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Angaben zur Veröffentlichung / Publication details:

Trenz, Manuel, Alexander Frey, and Daniel Veit. 2018. "Disentangling the facets of sharing: a categorization of what we know and don't know about the sharing economy." *Internet Research* 28 (4): 888–925. <https://doi.org/10.1108/intr-11-2017-0441>.

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Disentangling the facets of sharing

A categorization of what we know and don't know about the Sharing Economy

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Abstract

Purpose – The purpose of this paper is to develop a categorization of sharing practices from a structured interdisciplinary literature review on the Sharing Economy. Instead of striving for a new definition, the authors distinguish nine types of sharing practices and provide an overview of prior investigations on sharing practices across three levels of analysis and 15 research areas. The structured analysis is translated into opportunities for future research on the Sharing Economy.

Design/methodology/approach – The study follows a structured literature review approach to uncover practices related to the Sharing Economy and similar phenomena. The authors analyze 210 articles from a broad number of disciplines, and develop a categorizing framework for Sharing Economy practices.

Findings – The paper identifies nine different types of sharing practices and provides a structured way for analyzing, comparing and positioning research on the Sharing Economy and related phenomena.

Research limitations/implications – The categorization of sharing practices and the embedded interdisciplinary overview of studies on the Sharing Economy help to explain potentially contradictory research results and uncovers opportunities for future research in the topic area.

Originality/value – Given the variety of disciplines dealing with the Sharing Economy and the plenitude of definitions and related concepts, the categorization and research overview provides a consolidated view of the knowledge in the topic area and an effective tool for identifying paths for future research.

Keywords Categorization, Sharing Economy, Collaborative consumption, Access-based consumption

Paper type Literature review

1. Introduction

“The \$99 billion dollar idea” was the headline of an article on *Bloomberg Businessweek* in 2017. The accommodation marketplace Airbnb[1] with a valuation of \$30bn and the on-demand ridesharing service Uber[2] with a valuation of \$69bn (Stone, 2017) are prime examples of a development often referred to as Sharing Economy. The Sharing Economy is a rapidly growing economic-technological phenomenon (e.g. Heo, 2016; Möhlmann, 2015) that postulates access over ownership (e.g. Bardhi and Eckhardt, 2012). It may have the potential to become as important as the industrial revolution in terms of the way we think about ownership (Botsman and Rogers, 2010) and shape the next stage in the evolution of economies (Cohen and Kietzmann, 2014). The increasing amount of sharing services (Chasin *et al.*, 2015) has already led to severe consequences for society and firms. For instance, the raising popularity of Airbnb in Berlin leads to housing shortage in some districts, with more accommodations being offered for short-term than for traditional renting (Lomas, 2017). Sharing has turned from a private and local behavior into a transformational movement (Sundararajan, 2016). There are manifold examples of traditional industries potentially being disrupted by Sharing Economy startups, ranging from the tourism industry through peer-to-peer accommodation platforms like Airbnb or wimdu[3] (e.g. Zervas *et al.*, 2017) to mobility and transportation through on-demand ridesharing services like Uber or Lyft[4] (e.g. Pfeffer-Gillet, 2016).

However, the respective transactions differ widely in terms of their interaction types, monetarization, motives, and the involved parties. In fact, it seems to be challenging to draw

the boundaries of the Sharing Economy. For instance, PWC (2015) estimates the Sharing Economy at \$15bn dollar today and expects a volume of \$335bn for 2025, whereas Deloitte (Zobrist and Grampp, 2015) estimates a market volume of \$26bn today and \$110bn for the coming years. Bloomberg (2015) identifies a lack of a precise definition in terms of what is included in the Sharing Economy as the reason for these deviating results and argues that it is hard to pinpoint its actual size based on this definitional ambiguity.

The lack of clarity about boundaries and scope of the Sharing Economy leads to problems in academia as well. The semantic confusion caused by the many facets of internet-based sharing (Belk, 2014a) makes it difficult to describe the boundary conditions of studies or to compare results across investigations. During our research, we came across a variety of terms which are used aside “Sharing Economy” to describe the same or closely related practices, like access-based consumption (e.g. Bardhi and Eckhardt, 2012) or collaborative consumption (e.g. Botsman and Rogers, 2010).

Instead of fueling the normative debates on definitions (e.g. Ertz *et al.*, 2016) of what the Sharing Economy is or what it should be (Acquier *et al.*, 2017), the aim of this research is to uncover different facets of sharing practices and develop a fine-grained categorization of the different sharing models covered by the term “Sharing Economy.” To do so, we disentangle different dimensions that characterize sharing practices and conduct a structured, interdisciplinary literature review on sharing practices to shed light on the manifestations of each of those dimensions. The outcomes of our study are twofold:

- (1) we create an organizing framework that maps and structures different perspectives on the Sharing Economy
- (2) we categorize sharing practices into different dimensions to guide future research.

Applications for our categorizing framework are manifold: In the simplest possible way, it allows researchers to specify their object of analysis more precisely because it can be used to decompose definitions and classifications of popular terms existing in the public and academic discourse (e.g. Hamari *et al.*, 2015). It also allows the comparison across studies and can provide explanations for differences among studies that purportedly all investigate “Sharing Economy,” but instead focus on sharing practices with distinctive characteristics. The framework also facilitates the discovery of research trends and gaps by looking at trends and empty cells in specific research areas. Lastly, it can also be used as a starting point for meta-studies on selected topics that rely on the fact that the research objects are comparable. Practitioners can use our findings to improve the estimation of the market size, to develop new business models, or to adapt or extend the transactional scope of their existing business models, for instance by shifting their business from a non-commercial orientation to a more commercialized form of business to attract additional user bases.

The remainder of this paper is structured as follows. First, we analyze existing conceptualizations of sharing practices. This analysis unveils actors, compensation schemes, participation motives, and ownership transfer as the four elements of sharing transactions which serve as structuring dimensions for our literature analysis. Based on an analysis of 210 articles of a broad number of disciplines, we develop a categorizing framework for Sharing Economy practices. We conclude the paper by applying our framework in two ways. First, we illustrate similarities and differences between terms related to the Sharing Economy. Second, we structure all prior studies on sharing practices according to their investigated phenomena on a micro, meso, and macro level and map those studies into our framework to provide a full,

structured overview on sharing economy research. We then exemplify how it can be used to resolve apparent contradictions between studies to identify opportunities for future research.

2. Conceptualizations of sharing practices

To derive different facets that can be used to structure different perspectives on the Sharing Economy, we reviewed prior theoretical studies in the broader topic area. In order to increase the readability of this paper, we use the term “sharing practices” for referring to every practice which is potentially covered by the Sharing Economy or related phenomena. As illustrated in Table I, four core dimensions can serve as structuring elements of sharing practices: involved actors, compensation schemes, participation motives and ownership transfer. Those dimensions were identified using different approaches in prior studies providing evidence of the prevalence of each individual dimension. However, they were not combined into a holistic categorization of sharing practices.

