Fostering sustainability through technology-mediated interactions

Carrigan, Marylyn; Magrizos, Solon; Lazell, Jordon; Kostopoulos, Ioannis

DOI:
10.1108/ITP-10-2018-0474

Document Version
Peer reviewed version

Citation for published version (Harvard):
Carrigan, M, Magrizos, S, Lazell, J & Kostopoulos, I 2020, 'Fostering sustainability through technology-mediated interactions: conviviality and reciprocity in the sharing economy', *Information Technology & People*, vol. 33, no. 3, pp. 919-943. https://doi.org/10.1108/ITP-10-2018-0474

Fostering sustainability through technology-mediated interactions: Conviviality and reciprocity in the sharing economy

Journal:	*Information Technology & People*
Manuscript ID	ITP-10-2018-0474.R4
Manuscript Type:	Article
Keywords:	Computer-mediated communication (CMC) < Technology, Peer-to-peer network / file sharing < Technology, knowledge transfer < Phenomenon, Literature review < Methodology, Community of practice < Study setting, Knowledge-based community < Study setting, Information society < Phenomenon, Information sharing < Phenomenon, Information exchange < Phenomenon

Fostering sustainability through technology-mediated interactions: Conviviality and reciprocity in the sharing economy

ABSTRACT

Purpose: This article addresses the lack of scholarly attention paid to the sharing economy from a sociological perspective, with respect to the technology-mediated interactions between sharing economy users. The paper provides a critical overview of the sharing economy and its impact on business and communities and explores how information technology can facilitate authentic, genuine sharing, through exercising and enabling conviviality and non-direct reciprocity.

Approach: The paper begins with a critique of the technology-mediated sharing economy; introduces the concept of conviviality as a tool to grow and shape community and sustainability within the sharing economy; then explores reciprocity and sharing behaviour. Finally, the paper draws upon social exchange theory to illustrate conviviality and reciprocity, using four case studies of technology-enabled sharing.

Findings: The paper contributes to the emerging debate around how the sharing economy, driven by information systems and technology affects social cohesion and personal relationships. The paper elucidates the central role conviviality and reciprocity play in explaining the paradoxes, tensions and impact of the sharing economy on society. Conviviality and reciprocity are positioned as key capabilities of a more sustainable version of the sharing economy, enabled via information technology.

Originality and value: The findings reveal that information technology mediated sharing enterprises should promote conviviality and reciprocity in order to deliver more positive environmental, economic and social benefits. The diversity of existing operations indicated by

the findings and the controversies discussed will guide the critical study of the social potential of sharing economy to avoid treating all sharing alike.

Keywords: Sharing economy, conviviality, reciprocity, sustainability

1. Introduction

The Sharing Economy (SE) is an emerging economic model that has been revolutionized by the wide dissemination of innovative technology-enhanced digital platforms and that has attracted considerable academic debate and public attention (Mair and Reischauer, 2017; Guttentag et al., 2018). Information technology is "at the heart of the rising concept of the SE" and characterizes its differentiation from traditional business, work and sharing practices (Sutherland and Jarrahi, 2018, p.328). The SE is one of the fastest growing economic segments of the larger, flourishing information-intensive services sector (Apte and Davis, 2019). Developing the right information systems and sharing platforms can transform cities, generate huge economic impact and foster the open and socially beneficial behaviours that underpin advances such as digital commons like Open Street Map (Almirall et al., 2016). Despite the sharing economy's potential to improve and transform people's lives, it has faced significant criticism (Davies et al., 2017). Whether the SE will deliver on its promises of openness and egalitarianism, "much like other opportunities that information technology has created" (Ladegaard, 2018, p.397), or become another source of "digital" inequality and exclusion (Hargittai and Hinnant, 2008) remains to be seen.

Technological applications in the sharing economy typically take the form of information systems that facilitate peer-to-peer communication to share access to goods and services, enabling collaborative consumption through community-based platforms (Hamari et al., 2016). While previous research has investigated SE participants' attitudes (Yuan et al., 2018), motives (Wilhelms et al., 2017) and economic propositions (Schor, 2017), there has been little scholarly discussion about the technology-mediated interactions between SE users. This is surprising since, by definition, the sharing economy is a "socio-economic ecosystem that commonly uses information technologies to connect different stakeholders – individuals, companies,

governments, and others – in order to make value by sharing their excess capacities" (Laamanen, et al., 2016, p. 218). Hasan and Linger's (2016, p.2) call to reposition the social in 'information systems' towards capturing more societal dimensions "without necessarily having a productive purpose in a business sense", highlights the lack of engagement with convivial communication in such digital platforms. Past research has failed to explore the technology-mediated relationships that occur between the diverse stakeholders involved in the SE (Leung et al., 2019), despite calls "to reflect more deeply on the nexus between society and economy under the premise of new forms of sharing" (Kornberger et al., 2017, p.7).

The multitude of organizations that could be grouped under the SE umbrella term makes the SE an even more complex concept (Acquier et al., 2017). Unsurprisingly, how we understand and assess performance of the SE is complicated by this lack of clarity and inconsistencies across phenomena (Bradley and Pargman, 2016). Although it is difficult to "analyse and classify [SE] practices given their novelty and the broad areas that they cover" (Li et al., 2019; p.2), some emerging taxonomies have classified SE enterprises into different segments. For example, previous research has distinguished between digital and non-digital forms of SE (Dredge and Gyimóthy, 2015); non-profit or for-profit platform orientation (Gössling and Hall, 2019); and private or public interest (Cohen and Muñoz, 2016). However, most of these taxonomies "are too crude to acknowledge the types of interactions among the users" (Palgan et al., 2017, p.72). For example, according to these classifications Couchsurfing and Airbnb would belong to the same category as for-profit, digital and private interest accommodation platforms. Yet the former has the potential to build social cohesion, while Airbnb has been criticized for the opposite, dominated by opportunistic, sterile behaviours (Edelman et al., 2017); uneven economic losses to the hotel industry (Zervas et al., 2017); increased nuisance in neighbourhoods (Kathan et al., 2016); and a rise in the price of housing (Frenken and Schor,

2017). Similar behaviours by other firms, along with unfounded sustainability claims, give rise to criticism of the SE, arguing that many of these practices are rather fake or pseudo-sharing (Belk, 2014a). In this paper, we acknowledge that important differences exist between those SE firms that primarily recirculate and enable increased access to services and resources, and those firms that utilize locally-embedded knowledge to build social cohesion.

This paper addresses the significant void in knowledge regarding technologically mediated communication within the sharing economy's digital platforms. It offers theoretical insight into social exchange by drawing upon the concepts of conviviality and reciprocity. The social aspect of sharing has been overlooked and has particular resonance for the information technology sector, given the longstanding debate on whether the use of information technology empowers the disenfranchised; reduces discrimination and connects strangers; or increases discrimination and inequality, leading to "awkward encounters" between strangers (Ladegaard, 2018). The SE is positioned at the frontier of an ongoing discussion over the negative implications of technological change, such as how innovation in the IT sector has disrupted traditional working practices (Sundararajan, 2016). To better reflect the idiosyncrasies of different SE organizations, we develop an alternative conceptualization of a technology-driven sharing economy that recognizes the varying degrees of personal interaction and the potential to build social relationships.

Using the theoretical lens of social exchange theory (Blau, 1964), we contribute to the limited theoretical frameworks that attempt to explain SE's underlying structure and mechanisms (Heo, 2016). According to social exchange theory, social behaviour and interpersonal interactions are the outcome of an exchange process (Emerson, 1976). Exploring this process, we identify the concepts of communal bonding - or, ***conviviality*** - (Nowicka and

Heil, 2016, Illich, 1973) and ***reciprocity*** (Lawler et al, 2000) as tools grow a sense of community within the SE. Conviviality and reciprocity are positioned as key capabilities of a more sustainable version of the sharing economy which is significantly transformed via information technology. Initially used to study close, mutual relationships that involve more than duties and obligations, and rooted in trust, solidarity and support, social exchange theory resonates with the SE. To illustrate this, we propose a typology of SE businesses and their digital platforms and use four case studies that depict organizations with varying degrees of skills, social relationships and connectivity to illustrate conviviality and reciprocity in practice. We offer definitions, examples and key suggestions for firms in the SE and conclude with a discussion of theoretical and policy implications and directions for future research.

2. The Sharing Economy and the Information Technology Sector

The terms 'sharing economy', 'collaborative consumption', 'access based consumption', 'peer-to-peer economy', are often used interchangeably (Schor and Fitzmaurice, 2015) to describe the act of "consumers, granting each other temporary access to under-utilized physical assets (i.e. idle capacity)" (Frenken and Schor, 2017, p.3). Described as an emerging "economic-technological phenomenon" (Hamari et al., 2016, p.1), these exchanges do not always involve material or financial compensation (Parguel et al., 2017), and represent a democratizing new business model, with many positive environmental, economic and social outcomes. Their growth is sustained by increased consumer awareness of the possibilities of social information systems alongside multiplying online communities, positioned to allow people to harness underutilized time and resources, and earn additional income (Hamari et al., 2016).

The SE has emerged as an alternative to traditional forms of consumption and ownership, enabled by digital platforms that allow users to contribute content and connect with each other (Carroll and Romano, 2010). Contemporary information systems are fostering online markets that compete with traditional business (Mittendorf, 2016); whilst interactive Web 2.0 technologies have driven the inexorable pace of sharing worldwide (Sharma and Baoku, 2013) and the embedded culture of openness and freeness that underlie some SE models (Belk, 2014a). The Internet can mediate transactions by matching supply and demand (Kumar et al, 2018); dramatically reduce transaction costs (Henten and Windekilde, 2015); facilitate trust among strangers (Mittendorf, 2016); and help reverse perceptions of disadvantage. Thus, sharing is increasingly considered as a distinctive consumption preference (Schor and Fitzmaurice, 2015). Online platforms and mobile applications enable modern sharing economy transactions, driven, in many instances, by a shared ideology of common good or collective purpose (Hamari et al. 2016). However, digital inequality remains a critical issue (Hsieh et al., 2008), and the potential for social exclusion around technological innovation and the SE remains challenging, complex and multifaceted (Mervyn and Allen, 2012).

