customer linking capabilities (Day, 1994). Since the market capabilities approach emphasizes the ability of a firm to learn about customers and competitors and act on such information, we have included motivations and activities of all three actors into our conceptual framework. The

 Table 2

 Motives, activities and resources & capabilities of CC actors.

	Customer		Peer service provider		Platform provider	
Motives	Economic	Use of CC is often less expensive	Economic	Earning extra income by making use of	Economic	Make profit with matchmaking
	Social	Meeting other people, e.g. more authentic travel	Entrepreneurial freedom	assets (e.g. 11at) Flexible offering and individualization of service	Innovating and reacting to the market	Respond flexibly to rapid changes or market, exploit idle resources from peer service providers
	Hedonic value Reduce risks & responsibilities	Accessing products that are exiting or normally out of reach No burdens of ownership, option to preview a product for potential purchase	Social motive	Ability to meet other people, i.e. consumers that might share similar desires		
					Build beneficial relationships	Relationships to both the demand (customers) and the supply side (peer service providers)
Activities	Environmental Benefits Interact	Less usage of resources With platform providers, their technology and the peer service provider	Give access to assets	Giving access to the resources, e.g. transporting consumers in one's car or giving access to one's flat	Matchmaking	Based on online ratings and internal knowledge match peer service provider and customers
	Provide information	Greate user profile, verifying identity, providing reviews	Take role as customer contact employee	Representing the brand of the platform provider by providing the service	Presenting the brand Creating trust & reducing risk Shape and communicate	Creating awareness on both the demand and the supply side Trust is a crucial for the platform's provides ability to create a market The social norms are the 'rules of the
Behave appropr Resources & capabilities Technical skills	Behave appropriately Technical skills	Treat the accessed goods or spaces with care Using digital technology to	Personalize the service Assets	Perform an authentic and individualized service experience Possesses the assets that are the foundation	Social norms Resource Smoothing Market knowledge	game of CC Smooth demand and supply in peak times Knowledge in particular about peer
		access the platform	Reputation Trustworthiness	of the service, e.g. the house/flat of the car Previous customer reviews on the platform Foundation for the CC network work	Network Power to promote and	service providers and customers Network of peer service providers and customers Powerful stakeholder that can
					protect CC Stakeholder relations	communicate the societal benefits

capabilities approach is also based on the idea that firms are heterogeneous with regard to their resources and capabilities (Day, 2011). Thus, beyond motivations and activities we have included resources and capabilities in our literature analysis and the conceptual framework. Accordingly, in what follows we identify the roles of all actors within the triangle based on their 1) motives, 2) activities and 3) resources and capabilities.

3. The collaborative consumption triangle: the customer

This paper uses the term "customer" to refer to the actor in the triangle that requires access to a particular asset (e.g., an Airbnb flat) in exchange for some monetary contribution. When we utilize the term consumer, we refer to potential customers. Customers engage in CC out of several different *motives*, engage in different *activities* and possess certain necessary *resources and capabilities* to participate in CC (see Table 2).

3.1. Customer motives

3.1.1. Economic motives

Research indicates economic drivers (sharing or reducing costs) play the most important role for customers when deciding to use CC (Barnes & Mattson, 2016). Similarly, Rudmin (2016, p. 206) posits that the increasing reduction in customer wealth means that "more and more people will be unable to maintain private ownership of customer inventory" and therefore will prefer access to goods instead of owning them.

3.1.2. Social motives

In some contexts (e.g., couchsurfing and toy libraries) social utility has been found to be an important driver of CC use (Habibi, Kim, & Laroche, 2016; Ozanne & Ozanne, 2011). Airbnb positions itself as a community-driven hospitality brand focusing on creating connections between people that lead to authentic travel experiences (Botsman & Capelin, 2016). Airbnb recently launched their new "Bélo" company logo to visually communicate its focus on "belonging", one of the essential drivers of humankind (Botsman & Capelin, 2016).