Based on contradictory conceptualizations, Benoit *et al.* (2017) identify three types of actors involved in sharing practices: a platform provider (e.g. Airbnb), a service provider (e.g. host) and a consumer (e.g. guest). They identify the triadic nature of exchange among the three actors as a distinguishing feature for these kinds of services. Similar, Kumar *et al.* (2017) based their work on the three actors mentioned above and differentiate among the different motives of the actors by contrasting insights from literature with insights from practice. Acquier *et al.* (2017) found three organizing cores based on the involved actors and the motivation of users to participate in alternative forms of consumption. By unraveling controversies in the Sharing Economy literature, Cheng (2016) and Murillo *et al.* (2017) extend the three actor framework and additionally considered a community or government level in their structuring. However, these studies did not incorporate transactions with different forms of compensation or the possibility to transfer the ownership of the resource. Other classifications (e.g. Frenken and Schor, 2017; de Rivera *et al.*, 2017) consider different forms of compensation for sharing transactions and whether transfer of ownership takes place or not, for instance, by applying a netnographic approach. Though, these dimensions are not linked to the involved actors and the motives to participate.

By applying a holistic view, our study brings those four dimensions of sharing practices together. We build upon those structural differences and use them as a starting point for our research framework. The specific categories of sharing practices then emerge from the literature review outlined in the remainder of this paper.

Table II summarizes the definitions of the considered dimensions.

Table I.
Dimensions to
differentiate
sharing practices

| Reference | Involved actors | Compensation schemes | Participation motives | Ownership transfer |
|--------------------------------|-----------------|----------------------|-----------------------|--------------------|
| Benoit <i>et al.</i> (2017) | X | | X | |
| Acquier <i>et al.</i> (2017) | X | | X | |
| Kumar <i>et al.</i> (2017) | X | | X | |
| Murillo <i>et al.</i> (2017) | X | | X | |
| Cheng (2016) | X | | | |
| de Rivera <i>et al.</i> (2017) | | X | | X |
| Frenken and Schor (2017) | | X | | X |
| Our study | X | X | X | X |

3. Methodology

We conducted an interdisciplinary and structured literature review in order to gain an overview of existing knowledge on the Sharing Economy. We selected a structured review approach to make sure to systematically cover the variety of practices in the Sharing Economy as well as the variety of partly incompatible definitions and classifications of this phenomenon in the public and academic discourse (e.g. Belk, 2014a; Chasin and Scholta, 2015; Hamari *et al.*, 2015; McArthur, 2015; Richardson, 2015) into account. An interdisciplinary approach seems appropriate since relatively little IS research has addressed the topic of the Sharing Economy (Andersson *et al.*, 2013; Trang *et al.*, 2015) whereas the topic itself is of interest to researchers from a broad number of areas including information systems, consumer research, tourism, economics, marketing, law and others.

The structured literature review follows the approach of Webster and Watson (2002): identifying relevant literature by specifying considered outlets and keywords including backward and forward search; and structuring the review by using a continuously adapted concept matrix. As a long term project, we conducted our review without restrictions to the publication date of the articles and considered papers until October 2017 using three literature databases (EBSCO Host, ScienceDirect and AISel). Due to the multidisciplinary nature of the topic, we focused on peer reviewed journals, but no restriction on a certain set of journals was made. To account for the most recent contributions, we also included full papers (but not work-in-progress, panel or discussion papers) published in the proceedings of major information systems conferences (ICIS, ECIS, HICSS, PACIS and AMCIS) in our population[5]. The search string was carefully developed from terms used in known literature and iteratively improved. We finally used the following search term to generate results.

Abstract OR title: “shar* economy” OR “shareconomy” OR “collaborative consumption” OR “access-based consumption” OR “access economy”.

The abstract and, if necessary, the full text of each article was scanned for inclusion. Articles were excluded if the actual scope of the paper deviates from sharing practices. Backward and forward searches were performed to identify articles that the search term may have missed. For the backward search, references of the relevant articles were screened. Forward search was performed using citations of the Web of Science database. We identified 418 articles in total, whereof 208 articles were research-in-progress papers, panel discussions, dealt with other topics (e.g. Weitzman’s, 1984 share economy of profit-sharing) or deviated from the actual scope of sharing practices. In total, 210 of the remaining articles were seen as relevant for our research after manually screening the abstract. Four articles were found in the Senior Scholars’ Basket of Journals, four were found in other IS journals, 38 in IS conference proceedings, and 164 articles from other disciplines (e.g. marketing, law and social sciences). Figure 1 summarizes the literature screening approach.

To organize the analysis and synthesis of the identified literature, we used a continuously adapted concept matrix (Webster and Watson, 2002). The conceptualization followed the guidelines of Bagozzi (2011). According to Bagozzi (2011), the conceptualization of a specific construct can be accomplished through a focal term which might specify: characteristics of the

| | |
|-----------------------|--|
| Involved actors | Describes which kind of actors are involved in the sharing transaction (e.g. consumer or resource owner) |
| Compensation schemes | Describes how the sharing transaction is compensated (e.g. monetary or non-monetary) |
| Participation motives | Describes the main motives of the resource owner to participate in a sharing transaction (e.g. commercial interest or non-commercial interest) |
| Ownership transfer | Describes whether a ownership transfer takes place within a sharing transaction |

Table II.
Definitions of the
sharing practice
dimensions

concept; the antecedents and causes of the construct; and the consequences or implications of a construct. Therefore, we cover characteristics (e.g. involved actors, shared resources, transactions), antecedents and enablers of distribution, outlook and impact as well as history, scope, and specificity of the phenomenon. Additionally, our concept matrix includes meta data like methodology, research context, or data sources of the articles[6].

4. Results

This section illustrates the results of the conducted literature review. We first present an overview on general Sharing Economy research themes before highlighting insights on the different manifestations of the four core dimensions of sharing practices identified above (cp. Section 2).

4.1 Terms used to describe sharing practices

As expected, we came across a variety of terms related to Sharing Economy practices like access-based consumption (e.g. Bardhi and Eckhardt, 2012), collaborative consumption (e.g. Möhlmann, 2015), collaborative economy (e.g. Martin, 2016), collaborative lifestyles (e.g. Botsman and Rogers, 2010), commercial sharing systems (e.g. Lamberton and Rose, 2012), on-demand economy (e.g. Richardson, 2015), peer economy (e.g. Tussyadiah, 2016), product-service-systems (e.g. Mont, 2002), prosumption (e.g. Belk, 2014b), redistribution markets (e.g. Botsman and Rogers, 2010), Sharing Economy (e.g. Cohen and Kietzmann, 2014), the mesh (e.g. Gansky, 2010) and Unconsumption or Anticonsumption (e.g. Albinsson and Yasanthi Perera, 2012; Hartl *et al.*, 2015). Some of the investigated papers used these terms for introductory purposes to describe the complexity and semantic confusions regarding the Sharing Economy. In the course of the respective articles, these authors focused on one term for describing the phenomenon. The most prominent phrases which are used to describe the phenomenon turned out to be: Sharing Economy, collaborative consumption, and access-based consumption.

Figure 2 illustrates the development of the used terms to describe sharing practices over time. The term “Sharing Economy” seems to be the most prominent one, followed by “collaborative consumption.”