Recent literature has opened conversations regarding the nature of exchanges and mediation that takes place within the SE and how this is conceptualized and approached in the information technology literature. Dillahunt et al.'s (2017, p. 2) review of SE in computing literature examines the rapid growth of research in this area, most of which explores; "optimization, socio-technical design, geography, and social relationships". Sutherland and Jarrahi's (2018) review observes similar trends in how technological affordances in the SE, particularly mainstream platforms such as Uber and Airbnb, account for a considerable proportion of the discussion. These affordances include the ability of platforms to: generate flexible assignment of work; provide on-demand access to labour; offer the algorithmic ability to match services

or resources with users, thereby extending the reach of services; manage transactions, and further the ability to mediate trust and facilitate collective actions (Sutherland and Jarrahi, 2018). These accounts, however, are often unlinked and separate from debates taking place in other disciplines around sustainability in the SE (Davies et al., 2017). As Sutherland and Jarrahi (2018, p.338) note: "most of the work on the SE does not problematize the technology itself" and requires further understanding of the "social dynamics of the sharing context".

By considering SE platforms as part of a transition to a more sustainable future, a much more valuable discussion can be achieved (Martin, 2016). Shifting consumer values, such as reduced ownership or liquid, flexible lifestyles (Kathan et al., 2016), further support the popularity of the SE, enabled through such technological platforms as sharing apps or community websites. The SE depends on these social or community dynamics for sharing and collaboration to occur (Hamari et al., 2016). Sharing is attractive to sustainably motivated consumers, and the SE can signify minimalism and anti-consumption (Ozanne and Ballantine, 2010), or an intentional political act (Schor and Fitzmaurice, 2015). As a route to non-extreme market resistance, sharing companies promote themselves as environmentally, socially and economically sustainable (Laurell and Sandström, 2017), encouraging consumers to buy and own less. This multifaceted motivation behind sharing is a crucial difference not only between the SE and the conventional transactional (buying and selling) economy but also between sharing and pseudo-sharing (Belk, 2014a).

While the sustainable benefits of the SE may be unproven and possibly overstated, these alternative spaces of consumption (Gollnhofer and Schouten, 2017) provide choices that potentially both reduce and rebalance consumption more responsibly, and challenge throughputs of excess consumption and waste (Schor, 2017). Savolainen (2009) notes the

importance of understanding the influence new information systems have on society. The potential environmental impact of the SE is seductive; through sharing, mobility demand in Singapore could be met by 30% of its existing vehicles, and a further 40% reduction if people car-shared (Almirall et al., 2016. The public benefits of such technology-supported SE include: reduced travel times, less congestion and diminished environmental impacts. Thus, the sharing economy is a powerful disruptive force in many industries, impacting quality of life in cities. Nevertheless, tensions exist between the platform capitalism of Uber and Airbnb versus more social-based models of sharing (Almirall et al., 2016). While these multibillion dollar for-profit 'sharing' companies dominate their respective markets, those same organizations are increasingly being critiqued and legally challenged over poor working conditions, health and safety lapses and dubious contracts (Ravenelle, 2017).

Many of the tensions within the sharing economy reflect the increasing momentum around controversial societal changes due to human-computer interactions. Brynjolfsson and McAfee's (2014) work light on how technical progression is becoming decoupled from human progression. Arguably the disruption the SE has brought to traditional industry is embellished within this, such as how a process of 'uberization' has led to growing economic insecurity (Fleming, 2017). Research, however, has questioned and provided greater nuance to the debates around the negative impacts of SE via its technological capabilities. Martin (2016) recounts the contradictory discourses of how the SE has been framed in research. Acquier and Carbone (2018) differentiate mission driven and creative common platforms from those platforms that monetize access to a central pool of resources or matchmake people and services to facilitate transactions. The technical capability of the sharing economy is all too often vilified (Martin, 2016) and its sociotechnical status misunderstood (Murillo et al., 2017).

Although the SE is not without its controversies, there have been few attempts to question some of its benign assumptions (Parguel et al., 2017). The reach of the sharing economy's technological capability is not yet properly understood. Sutherland and Jarrahi (2018) highlight the lack of studies on mediating technologies in the SE sector, as well as the divergent use of terminology to describe their social and economic characteristics. There is a distinct lack of clarity about what 'technology' corresponds to. In echoing the call for a greater focus on the SE as a sociotechnical phenomenon (Hamari et al., 2016), we position understanding of SE's mediation via information and communication technologies as a critical part of both a cause and a solution to sustainability issues (Lennerfors, et al., 2015). For example, environmental benefits, such as reduced carbon emissions from car sharing, remain unproven; second-hand consumption may not foster zero-waste, possibly triggering indulgent overconsumption (Denegri-Knott, 2011). While the SE revolution could lead to greater inclusion and remove social barriers, Castells (1989) warns of the dual city, where technological developments could polarize and devalue social groups rather than unite communities. These potential pitfalls are compounded by terminological confusion around the SE; moreover, the lack of research in this area is creating uncertainty about its impact upon communities, economies and the environment (Murillo et al., 2017). Thus, Mervyn and Allen (2012, p.1126) suggest technology is "Janus-faced: offering hope and inclusion for some" yet excluding others.

The focus here, therefore, is not to give further insight into the technological affordances of the SE and the different ways in which exchanges take place, such as aspects of software and design that enable mediation via digital platforms, as this has been addressed elsewhere (Sutherland and Jarrahi, 2018). Rather, the focus of this paper is to provide further clarity on the nature of those exchanges within the SE's sustainability remit. This is achieved by creating greater nuance between what is described as 'pseudo-sharing' versus sharing, which

incorporates characteristics conviviality and reciprocity from the perspective of how the SE's digital platforms can have the most societal impact.

3. The Sharing Economy as Pseudo-Sharing

3.1 Reviewing the sustainability claims of the SE

Proponents of the SE claim that it has many economic, environmental and social advantages. The direct economic effects of sharing are obtained by eliminating intermediaries and delivering a more socially just model (Schor and Fitzmaurice, 2015). Consumers can now access commodities that would otherwise be unaffordable; producers can enjoy new income-earning opportunities, reduce running costs and earn from underused assets. The eco-friendly credentials of sharing may seem self-evident: sharing reduces the demand for new goods; means less hotel construction; re-circulates goods rather than promoting consumption; leading to lower footprint (Schor and Fitzmaurice, 2015). Airbnb suggest their guests use "significantly less energy and water" than staying in a hotel (Airbnb, 2017); shared transportation allows people to reduce their eco-footprint without restricting their mobility (Cohen and Kietzmann, 2014). Finally, the SE has potential to build social capital within communities; contribute to values of "equality, mutuality, honesty, openness, empathy, and an ethic of care" (John, 2013, p.114); and create feelings of solidarity and bonding (Belk, 2010). Companies that operate in the SE advertize their ability to increase social connections and build social networks; users also cite making friends, socialization and communal bonding as important motivation for their participation (Murillo et al., 2017; Böcker and Meelen, 2017; Ozanne and Ozanne, 2011)

However, the complex, negative externalities faced by traditional businesses, employees, citizens or the environment, are rarely discussed. Regarding the economic dimension, *members*

can be affected by uneven income distribution (Ravenelle, 2017), as markets are dominated by very few intermediaries (Murillo et al., 2017), moreover users' unpaid labour helps SE companies employ far fewer people (Schneider, 2014). *Non-members,* such as traditional businesses, face anti-competitive behaviour (Malhotra and van Alstyne, 2014), for example rented cars violating state zoning regulations (Ranchordas, 2015) and unlicensed, or commercially uninsured private drivers (Frenken and Schor, 2017). The environmental benefits of the SE have been largely assumed and not empirically tested (Frenken and Schor, 2017). While the SE tackles underutilization of resources, it can generate rebound effects that shift, rather than reduce, consumption, thereby delivering environmental harm (Acquier et al., 2017; Schor and Fitzmaurice, 2015). Finally, despite their communal rhetoric, many sharing platforms fail to create long-term social ties. Users often express disappointment at the extent of social connection they develop (Dubois et al., 2014); while the anonymity, temporary access and market mediation of the SE model may even lead to opportunistic behaviours (Bardhi and Eckhardt, 2012). These findings appear to run counter to the altruistic motivations that underpin sharing, and the tensions and inconsistencies in the SE emerging demand further empirical investigation.

INSERT TABLE 1 ABOUT HERE

3.2 Pseudo-sharing

The previous discussion shows that the impact of the SE is contested and largely based on informal, assumed or sometimes conflicting claims about digital collaborative behaviours. The term *pseudo-sharing* has been employed by previous studies to describe; "commodity exchange wrapped in a vocabulary of sharing" and questions the authenticity of certain parts of the sharing economy (Belk 2014b, p.7). Critically investigating the sharing economy poses

questions about its sharing qualities, hinting that what is commonly referred to as the SE has been compromised. This is due to two equally powerful phenomena that underscore the negative dimensions of the SE, as presented in Table 1. Firstly, the idea of direct, negotiated and compulsory reciprocity (Belk, 2014b), which suggests that most users and providers participate for the sole motive of profit. The SE has attracted significant venture capital money looking for the 'next Uber', thus tainting (Griffith, 2013) the genuine sharing economy. Money can blight the altruistic intentions of participants, much like a dinner guest who offers to pay rather than share their wine during the meal would taint the experience (Benkler, 2002; Belk, 2007). Couchsurfing is an exemplar of the difference between genuine and pseudo-sharing based on economic motives. While guests are encouraged to bring a small gift or cook a meal, payment for the service is forbidden. According to Couchsurfing's CEO, the experiences people *share* via Couchsurfing cannot be bought with money. In contrast, Airbnb (often cited as Couchsurfing's for-profit competitor) positions itself as, "a community marketplace for unique spaces" (Griffith, 2013, para. 10; emphasis added). Such a personal act as sharing your home with a stranger invites friendship and engenders conviviality with other members, so when Couchsurfing shifted from a non-profit to a for-profit organization, many community users gradually dissipated, no longer able to align their value system to the new format (Belk, 2014b).

Secondly, the lack of social interactions and meaningful relationships can also lead to pseudo-sharing. There is evidence that information technology has brought loneliness (Lim and Kim, 2018) and anxiety and isolation (Caplan, 2006) to some of its users, and this is manifest in the SE. Shared economy platforms such as Airbnb and Uber are digital 'matchmakers' between users however this ecosystem is not purely transactional, but is also socio-economic; "with a higher diversity of inter-relationships and opportunities for co-investment, co-learning and co-

innovation than traditional business models" (Laamanan et al., 2016, p.1). For example, to increase profits, sharing providers have invested in technological developments (such as smart locks for houses), thereby providing a faster service, but also minimizing social interaction. Fenton's (2013) study of car sharing reports that service users described their interactions as "anonymous" and "sterile", challenging its potential to truly build community goodwill. Similarly, a major societal concern is discrimination and exclusionary behaviours in the choice of collaborator (Frenken and Schor, 2017). For instance, some non-black hosts of Airbnb charge 12% more than black hosts (Edelman and Luca, 2014) and guests with distinctively African-American names were more frequently turned down by hosts (Edelman et al., 2017). In a field study of Uber and Lyft, Ge et al., (2016) found that African-American passengers were more likely to experience longer waiting times and more cancellations from drivers. When Willer et al. (2012) compared solidarity and group identification between Freecycle (an app to donate items for free), with Craigslist (which exchanges items for money), they found stronger evidence of social connections among Freecyclers. Similarly, Zipcar members had no interest in meeting other members and no sense of attachment, seemingly operating; "primarily from selfish, pragmatic, and individualistic motivations rather than from altruism, concern for the environment, or concern for the collective good" (Belk, 2014b, p.8).