3.1.3. Hedonic value

CC and access-based consumption may provide customers with hedonic value, such as when they wear luxury goods (e.g., designer clothes and handbags) they normally could not afford (Lawson, Gleim, Perren, & Hwang, 2016; Moeller & Wittkowski, 2010). For example, Rent-the-Runway provides access to designer clothing that would be financially out of reach for many customers. As mentioned by respondents in Lawson et al.'s (2016, p. 2616) study, it allows them to "pretend to be someone you aren't for a day and do something that you may not otherwise get to do" and thereby helps customers satisfy their desire to seek status.

3.1.4. Reducing risks and responsibilities

Since CC provides temporary access to assets with no ownership, it can reduce the risks (e.g., financial and social) associated with ownership as well as the responsibilities associated with owning goods such as such as maintenance, usage, storage and disposal (Wittkowski et al., 2013). For example, when using CC for transportation services, customers are not burdened with the costs associated with purchasing a car, providing insurance or maintenance, and only pay for the time they actually use the car, or the distance they drive or both (Cohen & Kietzmann, 2014). CC also allows customers to" preview" a good without having to commit to it via purchase (Lawson et al., 2016) thus reducing the risk of making a poor decision.

3.1.5. Environmental benefits

While participating in CC can potentially have a positive impact on

the environment (Botsman & Rogers, 2010) (e.g. fewer cars or tools have to be produced), this does not appear to be a strong motivator for many consumers (Habibi et al., 2016; Moeller & Wittkowski, 2010). Further, Leismann, Schmitt, Rohn, and Baedeker (2013) show that "use rather than own" schemes can also have undesired ecological side-effects as customers may overuse goods (e.g., tools and cars), which can eliminate positive environmental effects.

3.2. Customer activities

3.2.1. Interact

Customers' primarily interact with the platform provider, with the CC asset, and the peer service provider. They may also interact with other customers, either directly (peer-to-peer) or indirectly since many platform providers promote the platform as a social community (Botsman & Capelin, 2016). However, the interaction might also occur when customers notice signs of usage caused by the previous user of the accessed good (Schaefers et al., 2016). It is this interaction that drives the "community" aspect of CC valued by many consumers and peer providers (Habibi et al., 2016).

3.2.2. Provide information

Some CC offerings (e.g., Airbnb) require higher levels of customer involvement. For example, customers may spend considerable time on creating user profiles prior to using the CC provider. Users may also have to spend time verifying their identity by linking their account to other accounts (e.g., Google + or Facebook) or by providing further information such as their email addresses and telephone, driver's license or passport numbers (Botsman & Capelin, 2016). These activities including providing reviews are also important as they strengthen trust between peers in these consumptionscapes (Botsman & Capelin, 2016), something that is particularly important for CC (Lamberton, 2016). Similarly, Chan and Shaheen (2012), in a study of ride-matching programs in the US, mention the importance of building trust between participants, especially to address safety concerns.

3.2.3. Behave appropriately

The previous section outlined "informational" approaches that may strengthen trust in CC exchanges. However, owing to the group nature of many CC activities customers may rely on relationships or social norms as signals of trust. Bardhi and Eckhardt (2012) and Hartl, Hoffmann, and Kirchler (2015) suggest customers support the introduction of a governance system to ensure customers will behave appropriately because they believe human beings act egoistically and need regulation. However, Hartl et al. (2015) suggest that introducing a governance system may result in customer reactance, less collaborative behaviors, and maybe even opting out if the decision to engage in CC is based on social considerations instead of economic ones.

3.3. Customer resources and capabilities

3.3.1. Technical skills

Beyond the financial contribution by the customer the main customer contribution is to use the matchmaking technology. Collaborative use of resources has been facilitated by the widespread availability of the Internet and especially Web 2.0 (Belk, 2014). The increasing popularity of mobile apps allows faster information exchange between transaction partners (Moehlmann, 2015). For CC models that are mediated using mobile technology and/or the Internet customers need the technical skills to use them. The strong focus on technology for many CC offerings makes it difficult for less tech-savvy users to participate (Chan and Shaheen (2012)). Moreover, offerings that rely on digital communication tend to appeal young people (Rudmin, 2016), which may lead other demographic groups to feel left out.