Figure 1.
Literature screening
approach

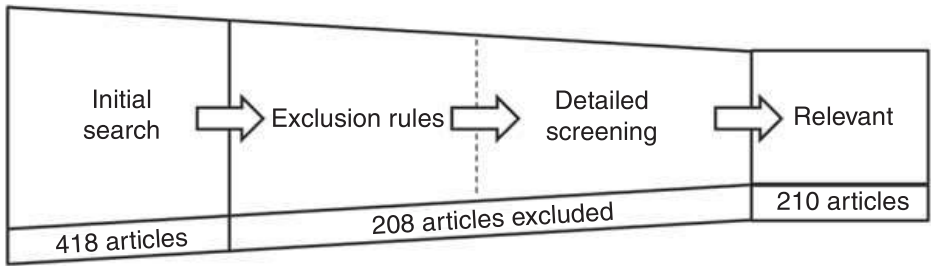
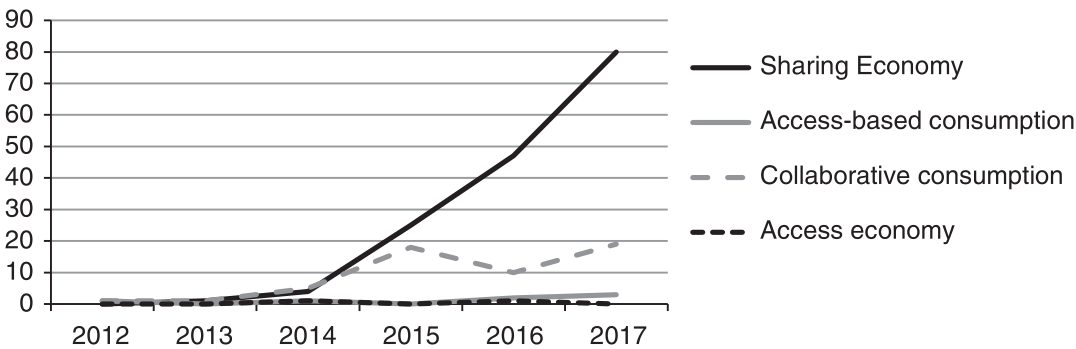


Figure 2.
Development of used
terms to describe
sharing practices



The many different practices subsumed under the umbrella term of Sharing Economy underline the need for a more fine-grained classification of sharing practices and show that a new definition of these phenomena is not a solution-oriented approach. Table III contrasts different (incompatible) definitions of the three most prominent investigated phenomena and emphasizes the importance of developing a new framework for specification and delimitation of research for the respective phenomena.

4.2 Research areas investigated

In order to understand the complex nature of the Sharing Economy and related phenomena, we adapt the three level typology of social sciences (Blalock, 1979) and structured our findings along a micro (individual), meso (firm/organization) and macro (society) level.

The micro level describes the lowest level of analysis and deals with user-centric approaches to investigate digital sharing practices. We found six research areas for studies with individuals as unit of analysis: adoption and continuance; motives to participate in Sharing Economy practices; choice by consumer; choice by service provider; offer pricing; and service quality. An overview and examples of those research areas are given in Table IV.

| Example references | Sharing Economy | Collaborative consumption | Access-based consumption |
|--------------------|---|--|---|
| Broad definition | “An umbrella concept that encompasses several ICT developments and technologies, among others collaborative consumption” (Hamari <i>et al.</i> , 2015, p. 1) | “An economic model based on sharing, swapping, trading, or renting products and services, enabling access over ownership” (Botsman, 2013) | “Transactions that may be market mediated in which no transfer of ownership takes place” (Bardhi and Eckhardt, 2012, p. 881) |
| Narrow definition | “An economic system in which assets or services are shared between private individuals, either for free or for a fee, typically by means of the internet” (Oxford Dictionary, 2016) | “The set of resource circulation systems which enable consumers to both obtain and provide, temporarily or permanently, valuable resources or services through direct interaction with other consumers or through the mediation of a third-party” (Ertz <i>et al.</i> , 2016, p. 15) | “Market-mediated transactions that provide customers with temporarily limited access to goods in return for an access fee, while the legal ownership remains with the service provider [...] [and] differ from traditional renting in that these market-mediated exchanges take place among consumers using intermediary firms” (Lawson <i>et al.</i> , 2016, p. 1) |

Table III.
Exemplary definitions

| Research area | Exemplary research question | Exemplary references |
|---------------------------|---|---|
| Adoption and continuance | What factors drive individuals to use or continue using a specific sharing platform? | (e.g. Möhlmann, 2015; Tussyadiah, 2016) |
| Motives for participation | What factors motivate individuals to participate in sharing practices in general? | (e.g. Böcker and Meelen, 2017; Hamari <i>et al.</i> , 2015; Tussyadiah, 2015) |
| Choice by consumer | How do individuals choose between different offers? | (e.g. Paundra <i>et al.</i> , 2017; Schneider, 2017) |
| Choice by provider | How do providers choose between different offers (e.g. a host on Airbnb selecting a guest)? | (e.g. Karlsson <i>et al.</i> , 2017; Mittendorf and Ostermann, 2017a) |
| Offer pricing | What factors influence the prices set by providers? | (e.g. Teubner <i>et al.</i> , 2017; Weber, 2017) |
| Service quality | What determines perceived quality of sharing offers? | (e.g. Priporas <i>et al.</i> , 2017) |

Table IV.
Research areas for studying sharing practices on a micro level

Meso level studies represent the middle level between micro and macro level and consider the firm or the organization as unit of analysis (Shin, 2006). Our research reveals six research areas on meso level: business models; platform evolution; platform governance; platform and infrastructure design; value creation; and characteristics and conceptualizations. Table V provides an overview of meso level studies.

The macro level is associated with the analysis of complex structure with large-scale patterns such as the society, the government or the community of Sharing Economy actors. We identified three areas of Sharing Economy research: impact on economy, society and environment; community conduct; and law and regulation. Macro level studies are highlighted in Table VI.

Looking at research on sharing practices over time, we discovered that the number of studies has increased over the last years for all three levels of analysis (Figure 3). The data points toward a stronger focus on micro and meso level studies in the nearby past.

4.3 Actors involved in sharing practices

Three major classes of actors are involved in Sharing Economy transactions: business, consumers and governments. Sharing models differ in terms of the question whose resources are being shared or consumed. Three categories can be distinguished: resources owned by individuals (consumer-to-consumer (C2C)), resources owned by companies (business-to-consumer (B2C)), and resources owned by the government (government-to-consumer (G2C)).