Societal and economic concerns such those mentioned above have led some academics to criticize SE platforms. References to the "skimming economy" (Malhotra and van Alstyne, 2014) and "pseudo-sharing" (Belk, 2014a, 2014b) are attached to profit-based sharing or renting, which, for some (Frenken and Schor, 2017; Belk, 2014a), sharply contrast with more socially driven sharing and lending, leading to questions whether the SE is a "social movement that solves pressing socio-economic global problems, or whether it is perhaps a business consultancy fad orchestrated by self-interested intermediarie" (Dredge and Gyimóthy 2015,

p.299). Frenken and Schor (2017) also disagree with the appropriation of the word 'sharing' suggesting that "renting" is more appropriate. Tom Slee's (2016) recent polemic also highlights how SE companies use feel-good rhetoric to hide their irresponsible business models, often financed by highly speculative venture capitalists; "what started as an appeal to community, person-to-person connections, sustainability and sharing has become a playground for billionaires, Wall Street and venture capitalists" (Slee, 2016, p.163).

Against this backdrop, we advocate a different type of technology-mediated, socially inclusive and cohesive SE. Kornberger et al. (2017) argue for "a real sharing economy", one based on "meaningful" sharing, not only of excess resources, but one that leverages information technology for an integrated sharing of "moral concern". We demonstrate how the SE is "replete with tensions and paradoxes" (Acquier et al., 2017, p. 1) regarding its boundaries, impact and rationales. The various sharing economies, each with complex, contested and asymmetrical emphases on different actors (Dredge and Gyimóthy, 2015) require examination through multiple lenses. Next, we offer a theoretical framework that can be used to classify SE firms.

4. Theoretical Framework

4.1 Social exchange theory and the sharing economy

Social exchange theory was introduced by Blau (1964) as a framework to explain people's behaviour through the exchange of rewards and benefits between actors. Early research on social exchange theory distinguishes between transactional and communal relationships (Clark and Mills, 1979). While both types of relationships are in some way beneficial for the members, the difference is that in transactional relationships the benefits are assumed and expected as part of a transaction. On the other hand, communal relationships are more open ended and less

time bonded, and benefits can be derived from various non-transactional aspects of the relationship, such as emotions, social interaction and interpersonal trust (Mills and Clark, 2013). Although these two types seem contradictory, in most relationships they coexist either equitably, or with one outweighing the other (Cropanzano and Mitchell, 2005). In the SE context, most participants develop a combination of both transactional and communal relationships, depending on the type of platform they use and whether their motives are intrinsic/altruistic, such as social interaction and sustainability, or extrinsic, namely related to utilitarian benefits (Tussyadiah, 2015).

Recent studies explore the aforementioned relationship between altruistic and utilitarian motives in the SE through the theoretical lens of the crowding-out effect (e.g. Hamari et al, 2016; Cox et al., 2018). This argues that individuals' intrinsic motivations start to wear out when their extrinsic motivations increase. In a SE context, this translates into occasions where people start using SE platforms for intrinsic reasons, but eventually monetary savings dominate their drive for participation (Hamari et al, 2016). Hence, their motives morph towards those of the traditional economy, which Belk (2014a) has described as "pseudo-sharing". Examples include global hospitality and transportation companies (e.g. Airbnb, Uber), which started as communities where participants enjoyed sharing services, but have transformed into cost-effective alternatives for hotels and hired car services.

However, this inversely proportional relationship between altruistic and utilitarian motives can manifest in the opposite way. As Cox et al. (2018) report, in some crowdfunding platforms, participants still consider intrinsic motives as the catalyst for their participation, despite the substantial tangible (e.g. monetary, resources) benefits they get. Moreover, for such platforms, research shows cues appealing to altruism attract more contributors than business/ financial

cues (Allison et al., 2015). These findings align with studies that indicate that activities such as recycling, donating and volunteering, which provide a utilitarian motive for participants, have an insignificant or substantially negative impact on participants' overall motivation (e.g. Bekkers and Wiepking, 2010). This suggests that when meaningful sharing takes place, the consequences of the crowding-out effect may be minimized and intrinsic motives can prevail. According to Hamari et al. (2016), there are two ways to achieve this: a) *increase the intrinsic motivations* (e.g. by creating more pleasurable and communal experiences); or b) *curb the extrinsic ones* (e.g. by enabling an "equal sharing" environment). This proposition tallies with previous studies on social exchange theory that explain meaningful sharing using variables such as interpersonal interaction and generalized reciprocity (Gyimóthy, 2017).

Based on the above discussion, in the following sections we demonstrate how specific SE platforms can move away from the pseudo-sharing paradigm towards a more authentic type of sharing, dominated by intrinsic, altruistic motives. With our focus on the interactions among people and the minimization of the pursuit for solely direct transactional benefits, we use ***conviviality*** (intrinsic) and ***reciprocity*** (extrinsic) lenses (explained in detail in the following sections) to explore the SE more critically and recommend a classification that enables a distinction to be drawn between sharing and pseudo-sharing.

4.2 Conviviality

Very commonly the social benefit of participating in sharing platforms is cited as having equal or greater importance than economic or other utilitarian motives. As explained in the previous section, one way to prevent negative aspects of the crowding-out effect and enable meaningful sharing is to enhance participants' intrinsic motivations, such as their pleasure and communal

experience (Hamari et al., 2016). On this basis, we introduce ***conviviality*** as a differentiating factor between authentic, meaningful sharing and pseudo-sharing.

The concept of conviviality is associated with "sociable, friendly and festive traits" (Nowicka and Heil, 2016, p.1) and denotes a sense of community and sharing (Guercini and Ranfagni, 2016). Across disciplines such as anthropology, geography and sociology, conviviality is imbued with narratives that articulate a deeper concern with the human condition and the meaning of togetherness. In fact, early research on social exchange theory identified friendliness, sociality and conviviality, along with the feeling of reciprocity, as the main ways of developing trust and symbolic value in social exchanges. Illich (1973) proposed that social tools – such as social institutions – could be shaped to help people live harmoniously in complex social systems. We propose that Illich's (1973) notion of conviviality has parallels with the emergence and growth of the SE. Moreover, we argue that conviviality can be one of the main reasons why the sharing economy's alternative market arrangements are increasingly challenging the current unsustainable economic paradigm (Kilbourne et al., 1997).

Guercini and Ranfagni (2016, p.770) define conviviality as:

> *the propensity for sharing and a phenomenon that is created, sought after or ….emerges from the community and contributes to the strengthening of the bonds within a group, without compromising individual freedom, but that gives rise to new possibilities deriving from the perceived closeness and greater sense of community*.

Conviviality has been considered by recent studies of cosmopolitanism and multicultural, local and national identities (Nowicka and Heil, 2016, Gilroy, 2004), and, more recently, of the sharing economy (Marovelli, 2018). Passion, skills and social relationships (Guercini and Ranfagni, 2016) drive the *conviviality economy*: conviviality represents a tool to grow and shape a sense of belonging, enabling participants to reap benefits from community. Following

Illich (1973), Guercini and Ranfagni (2016) conceive community as space where people are united, regardless of their inherent differences.

Conviviality represents both a source for the formation of these new communities, and the glue that holds an existing community together (Guercini and Ranfagni, 2016). Conviviality acts as a reservoir of community, delivering a strong sense of social anchorage, even when transactions take place online. The SE is a context in which conviviality may prove particularly valuable and significant, as a determinant of benefits beyond the functional and mundane aspects of community sharing, and where the underpinning processes and stories from convivial sharing interactions may be examined. An indicative example can be found in a comparison of corporate transportation platforms such as Uber, with their more convivial equivalents (e.g. Car2Go); the latter entails interactions between private individuals and is based on the benefits deriving from personal interaction.

Conviviality essentially represents good, quality life, and Nowicka and Heil (2016, p.6) present a useful framework for empirically mapping conviviality. The four principles of conviviality are*, common humanity*; *common sociality*; *individuation* and *managed conflict*. Communities of conviviality operate on the basis of mutual aid, spontaneity and empathy, and seek togetherness through; "ad hoc and temporary commonalities and similarities and consensus over issues of interest or concern" (Nowicka and Heil, 2016, p.12). By analysing conviviality, we seek to provide insight into how the social aspect of an interpersonal exchange, often overlooked in the discourse of the technology-mediated sharing economy, can determine the nature of the relationship between participants. The negotiation, transformation and transition processes that shape any convivial encounter may appear ephemeral, but these social practices and the interdependence of the people involved in the SE require attention and analysis if we

are to better understand the genuine sharing economy and move further away from pseudo-sharing.

4.3 Reciprocity

Expectation of direct reciprocity is one of the main characteristics that distinguishes authentic sharing from pseudo-sharing (Belk, 2014a). Although reciprocity as a concept has been central in public discourse for thousands of years, there is substantial ambiguity around its definition (Gouldner, 1960). From one perspective, reciprocity is considered the driver behind interpersonal transactions, in other words the reason why individuals respond to positive actions made by other people (Emerson, 1976). Reciprocity is also believed to be a cultural expectation, an individual orientation and a social norm, meaning that people not only feel obliged to return good actions, but also expect everyone else to share this view (Cropanzano and Mitchell, 2005).

According to social exchange theory, interpersonal exchanges can be categorized based on the type of reciprocity to which they are related (Lawler et al, 2000). When an exchange between two or more individuals is based on weak or no feelings of reciprocity, the foundation of the exchange is a negotiation that leads to an explicit agreement; for instance, when a customer agrees to pay a fee to purchase a product or a service. If an exchange is not based on a clear agreement, but is still founded on expectations of direct reciprocity between two parties, it is called reciprocal exchange (Molm et al., 1999). According to Belk (2014a), many companies develop business relationships based on these two types of exchange and masquerade them as genuine sharing. In reality, these transactions do not differ significantly from regular commercial ones, as they are not based on actual feelings of mutual responsibility, but rather

on extrinsic motivation (Norbutas and Corten, 2018). Examples of such pseudo-sharing exchanges can be found in the hospitality industry, where reciprocity involves either a monetary payment (e.g. Airbnb) or a non-monetary, but contracted and direct value provision (e.g. Couchsurfing).