4. The collaborative consumption triangle: the peer service provider

This paper uses the term "peer service provider" to refer to the actor in the triangle that gives access to a particular asset (e.g., an Airbnb flat) in exchange for a monetary contribution from the customer. Peer service provider's *motives* are explained subsequently as well as their *main activities* and necessary *resources and capabilities* (see Table 2).

4.1. Peer service provider motives

4.1.1. Economic benefits

CC has become an efficient mechanism for making use of underutilized assets (Lamberton, 2016). For example, Sivak (2013) reported there were 0.75 automobiles for every person in the US, creating substantial excess capacity. Platform providers such as Uber and Lyft were able to exploit this excess capacity because peer providers were willing to grant access to their personal assets. In exchange, customers usually pay a matchmaking fee to the platform provider (Rochet & Tirole, 2006) and make contribution to the peer service provider, thus providing peer providers with additional sources of income. The latter can either be a financial contribution for the consumption time, some quasi-financial contribution (e.g., some amount in a community currency), a non-financial contribution (e.g., social appreciation) or the (moral) right to obtain access to others peoples' resources within a community (Belk, 2014). Peer service providers offer access to their assets for a variety of reasons. However, recent research suggests that economic benefits are especially important to both customers and peer service providers (Hamari et al., 2015).

4.1.2. Entrepreneurial freedom

The past decade has been characterized by a great deal of economic uncertainty as the global economy continues its slow recovery from the events of 2008. One could argue the development and growth of CC has been driven in part by individual motivations to replace lost income, or augment income. CC provides individuals entrepreneurial freedom in that platform providers make it easy for those motivated by a need for income to easily match their skills/assets with those who are willing to pay for them, thus allowing those with underutilized assets to use them when and how they wish. This provides individuals with the ability to engage in CC activities when and how they want rather than being restricted by traditional job restrictions. Thus, someone who owns a car can work with Uber or Lyft to drive when they are able for as much as they want. Those with the skills to do home repair can use TaskRabbit to connect with homeowners who need these services. Vargo and Lusch (2004a, b) posit that firms should focus on flexibility of service instead of making service goods-like through internal standardization. Entrepreneurial freedom allows peer service providers in the network to be innovative and successfully engage customers to co-create value.

4.1.3. Social motives

In some CC contexts social motives drive participation (Habibi et al., 2016; Ozanne & Ozanne, 2011). As mentioned, companies such as Airbnb stress the community aspect and the locality of the accommodations on offer (e.g., "Book homes from local hosts in 191 + countries and experience a place like you live there"). The message that guests can stay with locals enhances the perception of an authentic travel experience (Botsman & Capelin, 2016). However, this may also act as a motivator for peer providers with underutilized assets in the sense that peer providers may value the opportunity to get to know travellers from around the world and/or support them in getting to know the local country or city of residence.

4.2. Peer service provider activities

4.2.1. Access to assets

The concept of CC requires an extensive network of independent peer service providers willing to provide access to underutilized assets, something that is often mediated by technology platforms developed by platform providers. Accordingly, this may be the most important activity in which peer service providers engage. Without these assets being made available by peer service providers, CC would not be a unique form of exchange. What makes Uber and Lyft unique is not only the technology utilized to access a ride, but the person who is providing the core service (i.e., the driver). Regardless of their motivation for doing so, it is the willingness of individuals to provide access to things they own that makes CC possible.

4.2.2. Customer contact employees

In a CC context, the peer service provider represents the main personal point of contact for the customer and (partially) acts as an extension of the platform provider or "customer contact employee" and "brand ambassador". This role is important because a bad experience with a single peer service provider may negatively impact a customer's willingness to use the platform provider in the future. On the other hand, seeking unique experiences is one of the motives for customers to engage in CC (Hamari et al., 2015) something that can be in opposition to the standardization of the service experience that service providers (e.g., hotels) sometimes seek. So while the heterogeneity of peer service providers' delivery is a core characteristic and competitive strength, it is also a challenge for the platform provider and customer. Platform providers can address this challenge by training peer service providers. For example, Uber recently launched a new code of conduct that provides specific guidelines regarding appropriate behaviors by Uber drivers, such as no refusal of service because of racial or other discriminating issues, no derogatory remarks, and no illegal substances or alcohol to be consumed in the car.