One research stream focuses on Sharing Economy transactions where the ownership of the resource is restricted to private individuals (e.g. Andersson *et al.*, 2013; Ert *et al.*, 2016; Hong and Vicdan, 2016). Other studies (e.g. Abramova *et al.*, 2015; Corciolani and Dalli, 2014;

Table V.
Research areas for studying sharing practices on a meso level

| Research area | Exemplary research question | Exemplary references |
|--|---|--|
| Business models | Which components and configurations of business models exist? | (e.g. Lombardi and Schwabe, 2017; Muñoz and Cohen, 2017) |
| Platform evolution | How do platforms evolve and develop over time? | (e.g. Constantiou <i>et al.</i> , 2016; Martin <i>et al.</i> , 2015) |
| Platform governance | How and why do platforms perform a specific type of governance? | (e.g. Hartl <i>et al.</i> , 2015; Martin <i>et al.</i> , 2017) |
| Platform and infrastructure design | How should a platform and the corresponding infrastructure be designed? | (e.g. Gargiulo <i>et al.</i> , 2015; Matzner <i>et al.</i> , 2016) |
| Value creation | How do platforms create value for the involved actors? | (e.g. Frey <i>et al.</i> , 2017; Reuschl <i>et al.</i> , 2017) |
| Characteristics and conceptualizations | What are characteristics and conceptualizations for sharing practices? | (e.g. Bardhi and Eckhardt, 2012; Belk, 2014b) |

Table VI.
Research areas for studying sharing practices on a macro level

| Research area | Exemplary research question | Exemplary references |
|---|---|--|
| Impact on economy, society, and environment | How do sharing practices affect our economy, society, and environment? | (e.g. Fremstad, 2017; Greenwood and Wattal, 2017; Tussyadiah and Pesonen, 2016; Zervas <i>et al.</i> , 2017) |
| Community conduct | What community behaviors and structures emerge in or from sharing practices? | (e.g. Gruen, 2017; Schor <i>et al.</i> , 2016) |
| Law and regulation | Which legal challenges and implications do occur due to sharing practices? (e.g. employment status of resource providers) | (e.g. Loewenstein, 2017; Stafford, 2016) |

Zervas *et al.*, 2017) do not explicitly state a restriction to privately owned resources. The analysis of the used example organizations (e.g. Couchsurfing[7] or Freecycle[8]) reveals that this stream focuses on privately owned resources. We refer to these constellations of actors as C2C models.

A second stream includes resources owned by companies as a part of sharing and alternative consumption practices. Companies acquiring, maintaining, and renting resources (e.g. B2C car sharing) are described as a part of the phenomenon (e.g. Bardhi and Eckhardt, 2012; Catulli *et al.*, 2017; Hamari *et al.*, 2015). Again we found articles implicitly referring to business-related practices within the Sharing Economy by naming example organizations like the B2C car sharing service ZipCar[9] (e.g. Dreyer *et al.*, 2017; Malhotra and Van Alstyne, 2014; Pedersen and Netter, 2015). This combination of actors is called B2C model.

Another stream of research, besides C2C and B2C, addresses sharing practices where the resources is owned by the government (e.g. Barnes and Mattsson, 2016; Cohen and Kietzmann, 2014; Pisano *et al.*, 2015). Cohen and Muñoz (2015) see a variety of forms of government involvement ranging from being primary developer and implementer to serving as active supporter. These constellations of actors are called G2C models. Appropriate examples are public gardens (Hartl *et al.*, 2015) or public bike sharing services (Fishman *et al.*, 2013).

4.4 Ownership transfer in sharing practices

There is an agreement that both physical goods and services can be part of sharing transactions. On the one hand, sharing practices enable access to physical goods. We found a variety of examples ranging from household items (Abramova *et al.*, 2015; Weber, 2015), clothes (Pedersen and Netter, 2015; Seegebarth *et al.*, 2016), toys (Denning, 2014), and books (Hartl *et al.*, 2015) to more expensive goods like cars (Andersson *et al.*, 2013; Bardhi and Eckhardt, 2012), parking space (Albinsson and Yasanthi Perera, 2012), or apartments and houses (Cohen and Kietzmann, 2014; Hamari *et al.*, 2015). On the other hand, intangible resources are part of transactions. Services in general (Cusumano, 2015; Möhlmann, 2015; Trang *et al.*, 2015) were mentioned as the most prominent examples. Besides services, we found, for instance, knowledge (Gargiulo *et al.*, 2015; Martin, 2016), skills (Barnes and Mattsson, 2016; Tussyadiah, 2016), or time (Kim *et al.*, 2015; Laamanen *et al.*, 2015) as objects of exchange.

Sharing transactions may differ with respect to the question whether a transfer of ownership occurs. This aspect is of particular interest for physical goods being shared. There is agreement that the Sharing Economy includes transactions where no transfer of ownership takes place (e.g. renting). Within that group, some authors argue explicitly that transactions where ownership is transferred are not part of the Sharing Economy and solely

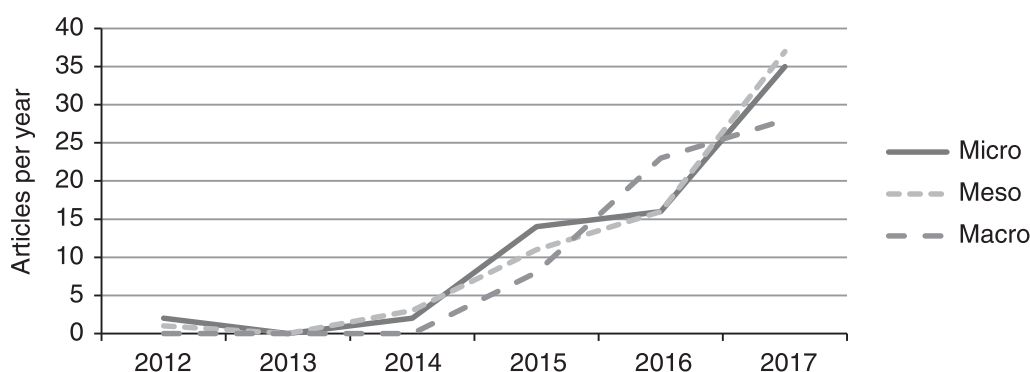


Figure 3.
Development of
sharing economy
research

non-ownership access to a resource correctly represents the phenomenon (e.g. Bardhi and Eckhardt, 2012; Jenkins *et al.*, 2014; Lamberton and Rose, 2012; Tussyadiah, 2015; Weber, 2015). On the contrary, others point more implicitly to non-ownership models by stating that access rather than ownership is preferred or typically no transfer of ownership takes place (e.g. Acquier *et al.*, 2017; Laamanen *et al.*, 2013, 2015; Nica and Potcovaru, 2015; Trang *et al.*, 2015). We found articles which do not directly make statements on transfer of ownership. Therefore, we analyzed the practical examples mentioned in the papers and found articles that exclusively named organizations offering non-ownership transactions (e.g. Dose and Walsh, 2015; Ert *et al.*, 2016; Hartl *et al.*, 2015; Weber, 2014). We added these articles to the group of non-ownership transactions.

Other articles investigate transactions with transfer of ownership as part of the Sharing Economy. Authors include swapping, gifting/donating, and trading practices where transfer of ownership takes place in Sharing Economy practices (e.g. Albinsson and Yasanthi Perera, 2012; Barnes and Mattsson, 2016; Martin and Upham, 2015).