According to generalized reciprocity theory, altruistic behaviour can be contagious and reciprocity can be indirect rather than paired. In recent years, digital sharing technologies have enabled interactions that are established on such a generalized sense of reciprocity. Movements like Access to Knowledge (A2K) have proved that individuals sometimes engage in sharing without expecting an immediate reward for their actions. On the contrary, they do it to contribute to societal and environmental causes, engage in collaborative activities and feel part of a strong community (Eisenstein, 2011; Bucher et al, 2016). This form of augmented reciprocity leads to two additional types of exchange that have been thoroughly analyzed in the social exchange theory literature (Lawler et al, 2000) as: a) productive exchanges, i.e. interactions where all parties collaborate and join resources in order to generate mutual value (e.g. charity and communal activities); and b) generalized exchanges, i.e. interactions where individuals offer value to a community of people, while receiving indirect benefits from their participation in the community or from the members of the community as a whole (e.g. the A2K movement or Freecycle). Following suggestions from Hamari et al. (2016), we propose that the lack of direct reciprocity – or the establishment of a generalized reciprocity climate - can enable meaningful sharing by decreasing the extrinsic motivations for participants and, in so doing, enhancing the intrinsic ones.

5. Classification of Sharing Platforms

The previous discussion reveals conviviality and reciprocity as two major factors that differentiate authentic sharing from pseudo-sharing. Although these two characteristics are interrelated they are distinct notions that determine the nature of the exchange within the sharing platform both separately and interactively. As such, a service may fall into the category of genuine sharing - either because it is based on non-direct expectations of reciprocity (Belk, 2014a), or because there is an element of conviviality (Frenken and Schor, 2017), or both (Murillo et al., 2017). To get a better understanding of how conviviality and reciprocity shape the type of a sharing exchange, we propose a 2x2 taxonomy of sharing platforms; essentially a taxonomy of the pertinent types of exchange, based on these two variables. As shown in Table 2, sharing platforms can be put into four distinctive categories based on whether they entail convivial interactions, and on whether they assume direct and compulsory reciprocity. The four categories are explained below:

a) Non-convivial – directly reciprocal

This category includes platforms like the large hospitality (e.g. Airbnb, Onefinestay) and transportation (e.g. Uber, Car2go) service providers, which are not genuine sharing platforms, but rather provide transitional commercial services for a fee. In such cases, the interactions between the stakeholders (providers and users) are not convivial and are solely based on materialistic, mostly monetary, transactions. According to social exchange theory this is a typical case of *negotiated exchange*, based on negotiations, explicit agreements and contractual obligations (Lawler et al, 2000). In platforms that belong to this category, the extrinsic motives of participants outweigh the intrinsic, indicating that meaningful sharing is unlikely to occur. These platforms are closer to traditional corporations or, as Belk (2014a) describes them, pseudo-sharing organisations.

b) Convivial – directly reciprocal

In some sharing platforms, interactions among individuals are directly reciprocal, but participants' motives are social and the relationships members develop are more meaningful. Examples of platforms that follow this paradigm can again be found in hospitality (e.g. Couchsurfing) and transportation (e.g. Blablacar). In general, when using such platforms, members are very rarely obliged to pay a fee, but are expected to 'return the favour' to the service provider (Norbutas and Corten, 2018). The type of exchange in this case is *reciprocal,* which, according to social exchange theory, means sequential, tacit and beneficial for all parties across time (Lawler et al, 2000). Sharing platforms that belong in this category include not-for-profit organizations, such as Superkitchen, that are aligned to successful social movements (Cathcart-Keays, 2015). We suggest that in these platforms, although all members obtain certain benefits and therefore extrinsic motives do exist, the intrinsic aspect is equally or more important. As Mills and Clark (2013) note, in exchanges like these the relationships are communal and hence benefits derive from various non-transactional aspects of individuals' participation.

c) Non-convivial - non-directly reciprocal

Even though convivial interactions are indicative of a genuine sharing economy, they are not a prerequisite. Meaningful sharing exchanges may also occur when individuals participate in communities and offer their services without expecting to get something back, even if they do not develop convivial relationships (Belk, 2014a). In many cases, participants do not even know the other members of the community, but are still willing to generate value for them (Eisenstein, 2011). Examples of such sharing platforms include revolutionary online knowledge exchange organisations (e.g. Wikipedia), open source software (e.g. Linux, R programming) and other platforms linked to the A2K movement (Kapczynski, 2010).

Following a social exchange theory approach, members of these communities engage in *generalized exchange*, as they provide unilateral benefits to other members of the community, while receiving them from different members or from the community as a whole (Lawler et al, 2000). Our proposition is that these platforms are not engaged in pseudo-sharing, since the benefits members receive are communal and based on intrinsic motives, such as sustainability, and they challenge the traditional market arrangements.

d) Convivial – non-directly reciprocal

According to social exchange theory, productive exchanges are those where all participants contribute for everyone to benefit, hence they co-create the value and incur benefits and costs simultaneously (Lawler et al, 2000). In a sharing economy context, this type of exchange implies that participants contribute to a common cause without expecting to receive benefits directly from the individuals they are helping. Instead of expecting, or even demanding, direct reciprocity, they participate in a community built on feelings of generalized reciprocity and they share their resources and knowledge in a collaborative and convivial environment (Belk, 2014a). Not-for-profit and charity projects are often based on this type of sharing; for example, the "Train of Hope" charity – where volunteers share resources and collaborate to support refugees in Vienna (Kornberger et al., 2017). We argue that this is the category where pseudo-sharing is the least likely to occur. In such sharing platforms, intrinsic motives are the dominant force behind individuals' behaviour, to the point that if extrinsic motives are offered, individuals may disengage due to the crowding-out effect (Hamari et al, 2016).

INSERT TABLE 2 ABOUT HERE

5.2 Case study methodology

Case study research as a strategy for methodological exploration is well documented (Flyvberg, 2011), and is rooted in the positivist tradition, typically aspiring to extract variables from context to generate propositions and build theory (Piekkari et al., 2009). Thus case study method is chosen for theoretical, not statistical, reasons (Glaser and Strauss, 1967), with the intention of filling theoretical categories, often providing examples of polar types (Eisenhardt, 1989). Using case studies as a research strategy is chosen here for illustration purposes, in order to provide a clearer view of how our theoretical arguments could be applied in an empirical setting (Siggelkow, 2007). Case study research has become increasingly refined, and considered a valid form of inquiry to explore a range of complex issues, particularly when human behavior and social processes are central to understanding. Following a positivist, idiographic approach, in this paper we use instrumental, exemplar cases to provide a broader appreciation of reciprocity and conviviality within sharing communities (Bell et al., 2018).) The empirical component of this paper entails four instrumental case studies (Stake 1995) based on secondary data sources. We apply our proposed 2x2 taxonomy to the sharing economy, providing a brief example for each quadrant (Curb Mobility, SuperKitchen, Fon Wireless, Repair Cafés). Purposive sampling was used to select each case, where the intention was to provide insight regarding the particular phenomena of reciprocity and conviviality. The value and importance of purposeful sampling comes from selecting information-rich cases to study in depth, allowing learning that delivers a "great deal about issues of central importance to the purpose of inquiry" (Patton, 2002, p.230). These case studies are detailed (Ritchie and Lewis, 2003), and phenomena are studied in context using various data collection methods (Yin, 1994). For this study, data source triangulation was achieved by drawing the secondary data from a number of sources (Yin, 1994) that included: newspaper articles, conference speeches, online blogs, and websites run by the communities and groups. Once all the

documents and information were assembled, data analysis was carried out by the authors using a deductive approach framed by the discussion and literature presented in previous sections. This concentrated review of relevant documents helped to illuminate the phenomena under study (Jamali et al., 2009). Case studies are noted for their ability to secure rich descriptions and while illustrative cases do present weaknesses in terms of generalizability and representativeness, Yin (1994) argues that case studies are generalizable to theoretical propositions and not to populations. This approach is similar to ones followed in conceptual papers both in the IT sector (e.g. Saariko et al., 2018) and the sharing economy domain (e.g. Belk, 2014a, 2014b). The four organizations were chosen for two additional reasons: a) they represent four sectors where sharing economy platforms are active; and b) these specific organizations have not been analyzed in previous relevant literature.

Case study 1. Negotiated exchange: *Curb Mobility*

Curb Mobility provides mobility solutions to the transport sector, principally represented in the sharing economy by an app that facilitates taxi services. The Curb app, introduced to the US market in 2015, enables licenced taxi drivers (in contrast to Uber and Lyft that are accessible to anyone with an appropriate vehicle) to find and receive fares via an app-based service thus enabling them to offer services that match up with those offered by competing apps. This facility is important given both how app services have had a negative impact on taxi drivers and the changing expectations of passengers regarding their car sharing experience, such as the provision of a price before the journey begins. These impacts have caused tensions between traditional taxi services and drivers of app services, leading to the re-regulation of for-hire services globally.

Despite a well-positioned business model and mission, we argue that Curb is an inherent example of pseudo-sharing. Curb facilitates the sharing of information to connect drivers and potential passengers for a solely economic aim. Curb's support of on board payment solutions, combined with the app, is an example of direct reciprocity. As part of this negotiated exchange between driver and passenger, three factors are the focus points for a more efficient service. These include: the setting of processing rates; the provision of technical support to drivers; and the usability and reliability of both software and hardware. Curb's business model takes a percentage processing fee, such that the driver and the firm are in an explicit agreement of conditions of payment. At the same time, users do not engage in any sort of meaningful interactions apart from the core transaction. It is, therefore, reasonable to conclude that the exchanges between them entail very low to zero conviviality and belong to the negotiated exchange category of our proposed classification.

Curb describes its platform as "Open. Flexible. Powerful" and as the "foundation for a scaleable, efficient, intelligent, open transport system" (https://gocurb.com/), promoting a fast and convenient way for passengers to request and pay for rides. In contrast, Li and Zhao (2015) explain how a similar app, e-hail, has disrupted stakeholder relationships between drivers, passengers, regulators and professional associations, enabling a more direct connection between drivers and passengers. The implementation of information technology in Curb's case, clarifies the direct value provision between the two parties, with the aim of the service not being for any sense of community or social exchange, but solely monetary.