4.2.3. Personalised service

Peer service providers are able to offer personalised service interactions leading to favorable outcomes for customers. Many service firms have recognized that customer perceived value can be considerably more important than productivity (Jakkola & Alexander, 2014). Networks of peer service providers can focus on customers, their needs, and their positive experiences, leveraged by technology, and hence are able to create the personalised service and relationship with customers.

4.3. Peer service provider resources and capabilities

4.3.1. Assets

In some CC contexts, customers are "prosumers" as they can take on the role of both peer service provider and customer (Barnes & Mattson, 2016). CC models allow customers to access and offer underutilized resources in creative and innovative ways (Cohen & Kietzmann, 2014). Resources that are accessed can include: objects, time, money, goods, services, information and skills (Barnes & Mattson, 2016). For offerings, such as Airbnb and Uber, peer service providers can also be customers by turning their personal resources into business resources (Rudmin, 2016). They make their assets available to others and spend time traveling with people in their car (e.g., Uber) or staying at their place (e.g., Airbnb).

4.3.2. Reputation

Because it is the peer providers that have the primary contact with the customer, ultimately the reputation of the platform provider is derived through the customer's interactions with the peer provider. Positive customer experience represented in 'reviews' have become a new business 'value' that is critical to communicate peer service providers reputation in particular given their limited resources to promote their service (Blazevic et al., 2013). For example, Airbnb provides an online platform where both hosts and guests can establish their reputation based on other parties' performance evaluations, i.e., star rating of previous transactions (Weber, 2014). This feature is important because customers are present in multiple social networks; they are 'social customers' embodying the voices and thoughts of hundreds or thousands of like-minded individuals (Zhang, Kandampully, & Bilgihan, 2015).

4.3.3. Trustworthiness

In the CC context trust plays a critical role in nurturing relationship between peer service providers and customers (Chan and Shaheen, 2012; Lamberton, 2016). For example, trust is necessary when being driven by someone a customer has never met before, or staying in an accommodation with strangers. Scholars refer to trust in this context as "a psychological state that exists when one party has confidence in an exchange partner's reliability and integrity" (Kimpakorn & Tocquer, 2010, p. 380). Since most services are first sold then experienced, cultivating and managing trustworthiness (and reputation) is essential for the peer service provider to build and maintain the relationship with customers (Kinard & Capella, 2006). Peer service providers and customers regard CC as an act indicating flexibility and willingness to trust each other and supporting sustainable and social wellbeing above profitability, while at the same time provides an alternative to standardized services (Botsman & Rogers, 2010).

5. The collaborative consumption triangle: the platform provider

This paper uses the term "platform provider" to refer to the actor in the triangle that supplies the online marketplace for a particular CC service and communicates its value proposition (say, for transportation). Similar to above structure the subsequent text focuses on platform provider's motives, activities and its resources and capabilities (see also Table 2).

5.1. Motives of the platform provider

5.1.1. Economic gains

Ultimately, a platform provider's primary motive is economic gain (i.e., profits, shareholder value) (Rochet & Tirole, 2006), whereas pricing is more complicated in CC settings because of the two sides of the market (Eisenmann, Parker, & Van Alstyne, 2006). Since new forms of CC may be perceived as risky, it is important that all actors in the triangle understand the motives of the platform provider and its value proposition. Without shared understanding and trust, the network of relationships will not be sustainable (Skålen, Pace, & Cova, 2015). For this reason, the platform provider's articulation of its mission and its value proposition are important; it becomes a "brand governor" (Fryberg & Jüriado, 2008).

5.1.2. Innovating and reacting to the market

Collaborative networks have emerged for several reasons: to innovate in a changing marketplace, to respond flexibly to rapid changes in markets and customer preferences, to exploit the resources and competencies of core actors and to achieve operating efficiencies in a global environment (Cravens & Piercy, 1994). These motives can explain the emergence of access-based and collaborative travel services focused on accommodation and transportation. The demand for global travel grew rapidly, with diverse preferences for travel experiences at different price points. Initially, many young people (who were open to novel solutions) were looking for economical ways to travel, such as couch surfing, and the platform providers reacted to this.