4.5 Compensation schemes in sharing practices

We further investigated how the transactions in Sharing Economy practices are compensated and identified three different compensation schemes: direct monetary compensation, direct non-monetary compensation and indirect non-monetary compensation. Transactions can be directly monetary remunerated by paying a fee for each transaction (Belk, 2014b; Lamberton and Rose, 2012; Matzler *et al.*, 2015) or by paying a membership fee to get access to goods and services (Bardhi and Eckhardt, 2012; Pedersen and Netter, 2015). Next to financial payments, transactions can be compensated in a direct non-monetary manner. Instances of direct non-monetary compensation are any forms of cashless, reciprocal exchange like swapping of goods (Albinsson and Yasanthi Perera, 2012) or time banks, where individuals are credited with one hour, which she or he can convert into an hour of service from another person in the system (Laamanen *et al.*, 2015). In addition to these more reciprocal forms of compensation, we found examples where the transaction is not directly compensated. This may be the case for any form of gift giving (Albinsson and Yasanthi Perera, 2012; Heo, 2016; Martin *et al.*, 2015) or “true” sharing, where no reciprocal exchange takes place (Ert *et al.*, 2016), for instance in the context of Couchsurfing, where people offer free accommodation to strangers.

4.6 Commercial and non-commercial motives to participate in sharing practices

These compensations can be directly linked to the motivational factors that were identified in the literature. The reasons why people participate in Sharing Economy practices are multifaceted. Besides striving for economic benefits, actors are motivated by other outcomes arising from the sharing transactions, including ecological and social benefits.

The most prominent motivations for getting involved in sharing and consumption services are economic benefits. One major driver is the cost saving potential for economic resources. For instance, users of Sharing Economy services can benefit from allocation of costs to several parties (e.g. in the case of ridesharing), from reduced time for coordination, or avoidance of ownership duties like acquisition or maintenance costs (e.g. Gullstrand Edbring *et al.*, 2015; Hamari *et al.*, 2015; Tussyadiah, 2015). Besides cost savings, people use these services for profit generation. Individuals participate in order to generate additional income or even to become “micro entrepreneurs” (e.g. Barnes and Mattsson, 2016; Corciolani and Dalli, 2014; Heo, 2016; Nica and Potcovaru, 2015), for instance by renting out their homes. Other benefits can be derived by higher flexibility or convenience. Individuals seem to follow utility-driven goals (Bardhi and Eckhardt, 2012; Kim *et al.*, 2015; Lamberton and Rose, 2012; McArthur, 2015; Piscicelli *et al.*, 2015) and want to be flexible and still get access to a variety of goods, which are mostly seldom-used, of high quality, or non-available at a

normal market (Andersson *et al.*, 2013; Gullstrand Edbring *et al.*, 2015; Pedersen and Netter, 2015; Tussyadiah, 2015). Comfort and convenience reasons were mentioned as well. Over time, increasing familiarity of the services and convenience by having access to resources when needed lead to usage of these services (Bardhi and Eckhardt, 2012; Kim *et al.*, 2015; Lamberton, 2016; Matzler *et al.*, 2015; Möhlmann, 2015; Tussyadiah, 2016). Lastly, these services provide the opportunity to test a certain product without paying the full price (Gullstrand Edbring *et al.*, 2015; Pedersen and Netter, 2015).

Other motivational factors for participating in the Sharing Economy are environmental and ecological benefits resulting from a more sustainable use of resources. Due to increased environmental consciousness, people expect to reduce their carbon footprint by using resources more efficiently or even by reducing their own consumption behavior (e.g. Albinsson and Yasanthi Perera, 2012; Piscicelli *et al.*, 2015; Tussyadiah, 2016). This includes avoiding inconveniences of other forms of waste disposal (Martin and Upham, 2015), especially in the case of gift giving.

As in many other communities, the human aspect is becoming increasingly central in this kind of sharing practices. By using Sharing Economy services, people satisfy their desire to belong to a community (e.g. Barnes and Mattsson, 2016; Hamari *et al.*, 2015; Möhlmann, 2015; Piscicelli *et al.*, 2015). These practices are seen as a cool, trendy, and hip alternative to traditional consumption practices (Bardhi and Eckhardt, 2012). Being part of a community also fosters social relationships and connection between community members. Starting and maintaining social relationships, e.g. by sharing and exchanging of experiences, and the possibility to get in touch with a variety of different actors were mentioned as motivational factors (e.g. Hawlitschek *et al.*, 2016; Lamberton and Rose, 2012; Martin and Upham, 2015). Additionally, participation in sharing and consumption services is driven by cultural and ideological reasons, for example altruism (Albinsson and Yasanthi Perera, 2012; Gutt and Herrmann, 2015) or ethical concerns regarding overconsumption and the consequential mindset of anticonsumption and anticapitalism (Chasin and Scholta, 2015; Hong and Vicdan, 2016; Lamberton and Rose, 2012; Martin and Upham, 2015). Negative experiences with traditional markets (Albinsson and Yasanthi Perera, 2012), emotional drivers like curiousness and experiential desires (Heo, 2016; McArthur, 2015), enjoyment (Tussyadiah, 2016), and the wishful thinking of increasing the quality of life by educating people and distributing the spirit of alternative consumption forms (Corciolani and Dalli, 2014; Hong and Vicdan, 2016) were found as motives for getting engaged in sharing services.

Lastly, single studies identified other aspects such as security needs or health benefits. For instance, the permanent localization of the car in the case of private P2P car sharing may serve as an anti-theft solution (Trang *et al.*, 2015) whereas co-housing may satisfy the desire for a safer neighborhood. McArthur (2015) names health benefits to be a motivator for growing own food in community gardening.

5. Discussion

In this section, we derive a categorization of sharing services by exploiting the manifestations of the dimensions of sharing practices identified in our literature review. We then exemplify the applicability of this conceptualization in two ways. First, we show how the categorization visualizes concepts of sharing practices and, simultaneously, helps to differentiate the Sharing Economy from related phenomena. Second, we apply our categorization to structure existing research and thereby enable the comparison of prior findings and the identification areas for future research.

5.1 Categorization of sharing practices

The literature review revealed manifestations for each of the four dimensions to differentiate sharing practices. First, we distinguish sharing practices based on the question whether a

transfer of ownership takes place or not. Second, we structure sharing practices based on the type of compensation, i.e. indirect non-monetary, direct non-monetary, or direct monetary. Third, the involved actors and the motives of participation are interdependent (Gritzas and Kavoulakos, 2015; Richardson, 2015). Different actors can participate in the sharing practices (business, consumer, government), which is strongly connected to their degree of commercial intention (non-commercial, hybrid, commercial). This commercial intention refers to the actors' engagement in sharing practices enabled by digital platforms. It does not refer to the commercial orientation of the sharing platform itself. The latter is no distinctive feature of sharing practices, since even non-profit platforms become more complex and commercially orientated over time due to an increasing number of users (Martin *et al.*, 2015). The different categories are derived from the synthesis of the reviewed literature. According to Bailey (1994), validity for typologies can be shown by using the classification and assigning empirical cases to cells and, thereby, to groups. This assessment revealed that the theory-driven characteristics of the four dimensions are both exhaustive and mutually exclusive (Bailey, 1994). Table VII summarizes the four dimensions and their respective characteristics.