Case study 2. Reciprocal exchange: *Superkitchen*

Established in 2013 in Nottingham, UK, Superkitchen aimed to "start a revolution around the dinner table" (Cathcart-Keays, 2015, para.10). Exclusively using surplus 'good' food destined

for waste, Superkitchen serves affordable, healthy, freshly-cooked meals to over 1,000 people per week. These welcoming social spaces have been established in more than 30 towns across the UK, run by social entrepreneurs or volunteers. Superkitchen's social mission is two-fold: to help the environment by saving food from landfills and to tackle loneliness and food insecurity within local communities. Internal reporting identifies a strong sense of community and conviviality within Superkitchen, driven by shared experiences and learning, support and a sense of belonging (Superkitchen, 2016).

With a shared website (http://superkitchen.org) that connects the Superkitchen communities around the UK, the sharing model of Superkitchen upcycles surplus food into social eating meals, saving 66 tons of food from landfill per month. Avoiding the current 'high choice-high waste' food business model, Superkitchen offers a varied, but limited menu of one or two choices each meal, serving food that costs and produces less waste (Superkitchen, 2016). Saving food from landfill and delivering high nutritional quality meals is just one aim. A core second ambition of Superkitchen's mission is to promote social inclusion. Everyone is welcome to join and this 'shared family' atmosphere is reinforced by members sitting around a table and sharing the same meal. This participation facilitates 'personal coherence' and leads to health, wellbeing and feelings of happiness.

The digital platform is hosted by a network of members who run social eating spaces, cooking for their communities, as well as offering support in setting up a kitchen and helping citizens locate a Superkitchen in their community. Superkitchen posts good practice films and blogs, tweets events and shares recipes between kitchens and also provides online advice. The conviviality of Superkitchen is apparent throughout its operations. By bringing together producers, supermarkets, volunteers, social entrepreneurs and consumers, it develops social

capital in the community and turns "spare food into friendship" (Hufton, 2016, para.1). Producers and volunteers experience community service, make a difference to local people's lives and reduce global food waste. Consistent with the notion of reciprocal exchange, consumers are asked to participate by either contributing for their own shared meal or paying a nominal (£2.50) fee. Despite the requested fee, we argue that Superkitchen remains part of the 'genuine' sharing economy, as highlighted by the convivial aspects in its practice and the reciprocity of participants. Many pay not only for their own meal, but also for an extra fee, a 'Superspoon' – a meal for attendees who cannot afford to pay themselves. In addition to a nutritious meal, vulnerable consumers and volunteers sharing in these events receive affection, connection, and a social space with informal support. Through their increased societal participation, they leave empowered, more confident, with a renewed sense of belonging and of being an 'active participant' in the community. On this basis, we conclude that exchanges at Superkitchen – both online and offline - entail both conviviality and direct reciprocity and can be therefore classified as *reciprocal exchanges* in our proposed taxonomy.

Case Study 3. Generalized exchange: *Fon Wireless*

Fon wireless is a commercial Wifi sharing network, founded in 2006 in Spain. The company's operations are based on an innovative sharing technology, which makes it possible to broadcast two separate WiFi signals to their users' routers; one just for the owners and a second one which allows the owners to share part of their connection with other members of the company's network (Allerson, 2012). Fon customers can either pay a fee or share their WiFi with other users by using a router that is linked to broadband connections offered by the company's partners (Shi et al., 2015). In return, they get free access to Wifi away from home using one of the 20 million Fon hotspots, most of which have been created by the company's other users (Bloomberg, 2018). Fon is now considered the largest Wifi provider worldwide, with a client

base that includes hotels, restaurants and large retailers, and with successful partnerships with leading broadband providers (Fon, 2018).

Fon Wireless is a successful example of a commercial corporation that uses sharing technology to enable their users to offer benefits to each other. It entails a degree of reciprocity (Shi et al., 2015), but not a direct, paired one. Instead, users gain value from their participation in the community and, in return, they choose whether they will repay the community by sharing a part of their Wifi connection or by paying a fee. As explained previously, this type of interaction falls into the *generalized exchange* category, in other words, the company's customers offer value to other users and they receive back benefits from the community as a whole (Lawler et al, 2000).

Despite being a very successful for-profit platform, Fon enables genuine sharing between their customers. They describe themselves as "driven by a community WiFi approach" and their aim is to enable their users to offer value to each other (Fon, 2018). Indeed, their commercial success is founded on the effective management of users' feelings of generalized reciprocity and the significant reach their services have achieved is due to their users' collaborative value production. This genuine sharing among between their users, who do not gain explicit monetary benefits from their participation, differentiates Fon from other companies that sell traditional services yet mask them as sharing (e.g. Airbnb, Uber); a phenomenon which is more authentically badged as pseudo-sharing (Belk, 2014a).

Case Study 4. Productive exchange: *Repair cafés*

A repair café is a community space that provides materials, tools and know-how to fix broken consumer products without money or any direct exchange (Muñoz and Cohen, 2018. The cafés

aim to mitigate the generation of waste created by the short life span of consumer products, following an ethos of repair rather than replacement. Founded in 2010 in Amsterdam, the Repair Café Foundation has guided more than 1,500 repair cafés to organize locally. Cafés are typically operated by skilled volunteers who want to give back to their community and encourage others to live more sustainably by means of the promotion of product repair and longevity (Keiller and Charter, 2016). Sustainably motivated repair practices are driven by the sharing of knowledge within a convivial framework of local and global organization, and are supported by volunteering and community collaboration. Repair Café hosts an online platform (https://repaircafe.org/en) that connects cafés and communities worldwide and provides a digital starter kit for a small fee. It also puts interested citizens in contact with other people or groups in their area who have shown an interest in starting their own Repair Café.

At a community level, repair cafés deliver a convivial space for social interaction, with the social aspect of repairing highly valued items, even if the repair is unsuccessful (Cole and Gnanapragasam, 2017). Repair cafés are also associated with promoting social cohesion; cafés in the Netherlands are funded specifically for this purpose (McGrane, 2012), and online forums and Facebook enable communities to share knowledge and ideas across the world. Conviviality runs through these activities; interactions are based on collaborative practices, with visitors to the cafés gaining skills as part of an ongoing learning process via 'sharing the repair' with others. They receive benefits from their participation and a culture of healthy reciprocity is enabled. These benefits are not monetary and not necessarily received by the participants directly from the people they interact with. As explained, this type of community participation falls under *the productive exchange* category of our proposed taxonomy.

Often the repairing knowledge held by volunteers is a forgotten, redundant, less relevant or less in demand skill in a throwaway, mass consumption world. Technical knowledge has now shifted locale to multinational organizations that produce products rather than users (Valenzuela and Böhm, 2017). Shared repairing provides an understanding of how things work and repurposes practical knowledge via the provision of a service to the public, in a space for convivial practices (Bradley, 2018), revaluing these skills with an ethic of care (Shaw et al., 2016). Repairing is reinterpreted as a sociable activity that brings people together in common sociality based upon the appreciation of such skills, with volunteers appraising items and attempting repairs in solidarity with the visitor rather than a customer-service provider relationship. Table 3 portrays the convivial aspects of Repair cafés and Superkitchen.

INSERT TABLE 3 ABOUT HERE

6. Discussion and Conclusions

With the SE spreading inexorably in the global marketplace, this paper is a timely contribution to a crucial knowledge gap surrounding the social and sustainable aspects of community sharing, and the potential it represents. Muñoz and Cohen (2018) suggest that the SE space offers a rich opportunity for scholars to explore, from many interdisciplinary angles. While information technology has enabled a vast array of different forms of sharing to emerge, the interactions between members in the SE have not been rigorously discussed. Analysis of the parameters that shape these interactions is essential, in order to understand how organizations utilize sharing technologies and processes, as well as to offer value to SE participants and society in general.

Drawing on social exchange theory, we use instrumental, exemplar cases within a sharing economy, selected for their insight regarding the particular phenomena of reciprocity and conviviality, and reveal where differentiation is manifested, based on meaningful communal, rather than transactional, drivers. Our analysis of the first case study, Curb, indicates that when reciprocity is based on a transactional, commodity experience and low levels of conviviality negotiated exchanges occur and sharing becomes commercial. Curb epitomises pseudo-sharing, where communal relationships are not featured or built; interaction is a closed encounter; and emotion, trust or social interaction are immaterial to the expected benefits received, reflecting Blau's (1964) original theorization of social exchange. Although successful, technology-enabled platforms like Curb become vulnerable in the sharing marketplace, based as they are on primarily extrinsic exchanges, without embedding more sustainable sharing attributes and rewards. Contrastingly, Superkitchen embodies the open-ended, interpersonal and socially interactive rewards of a convivial sharing economy, where reciprocity is the catalyst for socially inclusive communal benefits, underpinned by the transactional exchange of surplus food and conversation. Sustainability and community, along with economic imperatives, fortify the benefits exchanged, and non-obligatory, proactive participation lies at the core of this sharing platform. Scaling up and proliferation of these shared eating encounters is enabled by the underpinning digital networks. By fostering greater community social capital through the reciprocal connections it establishes, Superkitchen represents a more resilient, altruistic (Allison et al., 2015) model of conviviality within the sharing economy than those exhibiting primarily transactional exchange rewards.

Our exploration of Fon Wireless case study demonstrates how commercial actors – in this case the organization and its customers – can co-create a mutually beneficial exchange that reflects communal, rather than merely transactional, rewards. While a hybrid system of fee or shared

access operates, the potential non-monetary basis for differentiation characterizes Fon as both a communal and a transactional sharing platform – as opposed to an either/or (Clark and Mills, 1979) - with conviviality delivering a collaborative value proposition that transcends mere pseudo-sharing. Social interactions do not define Fon's shared encounters, yet valued communal rewards and connections are derived for customers from the balance of intrinsic and extrinsic incentives. The analysis of Repair cafés provides a further example of non-contractual reciprocity; here communal interaction and productive exchange are deeply intertwined in purposeful sustainability. Online communities catalyze the shared knowledge, ideas and exchanges, facilitated by repurposed knowledge within convivial spaces – online and offline – to enable social interaction benefits that stretch beyond those who participate in the repair.

Our suggestions are critical for SE organizations, consumers and policymakers, who can use the suggested categorization to understand how people interact with sharing technologies and with each other, and to effectively distinguish genuine sharing exchanges from pseudo-sharing ones. Organizations interested in building their legitimacy and reputation (Wang et al., 2019) can facilitate conviviality among users and encourage sustainable consumption and, whenever possible, non-direct reciprocity. With the advancement of information technology, we expect social technologies such as online reviews or message boards to be used to facilitate trust and user interactions (Bapna and Qiu, 2017) or mimic traditional face- to-face social relationships (Ou et al., 2014). From a user perspective, our taxonomy distinguishes different SE business propositions, sets expectations accordingly and helps alignment between motives and offerings of each category. Finally, public policy needs to engage with a broader understanding of the SE that recognizes the distinguishing attributes of the different SE models outlined in this paper and supports authentic sharing rather than pseudo-sharing to deliver greater social and sustainable benefits.