5.1.3. Build beneficial relationships

In CC, the triangle or network should not be considered a hierarchy "led" by the platform provider. Instead, each actor – including the

platform provider – communicates their intention and capability to participate in co-creation via their value proposition, defined in terms of desired customer or peer service provider experiences. From a Service Dominant Logic perspective, we can say that the immediate goal of each actor is to support other actors in their resource integration and value co-creation activities, rather than (narrowly) focusing on sales and profits (Lusch & Webster, 2011). This perspective emphasizes the platform provider's goal of building "good" relationships to both the supply and the demand side that co-create value, thereby leading to economic gains. Co-creation can occur between the platform provider and the customer, the platform provider and the peer service provider or the peer service provider and the customer. It occurs through shared inventiveness, co-design, or joint production of services.

5.2. Activities of the platform provider

5.2.1. Matchmaking

One characteristic of CC is that it allows an efficient way to match individuals with underutilized assets with those who want to gain access to them. It is the platform provider who engages in this "matchmaking" task. Uber, for example, uses sophisticated algorithms to try to match drives with customers while at the same time optimizing a number of different, sometimes competing, objectives (Gino, 2017). Furthermore, given the platform provider's "matchmaker" role, it is not entirely surprising that reviews and ratings (of both customers and peer service providers) have become important in identifying desirable customers and suppliers and then matching them.

5.2.2. Presenting the brand and its value proposition

One of the platform provider's most important activities is presenting the brand and communicating its distinctive value proposition. The platform provider can create brand awareness but the service experience creates brand meaning, where both brand awareness and meaning generate brand equity (Berry, 2000). There will be somewhat different overlapping meanings across the types of interactions within the network since participation directly influences perceptions of service quality, service experiences and outcomes (Bolton & Saxena-Iyer, 2009) for both customers (e.g., service usage, repeat purchase behavior and word-of-mouth) and suppliers (e.g., efficiency, revenues and profits).

5.2.3. Creating trust and reducing risk

In general, strong brands are especially important for services as they help create trust and reduce perceived risk. Since matching customers and suppliers involves related, interdependent tasks by all three network partners (platform provider, customer, and peer service providers), trust and fairness will be crucially important to the platform provider's ability to create a market (Lamberton & Rose, 2012). Hence, strong brands must also perform the core service well (matching customers and suppliers), so that customers and peer service providers have a favorable experience. Brands must also connect with customers emotionally and create mechanisms that engender trust. The platform provider can create trust by providing customer and peer service provider ratings systems, secure payment methods, and mechanisms for recourse when a service failure occurs.

5.2.4. Shaping and communicating social norms and aligning practices

The platform provider does not completely control the brand and its meaning. Brand meaning emerges in part from social norms arising from customers and peer provider interactions that ultimately create economic and non-economic value (Penaloza & Mish, 2011). These social norms are the "rules of the game" for all actors (Akaka et al., 2014). For example, what social norms apply when staying in another person's home? Ordinarily, CC allows customers the benefits of ownership (e.g., re-arranging furniture on the patio of a rented home). However, a social norm might require that all furnishings be returned to their original state. Does this social norm also apply to minor

activities, such as changing the bed-linens or running the dishwasher? Since customers and peer service providers are heterogeneous, they are unlikely to agree on such issues. However, the platform provider can play a role in *communicating and shaping social norms*. Through repeated exchanges between the three network partners, social norms will develop. Each actor also acquires tacit knowledge that enables him or her to be better co-creators.