The resulting framework represents all sharing practices in the Sharing Economy and is depicted in Figure 4.

Table VII.
Dimensions and
characteristics

| Dimension | Characteristics |
|-----------------------|---|
| Involved actors | C2C, B2C, G2C |
| Compensation schemes | Direct monetary, direct non-monetary, indirect non-monetary |
| Participation motives | Commercial interests (e.g. profit generation), non-commercial interests (e.g. cost sharing, social motives) |
| Ownership transfer | Yes, No |

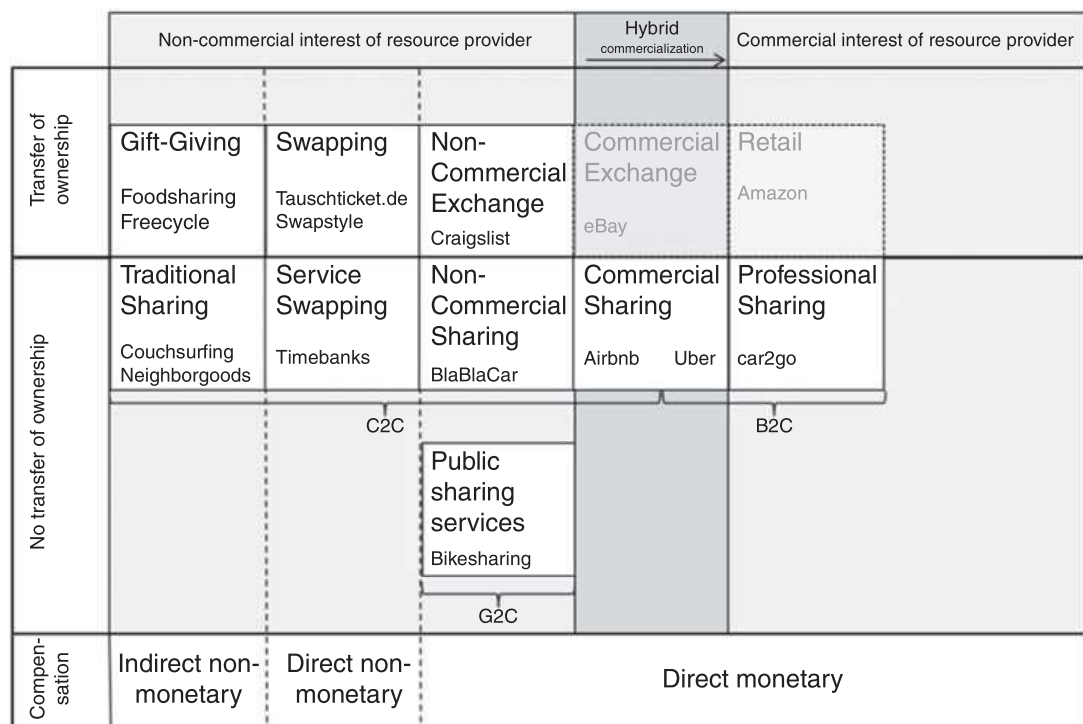


Figure 4.
Categorization of
sharing practices

The upper left corner describes sharing practices with no commercial intention, where transfer of ownership and no direct and immediate compensation take place. This refers to *Gift giving* acts. People dispose goods ostensibly for no compensation, e.g. due to pure altruism. We argue that although the donor is not compensated directly, there is still a way of compensation by emotional benefits, e.g. the enjoyment (Tussyadiah, 2016) or the pleasure to help other people (Martin and Upham, 2015). Practical examples fitting in that category are the gifting network Freecycle or the grocery saving and sharing platform Foodsharing[10].

Swapping describes a sharing practice that is not commercially orientated but includes a direct compensation in a non-monetary manner and a transfer of ownership. Both actors involved in the transaction are immediately compensated without the flow of money. Typical examples are swapping platforms like Swapstyle[11] for clothes or Tauschticket[12].

Besides these indirect and direct non-monetary compensation models, there are sharing practices where transfer of ownership takes place and transactions are directly monetary compensated without commercial interest. The category *non-commercial exchange* includes platforms where goods are exchanged either for a token payment or a fair monetary compensation with no commercial intention. These kinds of services are mostly second hand trading platforms like Kleiderkreisel[13] or Craigslist[14] where underutilized goods are traded.

The categories *commercial exchange* and *retail* refer to practices where no resources are shared. Therefore, they do not represent sharing-related practices. In commercial exchange a transfer of ownership takes place with direct monetary compensation. However, the drivers of participating can be both non-commercial and commercial interest. One prominent example is eBay[15]. In Germany, over 59 percent of all traded articles are sold by commercial sellers (eBay Inc., 2011). If these models are fully commercialized, they are classical retail businesses (e.g. Amazon[16] retail). Since there is a huge variety of studies on these categories (e.g. Bell and Tang, 1998; Tamimi and Sebastianelli, 2015; Tseng and Teng, 2014; Xu *et al.*, 2010), a review on studies related to that context is beyond the scope of this article.

Sharing practices without transfer of ownership are categorized in a similar way. *Traditional sharing* transactions are practices where no transfer of ownership takes place with indirect compensation in a non-commercial context. This category describes practices of true sharing or lending. Similar to gift giving, the lender receives no immediate and no monetary compensation. Example organizations are the free accommodation platform Couchsurfing or the free goods sharing platform NeighborGoods[17]. Alternative indirect compensation for these services could be social benefits like community feeling (Möhlmann, 2015) and new social relationships (Tussyadiah, 2015), or the possibility to receive compensation in the future (Corciolani and Dalli, 2014; Jenkins *et al.*, 2014; Martin *et al.*, 2015).

Service swapping describes non-commercial sharing practices with no transfer of ownership and direct non-monetary compensation. In this category, services or skills are swapped instead of goods. The concept of time banking (Laamanen *et al.*, 2015) can be seen as one example fitting in this category. Instead of monetary compensation, the actors in time banking transactions are directly compensated by getting non-monetary rewards, i.e. time from another person.

In contrast to non-commercial exchange, no transfer of ownership takes place in *non-commercial sharing*. The provider of the service is monetarily compensated, but the motivation to offer this service is not driven by profit orientation, but rather by the desire to save costs or to divide costs with others. Examples for these services are ridesharing platforms like BlaBlaCar[18]. The same distinction criteria apply to sharing services provided by the government (*public sharing services*), for example public bike sharing

(Fishman *et al.*, 2013), where users have to pay for the service, but the motivation of the government is non-commercial.

The lines between personal and commercial provision of resources are blurred in the Sharing Economy (Cohen and Sundararajan, 2015; Heo, 2016; Katz, 2015). We find some hybrid forms between non-commercial and commercial interest, which we call *commercial sharing*. In this case, no transfer of ownership takes place, the provided service is directly monetarily compensated, but the purpose could be non-commercial or commercial. For instance using the accommodation service Airbnb or the ride-for-hire service Uber to cover fixed expenses and to save money (Bardhi and Eckhardt, 2012) would refer to non-commercial interest, whereas using these services to generate profits, e.g. to sell additional services like tour guiding (Heo, 2016) or even acquire additional resources like new apartments for rental in the case of Airbnb, would refer to commercial purposes.