Based on this, this paper's first contribution is the introduction and application of the concepts of conviviality and reciprocity to frame a discussion about the genuine, authentic SE. In doing so, we extend knowledge and understanding of the opportunities these two features have to offer to the information technology sector and its role in supporting local transformation, social cohesion and sustainability. We suggest that information technology used by sharing enterprises should encourage conviviality and generalized reciprocity to flourish, if positive environmental, economic and social benefits are to be realized. Another important contribution of this paper is the categorization of sharing platforms based on the degree of conviviality and type of reciprocity they entail. As discussed, these two concepts determine not only the authenticity of the sharing process (Belk, 2014a), but also - following a social exchange theory approach – signify the type of the exchange between participants (Lawler et al, 2000).

A third contribution pertains to the implementation and extension of social exchange theory to explain the differences between organizations in the sharing economy landscape (Blau, 1964; Clark and Mills, 1979). Drawing upon early arguments that distinguish between the transactional aspects of an interaction and the communal ones and acknowledging that these two aspects can coexist (Cropanzano and Mitchell, 2005), we offer a comprehensive classification of sharing platforms based on the degree of reciprocity and conviviality they entail. In this way, we show how the expansion of social exchange theory can be used to fill an important gap in the literature and explain how technologically- mediated communication can help determine the nature of interactions in the SE context with wider sustainability implications. The extension of social exchange theory to the sharing economy confirms a taxonomy of different platforms with unique characteristics, participant motives and behaviour.

The diversity of operations in the sharing economy and the controversies therein can help guide scholars to critically study the social potential of the SE, rather than treating all sharing alike (Muñoz and Cohen, 2018). Our analysis highlights and elucidates the central role of conviviality and reciprocity in understanding the paradoxes, tensions and impact of the SE on society. Researchers should investigate what the SE, in its various guises, means for the future operation of organizations and the market, as well as the challenges, possibilities and alternatives it could present to the currently unsustainable economic paradigm. Further empirical investigation is needed, such as the recent work by Laurell and Sandström (2017) contrasting the idealism of non-market logics with profit driven SE firms.

Using the normative arguments expressed in this paper, further analysis of the 'social' promise of the sharing economy should be explored, particularly the motivations and experiences of stakeholders in the genuine sharing economy, if we are to measure its feasibility (Murillo et al., 2017); understand how information technology can unleash its potential for replication or scaling (O'Reilly and Binns, 2019); and encourage future participation – both by providers and users. The social potential of the SE rests in the creation of stronger communities and forging interpersonal relationships embedded with conviviality and reciprocity. The SE model forces people to push the boundaries of their lives and turns consumers into active and engaged members of societies. A greater understanding of how the co-creation of conviviality takes place - online and offline - would be a fruitful research direction. Such studies could provide indications for the general direction (and possible proliferations) the SE might take in coming years, and also reveal the ways in which the notion of sharing becomes utilized by SE actors, drawing on both non-market and market logics.

The implications for sustainable production, consumption and the conviviality economy are complex and not yet fully understood. Environmental motivations seem significant for car and ride-sharing; social motivations and substantial personal interaction dominate meal sharing; repair cafés flourish with both environmental and social aims (Böcker and Meelen 2017). Thus, the SE may offer transformational promises in contrast to the environmentally controversial dominant social paradigm, yet tensions are inherent, both conceptually and in practice (Acquier et al., 2017). Therefore, we need to expand our knowledge and assessment of the overall value and capability of the SE to further the circular economy, specifically potential transfer and scaling up of local initiatives is needed. This is particularly pressing, given that intangible sharing via information technology-enabled platforms is yet to be adequately examined, such as the altruistic notions of sharing and lending within online communities. The present paper offers some initial arguments and propositions on how true and meaningful interactions can be facilitated in online communities with the use of genuine sharing platforms.

Scholars from different disciplines can draw on a broader range of theoretical foundations including geography, sociology and public policy, to identify theoretical interventions that can deliver a greater focus on conviviality and generalized reciprocity in existing and future work. This may involve analysis of the awareness, attitudes and adoption of sharing practices (Wilhems et al., 2017) across cultural and geographical contexts, such as research beyond the North American and European settings. While offering information rich cases, our analysis contains only secondary data content.-Like most previous research into the SE, our paper is normative and conceptual in nature. This leaves considerable space for future, primary data based empirical exploration of the SE in terms of its many diverse business models.

References

Acquier, A. and Carbone, V. (2018), "Sharing economy and social innovation", *Cambridge Handbook of the Sharing Economy and Law*, pp. 1-17.

Acquier, A., Daudigeos, T. and Pinkse, J. (2017), "Promises and paradoxes of the sharing economy: An organizing framework", *Technological Forecasting and Social Change*, Vol. 125 No. Supplement C, pp. 1–10.

Airbnb (2017). "Helping Travel Grow Greener. Internal Report". Available at https://press.atAirbnb.com/app/uploads/2017/03/Airbnbandsustainabletravel2017.pdf

Allison, T.H., Davis, B.C., Short, J.C. and Webb, J.W. (2015), "Crowdfunding in a prosocial microlending environment: Examining the role of intrinsic versus extrinsic cues", *Entrepreneurship Theory and Practice*, Vol. 39 No. 1, pp. 53–73.

Allerson, J. (2012) "Fon announces next generation Fonera Simpl with EAP optimized for mobile devices", *Business Wire.* Available at: https://www.businesswire.com/news/home/20120226005026/en/Fon-Announces-Generation-Fonera-Simpl-EAP-Optimized

Almirall, E., Wareham, J., Ratti, C., Conesa, P., Bria, F., Gaviria, A. and Edmondson, A. (2016), "Smart cities at the crossroads: New tensions in city transformation", *California Management Review*, Vol. 59 No. 1, pp. 141–152.

Apte, U.M. and Davis, M.M. (2019), "Sharing economy services: Business model generation", *California Management Review*,Vol. 61 No. 2 pp.104-131

Bapna, R., Qiu, L. (2017), "Repeated interactions versus social ties: Quantifying the economic value of trust, forgiveness, and reputation using a field experiment", *MIS Quarterly*, Vol. 41 No. 3, pp. 841–866.

Bardhi, F. and Eckhardt, G.M. (2012), "Access-based consumption: The case of car sharing", *Journal of Consumer Research*, Vol. 39 No. 4, pp. 881–898.

Bekkers, R. and Wiepking, P. (2010), "A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving", *Nonprofit and Voluntary Sector Quarterly*, available at: http://nvs.sagepub.com/content/early/2010/09/08/0899764010380927.abstract (accessed 22 September 2016).

Belk, R. (2007), "Why not share rather than own?", *The ANNALS of the American Academy of Political and Social Science*, Vol. 611 No. 1, pp. 126–140.

Belk, R. (2010), "Sharing", *Journal of Consumer Research*, Vol. 36 No. 5, pp. 715–734.

Belk, R. (2014a), "Sharing versus pseudo-sharing in Web 2.0", *The Anthropologist*, Vol. 18 No. 1, pp. 7–23.

Belk, R. (2014b), "You are what you can access: Sharing and collaborative consumption online", *Journal of Business Research*, Vol. 67 No. 8, pp. 1595–1600.

Bell, E., Bryman, A. and Harley, B. (2018), *Business Research Methods*, Oxford University Press

Benkler, Y. (2002), "Coase's penguin, or, Linux and "the nature of the firm"", *Yale Law Journal*, Vol. 112 No. 3. pp. 369–446.

Blau, P.M. (1964), "Justice in social exchange", *Sociological Inquiry*, Vol. 34 No. 2, pp. 193–206.

Bloomberg, (2018) *Company Overview of FON Wireless Ltd.* Available at: https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=42721686

Böcker, L. and Meelen, T. (2017), "Sharing for people, planet or profit? Analysing motivations for intended sharing economy participation", *Environmental Innovation and Societal Transitions*, Vol. 23, pp. 28–39.

Bradley, K. (2018), "Bike kitchens–spaces for convivial tools", *Journal of Cleaner Production*, Vol. 197, pp. 1676–1683.

Bradley, K. and Pargman, D. (2016), "The sharing economy as the commons of the 21st century", *Cambridge Journal of Regions, Economy and Society*, available at: https://doi.org/10.1093/cjres/rsx001.

Brynjolfsson, E. and McAfee, A. (2014), *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, W.W. Norton & Company, New York

Bucher, E., Fieseler, C. and Lutz, C. (2016), "What's mine is yours (for a nominal fee) – Exploring the spectrum of utilitarian to altruistic motives for Internet-mediated sharing", *Computers in Human Behavior*, Vol. 62, pp. 316–326.

Carroll, E. and Romano, J. (2010), *Your Digital Afterlife: When Facebook, Flickr and Twitter Are Your Estate, What's Your Legacy?*, New Riders, Berkeley, California.

Caplan, S. E. (2002). "Problematic Internet use and psychosocial well-being: development of a theory-based cognitive–behavioral measurement instrument". *Computers in Human Behavior*, Vol. 18 No. 5 pp. 553-575.

Castells, M. (1989), *The Informational City: Information Technology, Economic Restructuring, and the Urban-Regional Process*, Basil Blackwell, Oxford.

Cathcart-Keays, A. (2015) 'In Nottingham, one woman is fighting food poverty with social eating', *The Guardian.* Available at: https://www.theguardian.com/cities/2015/feb/17/nottingham-fighting-food-poverty-social-eating

Clark, M.S. and Mills, J. (1979), "Interpersonal attraction in exchange and communal relationships", *Journal of Personality and Social Psychology*, Vol. 37 No. 1, p. 12.

Cohen, B. and Kietzmann, J. (2014), "Ride on! Mobility business models for the sharing economy", *Organization & Environment*, Vol. 27 No. 3, pp. 279–296.

Cohen, B. and Muñoz, P. (2016), "Sharing cities and sustainable consumption and production: Towards an integrated framework", *Journal of Cleaner Production*, Vol. 134, pp. 87–97.

Cole, C. and Gnanapragasam, A. (2017), "Community repair: Enabling repair as part of the movement towards a circular economy", available at: https://dspace.lboro.ac.uk/dspace-jspui/handle/2134/36102 (accessed 5 August 2019).

Cox, J., Nguyen, T., Thorpe, A., Ishizaka, A., Chakhar, S. and Meech, L. (2018), "Being seen to care: The relationship between self-presentation and contributions to online pro-social crowdfunding campaigns", *Computers in Human Behavior*, Vol. 83, pp. 45–55.