5.2.5. Resource smoothing

This last role is especially important because collaborative networks often arise when environmental volatility is high (Cravens & Piercy, 1994). Networks can be guided by highly sophisticated, global information systems that are flexible, rather than fixed hierarchical structures. Peer service providers decide if (and when) they will offer services and customers decide if (and when) they will buy them. Since the platform provider acts as a relational mediator, its core role entails resource smoothing by matching demand and supply over time. For example, if there is high demand for rental accommodation during good weather months and a high demand for transportation during rush hour the platform provider can smooth resources though pricing or by providing information to customers and peer service providers. For example, Uber's surge pricing algorithm was designed for this purpose. In addition, a platform provider might share data about demand and supply over time, such as reporting occupancy rates.

5.3. Resources of the platform provider

5.3.1. Market knowledge

Informational resources, particularly knowledge of customers and peer service providers, are crucial to the platform provider's role as a mediator. For example, Uber was originally founded as a direct competitor to taxi services. As Uber expanded, it offered new transportation services to better match customer needs. The expanded product line includes luxury car services and carpooling services, which created price/quality tiers (i.e., UberGo, UberTaxi, and UberX). Uber also introduced an automated algorithm to rapidly change prices in response to changes in supply and demand. This feature was designed to attract more drivers during times of increased rider demand, as well as reduce demand. Such tacit knowledge (Chesbrough & Spohrer, 2006, p. 38) is important since it often provides a differential advantage because competitors can't observe or imitate the platform provider's behavior.

5.3.2. Network of peer service providers and customers

The technology platform is an important element for platform provider, but it alone does not provide a differential advantage in the marketplace. Indeed, competitors are likely to come from substitutes (albeit imperfect) in adjacent market spaces. For example, ride-sharing services expand the options available to meet customers' transportation needs, but peer service providers also compete with traditional taxis and limousine services. For CC the platform provider's core competency arises from how it leverages technology to provide a large enough network covering the demand and the supply side and to produce successful matches from among heterogeneous customers and peer service providers. However, as CC companies have become large-scale, other resources become more important to their success.

5.3.3. Power to promote and protect CC

Human resources have been critical to the growth of collaborative services, often simultaneously shaping the regulatory environment (Cannon & Summers, 2014). There is a perspective that peer service providers are displacing paid labor. However, the platform provider promotes an opposite view, namely that they provide a dynamic, open, network that generates opportunities for growth and shared gains (Banks & Humphreys, 2008). Thus, the platform provider supplies frames that help people (employees, customers, peer service provider,

and regulators) understand the offering and its relevance, both individually and collectively (Laamanen, Wahlen, & Campana, 2015).

5.3.4. Stakeholder relations

Although all of the resources discussed above are necessary to develop, maintain and enhance the platform and processes that match customers and suppliers, relational resources are especially critical. The platform provider articulates a mission statement that motivates customers and suppliers to participate in the network, thereby expanding relational resources. Founders and leaders are often missionaries who communicate extensively with external stakeholders about the motives underlying the platform provider's value proposition. For example, Uber CEO and co-founder Travis Kalanick made frequent speeches about environmental issues and job-creation during 2016. In doing so, they sometimes challenge authoritative cultural and economic systems – and mobilize people to support social causes.

6. Expert survey on opportunities for further research

As CC continues as an emerging stream of research it gives rise to a wide range of future research questions. In line with the third aim of our paper we aim to encourage further research and show opportunities to do so. Qualitative research provides an "understanding of an individual viewpoint that may yield lessons for others" (Hanson & Grimmer, 2007, p. 59). Thus, to broaden our coverage of views and topics, we conducted a qualitative expert survey asking authors who have published in the area of CC about their view on future research opportunities relating to the 1) platform provider, 2) the peer service provider, 3) the customer and 4) the ecosystem of the triangle. The experts in the sample were selected in a stepwise process. In the first step 94 experts were identified via their publications in the area of CC. We captured their email addresses via web search and contacted them via email asking for their participation to fill out a programmed online survey with four open questions. The initial set of experts was asked in the invitation letter to forward the email to other known experts in the field. Thus, we utilized snowball sampling in a second step, which has been shown to be a very useful and widely used sampling method in social science (Biernacki & Waldorf, 1981). In a third step, the invitation to participate in the survey was included in the monthly newsletter of the website collaborativeeconomy.com in April 2017. Experts had four weeks to answer the questions, at the end of the four-week period reminders were sent out. This stepwise procedure yielded responses from 25 experts¹ and informed our future research section. The responses have been analysed and synthesised by the authors of this paper. This was done in a two-step process. First, transcripts were read by one author and synthesised to common themes. Second, these common themes were then verified and amended by a second author. Multiple author involvement in this subjective procedure is eminent for the validity of the data analysis (Auer-Srnka & Koeszegi, 2007).