Professional sharing refers to practices where companies offer access to a resource without transferring ownership and where they receive a direct monetary compensation for providing the service. Typical examples of that category are B2C car sharing systems like ZipCar or car2go[19].

5.2 Application 1: distinguishing phenomena and terms

As mentioned above, access-based consumption, collaborative consumption and Sharing Economy were the most frequently used terms related to sharing practices. We now use our framework to illustrate similarities and differences between the phenomena that those terms describe. These terms partially have strong overlaps. Figures 5 and 6 visualize the differences and similarities among these terms.

In literature, there is an agreement on the definition of access-based consumption. It is defined as transactions that may be market-mediated and in which no transfer of ownership takes place (Bardhi and Eckhardt, 2012; Watkins *et al.*, 2016). This definition includes all categories of our framework where no transfer of ownership takes place (see Figure 5).

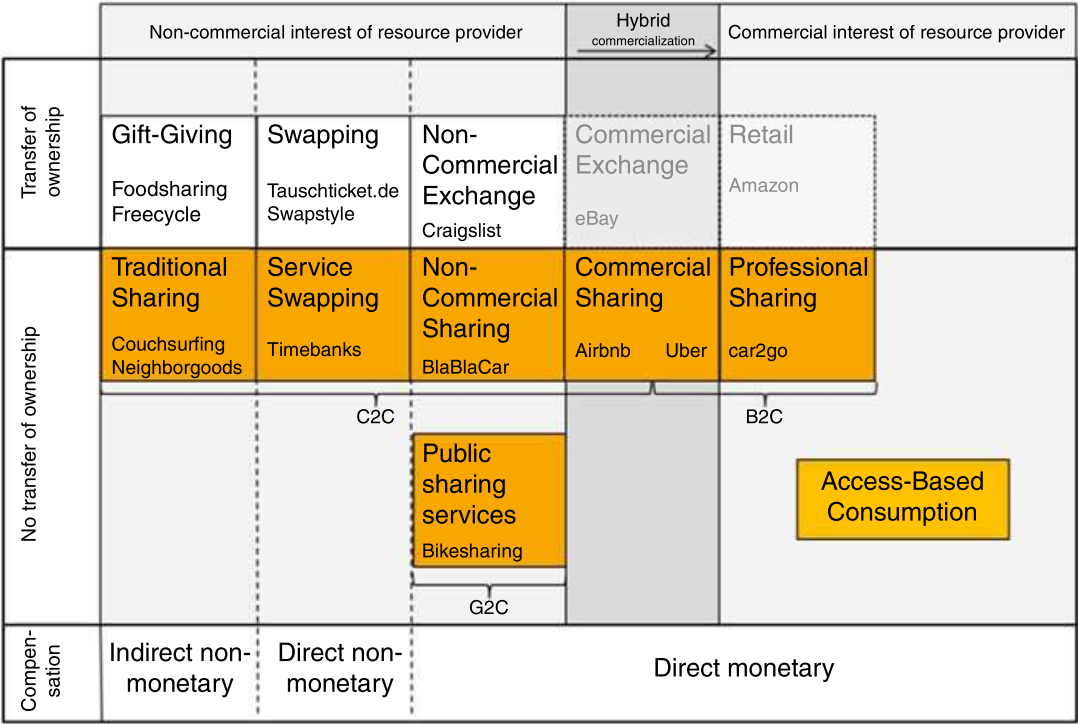


Figure 5.
Access-based
consumption

| | Non-commercial interest of resource provider | | | Hybrid commercialization | Commercial interest of resource provider |
|--------------------------|---|---|--|---|--|
| Transfer of ownership | Gift-Giving Foodsharing Freecycle | Swapping Tauschticket.de Swapstyle | Non-Commercial Exchange Craigslist | Commercial Exchange eBay | Retail Amazon |
| No transfer of ownership | Traditional Sharing Couchsurfing Neighborgoods | Service Swapping Timebanks | Non-Commercial Sharing BlaBlaCar | Commercial Sharing Airbnb Uber | Professional Sharing car2go |
| Compensation | Indirect non-monetary | Direct non-monetary | Direct monetary | | |

C2C (between Traditional Sharing and Service Swapping)
 G2C (between Non-Commercial Sharing and Commercial Sharing)
 B2C (between Commercial Sharing and Professional Sharing)
 Collaborative Consumption (encompassing Commercial Sharing and Professional Sharing)

Figure 6.
Collaborative consumption

For collaborative consumption, this task is more challenging, since the definition of this phenomenon is not commonly agreed upon in literature (McArthur, 2015). The majority of the papers did not give a concrete definition of collaborative consumption, but named different terms of related concepts and explained difficulties with defining collaborative consumption.

On closer examination, it becomes apparent that the definition of collaborative consumption has evolved over time and these evolutionary steps should not be described as contradictory (Daunorienė *et al.*, 2015). The roots of the term “Collaborative Consumption” go back to times before the advent of the internet. “Drinking beer with friends [...] or using a washing machine for family laundry are acts of Collaborative Consumption” (Felson and Spaeth, 1978, p. 614). In more recent times, Botsman and Rogers (2010) have used Collaborative Consumption as a concept including sharing, bartering, lending, trading, renting, gifting and swapping. Belk (2014b) sees this definition as miss-specified, since this view is too broad and mixes up marketplace exchange with gift giving. He defines collaborative consumption as “people coordinating the acquisition and distribution of a resource for a fee or other compensation” (Belk, 2014b, p. 1597). This definition includes practices like bartering, trading, and swapping, but excludes sharing activities like Couchsurfing or gift giving, where no direct compensation is involved. Botsman (2013) later refined her definition of collaborative consumption and excluded gift giving practices. Mainstream media diffused the definition of Botsman and Rogers (2010) or Botsman (2013), whereas early scholarly definitions like Belk (2014b) came up later (Hamari *et al.*, 2015).

The meaning of sharing resources is used in a broader sense and not restricted to “true” sharing. Barnes and Mattson define Collaborative Consumption as “the use of online marketplaces [...] to facilitate peer-to-peer sharing of resources [...] between individuals” (Barnes and Mattsson, 2016, p. 4). This definition would exclude transfer of ownership models. Other works (e.g. Ertz *et al.*, 2016) explicitly refer to transfer-of-ownership models like FreeCycle. According to Hamari *et al.* (2015), sharing the consumption of goods and services includes renting, lending, donating, swapping or trading.

To differentiate non-direct reciprocal transactions from market exchange and to stay in line with common definitions (Belk, 2014b; Botsman, 2013; Hartl *et al.*, 2015; McArthur, 2015; Möhlmann, 2015; Piscicelli *et al.*, 2015), we exclude *Gift giving* practices from collaborative consumption. Since in *traditional sharing*, access to a certain resource is enabled for a non-direct compensation, *traditional sharing* could be considered as an act of gifting. The owner of a resource donates access to a resource, instead of donating the resource itself. Therefore, excluding traditional sharing from collaborative consumption practices is in line with the latest evolution of the concept and results in the clear graphical definition depicted in Figure 6.