Creswell, J. W. (2014), *Research Design: Qualitative, Quantitative and Mixed Methods Approaches,* (4th ed.). Thousand Oaks, CA: Sage.

Cropanzano, R. and Mitchell, M.S. (2005), "Social exchange theory: An interdisciplinary review", *Journal of Management*, Vol. 31 No. 6, pp. 874–900.

Davies, A.R., Donald, B., Gray, M. and Knox-Hayes, J. (2017), "Sharing economies: Moving beyond binaries in a digital age", *Cambridge Journal of Regions, Economy and Society*, Vol. 10 No. 2, pp. 209–230.

Denegri-Knott, J. (2011), "'Have it now!': Ebay and the acceleration of consumer desire", *ACR European Advances*, Vol. E-09, available at: http://acrwebsite.org/volumes/1006905/eacr/vol9/E-09 (accessed 10 December 2017).

Dillahunt, T.R., Wang, X., Wheeler, E., Cheng, H.F., Hecht, B. and Zhu, H. (2017), "The sharing economy in computing: A systematic literature review", *Procedures. ACM Human-Computer Interaction*, Vol. 1 No. CSCW, pp. 38:1–38:26.

Dredge, D. and Gyimóthy, S. (2015), "The collaborative economy and tourism: Critical perspectives, questionable claims and silenced voices", *Tourism Recreation Research*, Vol. 40 No. 3, pp. 286–302.

Dubois, E., Schor, J. and Carfagna, L., 2014. Connected consumption: a sharing economy takes hold. Rotman Management, Vol. 1, pp.50-55.

Edelman, B. and Luca, M. (2014), "Digital discrimination: The case of Airbnb.com", Harvard Business School NOM Unit Working Paper 14-054.

Edelman, B., Luca, M. and Svirsky, D. (2017), "Racial discrimination in the sharing economy: Evidence from a field experiment", *American Economic Journal: Applied Economics*, Vol. 9 No. 2, pp. 1–22.

Eisenhardt, K.M. (1989), "Building theories from case study research", *The Academy of Management Review*, Vol. 14 No. 4, p. 532.

Eisenstein, C. (2011), *Sacred Economics: Money, Gift, and Society in the Age of Transition*, North Atlantic Books, Berkeley California.

Emerson, R.M. (1976), "Social exchange theory", *Annual Review of Sociology*, Vol. 2 No. 1, pp. 335–362.

Fenton, A. (2013), "Making markets personal: Exploring market construction at the micro level in the car-sharing and time bank markets", unpublished paper, Harvard University.

Fleming, P. (2017), "The human capital hoax: Work, debt and insecurity in the era of Uberization", *Organization Studies*, Vol. 38 No. 5, pp. 691–709.

Flyvbjerg, B. (2011), Case study. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research,* 4th ed., pp.301-316, Thousand Oaks, CA: Sage.

Fon, (2018). Available at: https://fon.com/

Frenken, K. and Schor, J. (2017), "Putting the sharing economy into perspective", *Environmental Innovation and Societal Transitions*, Vol. 23 No. 1, pp. 3-10

Ge, Y., Knittel, C.R., MacKenzie, D. and Zoepf, S. (2016), *Racial and Gender Discrimination in Transportation Network Companies*, National Bureau of Economic Research. Cambrdge, Massachusetts

Gilroy, P. (2004), *After Empire: Melancholia Or Convivial Culture?*, Routledge, New York.

Glaser, B.G. and Strauss, A.L. (1967), "Discovery of grounded theory".Routledge, New York

Gollnhofer, J.F. and Schouten, J.W. (2017), "Complementing the dominant social paradigm with sustainability", *Journal of Macromarketing*, Vol. 37 No. 2, pp. 143–152.

Gössling, S. and Hall, C.M. (2019), "Sharing versus collaborative economy: How to align ICT developments and the SDGs in tourism?", *Journal of Sustainable Tourism*, Vol. 27 No. 1, pp. 74-96.

Gouldner, A.W. (1960), "The norm of reciprocity: A preliminary statement", *American Sociological Review*, pp. 161–178.

Griffith, E. (2013), "Does money taint the sharing economy?", *Pando*, 14 March, available at: https://pando.com/2013/03/14/does-money-taint-the-sharing-economy/ (accessed 25 June 2017).

Guercini, S. and Ranfagni, S. (2016), "Conviviality behavior in entrepreneurial communities and business networks", *Journal of Business Research*, Vol. 69 No. 2, pp. 770–776.

Guttentag, D., Smith, S., Potwarka, L. and Havitz, M. (2018), "Why tourists choose Airbnb: A motivation-based segmentation study", *Journal of Travel Research*, Vol. 57 No. 3, pp. 342–359.

Gyimóthy, S. (2017), "Business models of the collaborative economy", in Dredge, D. and Gyimóthy, S. (Ed.), *Collaborative Economy and Tourism: Perspectives, Politics, Policies and Prospects*, Springer International Publishing, Cham, pp. 31–39.

Hamari, J., Sjöklint, M. and Ukkonen, A. (2016), "The sharing economy: Why people participate in collaborative consumption", *Journal of the Association for Information Science and Technology*, Vol. 67 No. 9, pp. 2047–2059.

Hargittai, E. and Hinnant, A. (2008), "Digital inequality: Differences in young adults' use of the Internet", *Communication Research*, Vol. 35 No. 5, pp. 602–621.

Hasan, H. and Linger, H. (2016), "Guest editorial", *Information Technology & People*, available at:https://doi.org/10.1108/ITP-08-2015-0200.

Henten, A. and Windekilde, I. (2015), "Transaction costs and the sharing economy", info, Vol. 18 No. 1, pp. 1-15

Heo, C.Y. (2016), "Sharing economy and prospects in tourism research", *Annals of Tourism Research*, Vol. 58, pp. 166–170.

Hsieh, JJ Po-An, Arun Rai, and Mark Keil. "Addressing digital inequality for the socioeconomically disadvantaged through government initiatives: Forms of capital that affect ICT utilization." *Information Systems Research* Vol. 22 No. 2, pp. 233-253.

Hufton, C. (2016, April 22). Super Kitchen turns spare food into friendship. *The Daily Telegraph*. Retrieved from http://www.telegraph.co.uk/good-news/seven-seas/bringing-communities-together-at-meal-times/

Ilich, J. (1973), *The Art and Skill of Successful Negotiation*, Prentice-Hall.

Jamali, D., Zanhour, M. and Keshishian, T. (2009), "Peculiar Strengths and Relational Attributes of SMEs in the Context of CSR", *Journal of Business Ethics*, Vol. 87, pp.355-377.

John, N.A. (2013), "The social logics of sharing", *The Communication Review*, Vol. 16 No. 3, pp. 113–131.

Kapczynski, A. (2010), "Access to knowledge: A conceptual genealogy". Access To Knowledge In The Age Of Intellectual Property, Gaelle Krikorian, ed., Zone Press 2010.

Kathan, W., Matzler, K. and Veider, V. (2016), "The sharing economy: Your business model's friend or foe?", *Business Horizons*, Vol. 59 No. 6, pp. 663–672.

Keiller, S. and Charter, M. (2016), "The second global survey of repair cafés: a summary of findings" The Centre for Sustainable Design, Surrey Uk.

Kilbourne, W., McDonagh, P. and Prothero, A. (1997), "Sustainable consumption and the quality of life: A macromarketing challenge to the dominant social paradigm", *Journal of Macromarketing*, Vol. 17 No. 1, pp. 4–24.

Kornberger, M., Leixnering, S., Meyer, R. and Hoellerer, M. (2017), "Rethinking the sharing economy: The nature and organization of sharing in the 2015 refugee crisis", *Academy of Management Discoveries*, Vol. 4 No. 3, pp.314-335

Kumar, V., Lahiri, A. and Dogan, O.B. (2018), "A strategic framework for a profitable business model in the sharing economy", *Industrial Marketing Management*, Vol. 69, pp. 147–160.

Laamanen, T., Pfeffer, J., Rong, K. and Van de Ven, A. (2016), "Business models, ecosystems, and society in the sharing economy", *Academy of Management Discoveries*, Vol. 2 No. 2, pp. 218–221.

Ladegaard, I. (2018), "Hosting the comfortably exotic: Cosmopolitan aspirations in the sharing economy", *The Sociological Review*, Vol. 66 No. 2, pp. 381–400.

Laurell, C. and Sandström, C. (2017), "The sharing economy in social media: Analyzing tensions between market and non-market logics", *Technological Forecasting and Social Change*, Vol. 125, pp. 58–65.

Lawler, E.J., Thye, S.R. and Yoon, J. (2000), "Emotion and group cohesion in productive exchange", *American Journal of Sociology*, Vol. 106 No. 3, pp. 616–657.

Lennerfors, T.T., Fors, P. and van Rooijen, J. (2015), "ICT and environmental sustainability in a changing society: The view of ecological world systems theory", *Information Technology & People*, Vol. 28 No. 4, pp. 758–774.

Li, C. and Zhao, J. (2015), *Humanizing Travel: How e-Hail Apps Transform Stakeholder Relationships in the US Taxi Industry*. Transportation Research Board 94th Annual Meeting Location: Washington DC, United States

Li, D., Liu, G., Jia, F. and Sun, H. (2019), "Sharing economy–based service triads: Towards an integrated framework and a research agenda", *Journal of Cleaner Production*, Vol. 218 pp.1031-1044

Lim, M.S. and Kim, J. (2018), "Facebook users' loneliness based on different types of interpersonal relationships", Vol. 31 No. 3, pp. 646-665.

Mair, J. and Reischauer, G. (2017), "Capturing the dynamics of the sharing economy: Institutional research on the plural forms and practices of sharing economy organizations", *Technological Forecasting and Social Change*, Vol. 125, pp. 11–20.

Malhotra, A. and Van Alstyne, M. (2014), "The dark side of the sharing economy ... and how to lighten it", *Communications of the ACM*, Vol. 57 No. 11, pp. 24–27.

Marovelli, B. (2018), "Cooking and eating together in London: Food sharing initiatives as collective spaces of encounter", *Geoforum*, Vol. 99 pp.190-201

Martin, C.J. (2016), "The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism?", *Ecological Economics*, Vol. 121, pp. 149–159.

McGrane, S. (2012), "Amsterdam tries to change culture with 'repair cafes'", *The New York Times*, 8 May, available at: https://www.nytimes.com/2012/05/09/world/europe/amsterdam-tries-to-change-culture-with-repair-cafes.html (accessed 5 August 2019).