7. Opportunities for future research

Avenues for further research on the role of the **platform provider** mainly relate to four areas: 1) regulatory framework and governance, 2) success factors of platform providers, 3) customer service, and 4) positioning. In many countries (e.g. US and UK) the practices of CC platform providers have come under scrutiny and changes in **regulatory frameworks** are underway. For example, considering peer service

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providers as employees or taxing platform providers similar to traditional service providers like hotels are issues that will need to be addressed. Accordingly, research should try to anticipate these changes and their impact on both traditional and CC business models.

Additionally, we encourage research on **success factors** of platforms, since it is unclear why some platforms are successful and others not. Since these platforms deal with two sides of the market, customers and suppliers (the peer service providers) one of the success factors seems to be balancing out the requirements of both sides, retaining the peer service providers as well as managing and coordinating demand and supply and thus smooth the capacity. However, research does not offer much guidance on how to do this effectively. For the successful platforms it will be interesting to investigate their growth and change dynamic (i.e., with what speed do they need to adapt and what changes can be successful) and how to succeed long term.

Many of our experts also commented on **customer service** issues. For the platform provider it is a challenge to maintain the individuality of the CC service on one side at the same time ensuring a constant quality level. Thus, research is needed on how to assure service consistency in CC or how to successfully communicate the likelihood of service inconsistency, something that may be more valued in a CC context than a traditional service context (e.g., hotel).

The final research area mentioned by the expert panel germane to platform providers relates to **positioning**. Since CC offerings are heterogeneous by nature it is a challenge for platform providers to position themselves and also differentiate their service from competitors. Currently the main competitors of the CC platform providers are traditional service providers (e.g., hotels) but this will likely change as the market evolves. Further it is unknown how platform providers can make use of established marketing tools like customer segmentation or loyalty programs.

Research opportunities relating to the peer service provider mainly span across following topics 1) their professionalization, 2) negative effects on peer service providers and 3) the evaluation system. The primarily issue mentioned by the experts related to the professionalization of peer service providers and how to apply HR policies towards peer service providers that act as brand ambassadors. It is unclear how peer service providers (e.g., hosts) can ensure the platform provider's brand promise without any formal training, how they can differentiate themselves from others, and how they can help in building a to become a trustworthy supplier. In particular, because of the triadic nature of CC we need greater understanding regarding the balance between the peer service provider capability/brand and the platform provider capability/brand. Related to this it is also unclear how to transition from a hobbyist peer service provider to a more professional peer service provider and whether this is beneficial for the peer service provider in the long term.

The dark side of CC or the potential **negative effects for peer service providers** was also perceived as an important opportunity for further research. Questions in particular relate to the how peer service providers fit into the welfare system without any long-term employment and if the growing importance of CC will impact the future of work in general. Above we encouraged research on the balance of capability/brand between both providers. This research would also inform how to distribute responsibilities and power between them and how peer service providers can enhance their bargaining power against the ever growing platform providers.

The third area relating to the peer service provider that offers opportunities for further research is the **evaluation system**, partly relating to and overlapping with above topics. Anecdotal evidence suggests biases and discrimination against certain demographics or minorities of peer service provider that surface in the evaluation system. More knowledge is needed about the extent of these biases and in particular how to overcome and deal with them. Further, other communities have shown "superstar effects" in which only the very good peer service providers are able to survive the competition. This in

the long term leads to the high star ratings losing its signaling power at the same time making the market unattractive for new peer service providers, which in the end might lead to an ageing of the platform. Finally, research could investigate how the ability of providers (e.g., Uber drivers) to rate customers impacts customer behavior and if, assuming the effect is positive, this can be translated into more traditional service businesses.