Mervyn, K. and Allen, D.K. (2012), "Sociospatial context and information behavior: Social exclusion and the influence of mobile information technology", *Journal of the American Society for Information Science and Technology*, Vol. 63 No. 6, pp. 1125–1141.

Mills, J. and Clark, M.S. (2013), "Communal and exchange relationships: Controversies and research", *Theoretical Frameworks for Personal Relationships*, Psychology Press, New York pp. 41–54.

Mittendorf, C. (2016), "What trust means in the sharing economy: A provider perspective on Airbnb. com". Digital Commerce Conference, Association for Information Systems.

Molm, L.D., Peterson, G. and Takahashi, N. (1999), "Power in negotiated and reciprocal exchange", *American Sociological Review*, pp. 876–890.

Muñoz, P. and Cohen, B. (2018), "Entrepreneurial narratives in sustainable venturing: Beyond people, profit, and planet", *Journal of Small Business Management*, Vol. 56 No. S1, pp. 154–176.

Murillo, D., Buckland, H. and Val, E. (2017), "When the sharing economy becomes neoliberalism on steroids: Unravelling the controversies", *Technological Forecasting and Social Change*, Vol. 125 No. Supplement C, pp. 66–76.

Norbutas, L. and Corten, R. (2018), "Sustainability of generalized exchange in the sharing economy: the case of the 'freecycling' Facebook groups", *International Journal of the Commons*, Vol. 12 No. 1.

Nowicka, M. and Heil, T. (2016), *On the Analytical and Normative Dimensions of Conviviality and Cosmopolitanism*, Eberhard Karls Universität. Tübingen

O'Reilly, C. and Binns, A.J.M. (2019), "The three stages of disruptive innovation: Idea generation, incubation, and scaling", *California Management Review*, Vol. 61 No. 3, pp. 49–71.

Ou, C.X., Pavlou, P.A. and Davison, R. (2014), "Swift guanxi in online marketplaces: The role of computer-mediated communication technologies", *MIS Quarterly*, Vol. 38 No. 1, pp. 209–230.

Ozanne, L.K. and Ballantine, P.W. (2010), "Sharing as a form of anti-consumption? An examination of toy library users", *Journal of Consumer Behaviour*, Vol. 9 No. 6, pp. 485–498.

Ozanne, L.K. and Ozanne, J.L. (2011), "A child's right to play: The social construction of civic virtues in toy libraries", *Journal of Public Policy & Marketing*, Vol. 30 No. 2, pp. 264–278.

Palgan, Y. V., Zvolska, L., & Mont, O. (2017). Sustainability framings of accommodation sharing. Environmental Innovation and Societal Transitions, Vol. 23, pp. 70-83.

Parguel, B., Lunardo, R. and Benoit-Moreau, F. (2017), "Sustainability of the sharing economy in question: When second-hand peer-to-peer platforms stimulate indulgent consumption", *Technological Forecasting and Social Change*, Vol. 125, pp. 48–57.

Patton, M. Q. (2002), *Qualitative Research and Evaluation Methods*, Thousand Oaks: Sage.

Piekkari, R., Welsh, C. and Paavilainen, E. (2009) Case study as disciplinary convention: evidence from international business journals, *Organisational Research Methods*, Vol. 12 No. 3, pp. 567-89.

Ranchordás, S. (2015), "Does sharing mean caring: Regulating innovation in the sharing economy", *Minnesota Journal of Law, Science and Technology.*, Vol. 16 No. 1 pp. 413-477.

Ravenelle, A.J. (2017), "Sharing economy workers: selling, not sharing", *Cambridge Journal of Regions, Economy and Society*, Vol. 10 No. 2, pp. 281–295.

Ritchie, J. and Lewis, J, (2003), *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, London: Sage.

Saarikko, T., Jonsson, K. and Burström, T. (2018), "Software platform establishment: effectuation and entrepreneurial awareness", *Information Technology & People*, Vol. 332 No. 3, pp. 579-602.

Savolainen, R. (2009), "Information use and information processing: Comparison of conceptualizations", *Journal of Documentation*, Vol. 65 No. 2, pp. 187–207.

Schneider, N. (2014), "Owning is the new sharing", *Shareable*, Vol. 21, p. 2014.

Schor, J.B. (2017), "Does the sharing economy increase inequality within the eighty percent? findings from a qualitative study of platform providers", *Cambridge Journal of Regions, Economy and Society*, Vol. 10 No. 2, pp. 263–279.

Schor, J.B. and Fitzmaurice, C.J. (2015), "26. Collaborating and connecting: the emergence of the sharing economy", in Reisch, L. and Thogersen, J. (Ed.), *Handbook of Research on Sustainable Consumption*, Edward Elgar, Cheltenham, pp. 410-425

Sharma, G. and Baoku, L. (2013), "Customer satisfaction in Web 2.0 and information technology development", *Information Technology & People*, Vol. 26 No. 4, pp. 347–367.

Shaw, D., McMaster, R. and Newholm, T. (2016), "Care and commitment in ethical consumption: An exploration of the 'attitude–behaviour gap'", *Journal of Business Ethics*, Vol. 136 No. 2, pp. 251–265.

Shi, J., Gui, L., Koutsonikolas, D., Qiao, C., & Challen, G. (2015). "A little sharing goes a long way: The case for reciprocal wifi sharing". In Proceedings of the 2nd International Workshop on Hot Topics in Wireless (pp. 6-10).

Siggelkow, N. (2007), "Persuasion with case studies", *Academy of Management Journal*, Vol. 50 No. 1, pp. 20–24.

Slee, T. (2016), *What's Yours Is Mine: Against the Sharing Economy*. OR Books, New York

Stake, R.E. (1995), *The Art of Case Study Research*, Sage.

Sundararajan, A. (2016), *The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism*, MIT Press, Cambridge, Massachussets.

Superkitchen. (2016). Super kitchen welcome pack. Reducing food poverty and encouraging social eating. Internal Report provided by the company

Sutherland, W. and Jarrahi, M.H. (2018), "The sharing economy and digital platforms: A review and research agenda", *International Journal of Information Management*, Vol. 43, pp. 328–341.

Tussyadiah, I.P. (2015), "An exploratory study on drivers and deterrents of collaborative consumption in travel", *Information and Communication Technologies in Tourism 2015*, Springer, Cham, pp. 817–830.

Valenzuela, F. and Böhm, S. (2017), "Against wasted politics: A critique of the circular economy", *Ephemera: Theory & Politics in Organization*, Vol. 17, pp. 23–60.

Wang, Y., Xiang, D., Yang, Z. and Ma, S. (Sara). (2019), "Unraveling customer sustainable consumption behaviors in sharing economy: A socio-economic approach based on social exchange theory", *Journal of Cleaner Production*, Vol. 208, pp. 869–879.

Wilhelms, M.-P., Henkel, S. and Falk, T. (2017), "To earn is not enough: A means-end analysis to uncover peer-providers' participation motives in peer-to-peer carsharing", *Technological Forecasting and Social Change*, Vol. 125, pp. 38–47.

Willer, R., Flynn, F.J. and Zak, S. (2012), "Structure, identity, and solidarity: A comparative field study of generalized and direct exchange", *Administrative Science Quarterly*, Vol. 57 No. 1, pp. 119–155.

Yin, R.K. (1994), *Applications of Case Study Research*, Newbury Park: CA: Sage.

Yuan, C.W., Hanrahan, B.V. and Carroll, J.M. (2018), "Assessing timebanking use and coordination: implications for service exchange tools", *Information Technology & People*, Vol. 2 No. 2, pp. 344-363.

Zervas, G., Proserpio, D., & Byers, J. W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. Journal of marketing research, Vol 54 No.5, pp. 687-705.

Table 1: Positive and negative consequences of the sharing economy in the three dimensions of sustainability

Positive	**Negative**
Environmental Impact	
Extension of useful life	Additional transportation or cleaning/repairs
Reduction in new product demand; less throughput	Extended use of inefficient products (e.g. old cars; white goods)
Economic Impact	
Low cost	Decline in industries such as hotels, taxis
New income potential	Unfair, unregulated competition
Increased access to resources	Monopolistic powers
Social Impact	
Social ties	Labour standards unclear, insecure working conditions
Social coherence	Safety, privacy, discrimination
Conviviality	Homophily

Table 2: Sharing platforms classification

		Non-Convivial	Convivial
Direct reciprocity	*Type of Exchange*	Negotiated exchange	Reciprocal exchange
	Characteristics	- Predefined contractual obligations - Mostly extrinsic motives - Sustainability is not a significant factor - Technology plays an important role - Social interactions are moderately important	- Non-contractual obligations - Both intrinsic and extrinsic motives - Sustainability is a moderately significant factor - Technology plays a moderately important role - Social interactions are important
	Examples	Aibnb, Uber, Craigslist, Rentl, Onefinestay, Kickstarter, WorkAround, Curb Mobility	Couchsurfing, Blablacar, BeWelcome, CovEvent, MovingWorlds, Superkitchen
Non-direct reciprocity	*Type of Exchange*	Generalized exchange	Productive exchange
	Characteristics	- Non-contractual obligations - Mostly intrinsic motives - Sustainability is a significant factor - Technology plays an important role - Social interactions are not important	- Non-contractual obligations - Mostly intrinsic motives Sustainability is a significant factor - Technology plays a moderately important role - Social interactions are important
	Examples	Wikipedia, Linux, Freecycle, R programming, Slideshare, Apache OpenOffice, Fon wireless	Library of Things, Retoy, Train of Hope, Repair cafes, Fixit Clinic, Little Free Library

Table 3: Mapping the convivialist principles of our case studies

Convivialist principles	**Repair Café**	**Superkitchen**
Common humanity *i.e. shared compassion; understanding of suffering*	Shared endeavours to combat waste; environmental degradation; shared repair problems;	Shared endeavours to combat social isolation; food poverty; food justice; mental health and wellbeing; waste reduction and environmental degradation
Common sociality *i.e. shared, communal, community gathering*	Shared conversation, friendship and repairs; intergenerational and local community knowledge exchange	Shared eating, conversation and friendship; shared recipes and cooking skills; problem sharing and informal support.
Individuation i.e. *shared discovery and experience of meaning and purpose*	Shared sense of community and common purpose towards environmental goals; promotes generativity	Achieves living together with different people and creating a shared community, common purpose towards environmental and social justice goals; promotes *salutogenesis*
Managed conflict *i.e. limiting the negative aspects of conflict*	Accesses underutilized assets rather than competing for resources; recirculates household goods rather than added consumption; avoids throughput of raw materials; limited competition with tradespeople	Accesses underutilized food rather than competing for resources; recirculates surplus food rather than added consumption; avoids throughput of food waste; exists in parallel to DSP; transcends social barriers