Three research areas were identified as it relates to consumers in general or certain customers in particular. Specifically, experts suggested topics related to (1) the potentially transformative nature of CC, (2) issues related to customer participation in CC, and (3) the formation of expectations. As it relates to potentially transformative aspects of CC, one issue relates to how CC might provide opportunities for lower income consumers to gain greater access to services due to CC. For example, by allowing relatively inexpensive transportation on an on-call basis, low-income consumers may have greater opportunities to participate in health care at a higher level than before. Access to a wider range of products/services might enable low-income consumers to engage in activities heretofore beyond their reach. There may also be interesting issues related to how non-ownership might impact quality of life issues. Will consumers value not having the responsibilities of ownership, or will this have a negative impact? Research has shown that products and services often exist as an "extended self" (Belk, 1988) but how will that be impacted if consumers do not own cars but access transportation via a CC platform.

A second issue related to consumers has to do with **participation**. To date relatively little is understood about the motivations for customer participating in CC vs using more traditional service offerings. Understanding how factors impact outcomes (e.g., satisfaction, WOM, engagement) as well as potential mediators and moderators of these relationships would appear to be very useful. While there has been much discussion about co-creation of services (e.g., Vargo & Lusch, 2004a, b) over the past decade, CC provides an opportunity for higher levels of co-creation. Research investigating under what conditions customers may wish to engage in more or less co-creation would provide interesting insights as would research that helps in understanding how different customers differentially value different levels of co-creation.

Finally, research broadly pertaining to the **formation of consumer expectations** and evaluations would seem to be warranted. Given the triadic nature of CC it may be that consumers form expectations differently that for traditional service providers. In addition, the fact that the core service is being provided by peers is likely to impact how consumers form expectations. For example, if a customer also acts as a peer provider (e.g., rents their apartment via Airbnb but also uses Airbnb when traveling) how will their acting in both roles impact how they form expectations regarding service delivery.

Our final area of potential research has to do with the ecosystem of the CC triangle. Here there appear to be three areas of interest: (1) service failure/recovery, (2) issues related to value, and (3) how one CC ecosystem might work within broader ecosystems. As to the first issue, service failure/recovery, due to the triadic nature of CC, research may need to investigate who customers blame for service failures and who is expected to recover for the failure as well as the form of recovery that will be required. Furthermore, there may be issues related to how and when consumers might be willing to participate in service recovery. For example, if staying in an Airbnb apartment and an issue arises, would the customer be more willing to participate in the recovery than if they were in a hotel?

Regarding **value** some of the experts mentioned how each member of the triad would not only provide value but also extract value from the relationships. It may be that, at least initially, platform providers may derive more value from non-monetary factors (e.g., information, market access, platform feedback) than from monetary factors. The same might be true for other triad actors. Thus, some understanding of the value extracted from the relationships by each actor and how that changes

over time would seem to be warranted.

Finally, it would seem that research would be benefited from taking a perspective that sets a triadic relationship within a broader ecosystem perspective. As Service-Dominant Logic (Vargo & Lusch, 2004a, b) has evolved from its initially conceptualization (e.g., Vargo & Lusch, 2016) it has become more focused on how actors engage in resource integrating activities within service ecosystems that are governed by institutions (norms) and institutional arrangements. From this one research direction might be to investigate how norms are formed not only within a triadic relationship but also how norms are driven by other, related ecosystems. For example, how do norms operative in a ride-sharing ecosystem (e.g., Uber) impact those in an apartment sharing ecosystem (e.g., Airbnb).

8. Conclusion

Collaborative consumption has become an important and growing element of the economy in many countries. We suggest CC can be differentiated from more traditional forms of exchange based on three factors, those being the (1) number and type of actors, (2) nature of the exchange, and (3) directness of exchange (see Table 1). From this point, our primary goals were to delineate the roles of the three actors involved in the exchange and then provide an overview of possible research directions. While academicians have recently begun to investigate this phenomenon, there are still far more questions to be answered. We hope our paper might serve as a starting point for some of this research in terms of providing a broad perspective of the actors involved in CC and the issues relative to their involvement.

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