The scopes of Sharing Economy and collaborative consumption seem to have a strong overlap. Due to the marginal differences between Sharing Economy and collaborative consumption, these two terms tend to be used interchangeably in practice (Martin *et al.*, 2015) and Sharing Economy has become the predominant concept (Martin, 2016). Our categorization makes the differences between the terms apparent.

As mentioned above, even the phenomenon Sharing Economy as a whole is subject to discourse, in particular about the question whether it encompasses professional services. The *Oxford Dictionary* restricts the term to resources owned by private individuals (*Oxford Dictionary*, 2016), whereas others see the Sharing Economy as an umbrella concept encompassing access-based consumption and collaborative consumption (Barnes and Mattsson, 2016; Hamari *et al.*, 2015; Henten and Windekilde, 2016; Nica and Potcovaru, 2015). Since the main idea behind the Sharing Economy is the capturing and redistribution of idling capacity (Daunorienė *et al.*, 2015) and taking under-utilized assets to make them accessible to others, leading to a reduced need for ownership (Richardson, 2015), one can argue to include professional services to Sharing Economy practices. The decision whether to include or exclude professional services from the Sharing Economy depends on the perspective. If the phenomenon is seen as a grassroots movement of the society, professional services should be excluded. If the Sharing Economy is viewed from a resource efficiency perspective, we suggest including professional and governmental services.

In the same way, our framework enables the visualization of other phenomena or descriptions of practices, for instance, non-reciprocal exchange (Gift-giving and traditional sharing) or access-economy (non-commercial sharing, commercial sharing and professional sharing). Thereby, our framework enables researchers to clearly state what types of sharing practices they relate to. In the best case, this common ground can facilitate the discourse on phenomena rather than definitions.

5.3 Application 2: structuring research

Besides the visualization of sharing practices and the different corresponding phenomena, our categorization can be used to systematically structure research on the Sharing Economy and, thereby, help to explain differences among research results. Using the motives for participating in Sharing Economy transactions mentioned above as example, some studies found that the main drivers for using a sharing service seem to be economic benefits (e.g. Böcker and Meelen, 2017), whereas other studies (e.g. Albinsson and Yasanthi Perera, 2012) found that a sense of community feeling is the main driver for participation in sharing practices. At the first sight, these findings seem to be contradictory. However, these results can be easily explained by our categorization. The identified categories of sharing practices divide existing research into specific areas. In the case above, Albinsson and Yasanthi Perera (2012) investigated the motivational factors in the context of gift-giving, whereas Böcker and Meelen (2017) conducted their research in the context of non-commercial sharing and commercial sharing (P2P car sharing). The commercial orientation of the transaction is reflected in our categorization and increases from left to right side. Therefore, if both studies talk about the Sharing Economy, one could conclude that those results are contradictory. However, our

framework allows a more precise description of the investigated sharing practices and the characteristics of those practices directly explain the differences in their findings.

Tables VIII–X provide a detailed overview on the studies conducted in the context of a certain sharing practice (e.g. commercial sharing) and links them to the identified research areas (e.g. value creation). Some studies investigated platforms which enabled more than one practices at the same time (e.g. a platform for swapping and renting clothes). Correspondingly, these studies are listed in more than one cell of the table.

5.4 Opportunities for future research

The categorization of sharing services above can be used to structure existing literature and identify research gaps and opportunities. A closer investigation of Tables VIII–X reveals that the majority of research concentrates on commercial sharing, followed by non-commercial sharing and professional sharing. Research on more alternative ways of consumption like swapping and gifting remains scarce. This observation is not surprising, since prime examples of the Sharing Economy with huge media coverage (Airbnb or Uber) are considered in “commercial sharing” and depict the stereotype of the new, technology-enabled form of sharing underutilized resources.

Our categorization revealed research gaps and opportunities classified by research areas and level of analysis as summarized in Table XI. Although a complete discussion of every single research avenue is beyond the scope of this article, we highlight a few observations and thereby illustrate ways how our categorization and review can be used to structure prior research and identify research gaps. In this case, we focus on the most popular research areas and use the framework to identify further opportunities in those areas. Despite the general trend of the increased attractiveness of Sharing Economy research, four research areas exhibit extraordinary growth: value creation; choice by consumer; choice by resource provider; and impact. Figure 7 depicts the growth of “hot” topics within Sharing Economy research.

In 2017 the number of articles investigating the value creation of sharing platforms increased from 0 to 13. These studies mainly focused on the category of “commercial sharing” in the context of shared accommodation (e.g. Johnson and Neuhofer, 2017; Wiles and Crawford, 2017) or shared mobility services (e.g. Dreyer *et al.*, 2017; Frey *et al.*, 2017). Transferring findings to other contexts of our framework and comparing findings by exploiting the structural differences of trading transactions in the different manifestations could lead to a fruitful avenue for further investigation. For instance, investigate the value creation in other sharing categories (e.g. swapping or gifting), or in “commercial sharing,” but in different context like tool-sharing or meal-sharing.

Furthermore, behavioral studies on the *choice by consumers and by resource providers* became popular. Studies on the selection by the consumer on sharing offers (e.g. Abramova *et al.*, 2017; Ert *et al.*, 2016) and on the selection by resource providers on consumers (e.g. Karlsson *et al.*, 2017) are important to improve the matchmaking of the platform. These studies could have a big potential for recommendations on platform features and platform design. In particular, studies from a resource provider perspective are scarce and could provide interesting insights for future research in platform design, guidelines for effective sharing services in terms of the artifact, but also governance structures, regulations and sanctions for users.

The number of studies on the *impact of the Sharing Economy* is increasing. However, the majority of studies on the impact are restricted to one sector. For instance, the economic impact of the Sharing Economy on traditional businesses (e.g. Zervas *et al.*, 2017) is mainly limited to the accommodation sector. Studies on the ecological impact (Cervero *et al.*, 2007) mainly focus on car sharing, whereas studies on the societal consequences (e.g. Greenwood and Wattal, 2017) mainly deal with the entrance of Uber. Due to the complex nature of

Table VIII.
Literature overview
on micro level studies

| Research area | General | Gift giving | Swapping | Non-commercial exchange | Traditional sharing | Service swapping | Non-commercial sharing | Commercial sharing | Professional services | Public sharing services |
|--|--|---|------------------------------|---|--|-----------------------------|---|---|---|-------------------------|
| <i>Micro level</i> Adoption and continuance | Burgiel and Zralek (2015), Dąbrowska and Gutkowska (2015), Lindblom and Lindblom (2017), Yang <i>et al.</i> (2017) | – | Johnson <i>et al.</i> (2016) | Johnson <i>et al.</i> (2016) | Davidson <i>et al.</i> (2017) | – | Barnes and Mattsson (2017), Piscicelli <i>et al.</i> (2015), Trang <i>et al.</i> (2015) | Barnes and Mattsson (2017), Chen, Phang and Zhang (2017), Chen, Zhao, Wang, Huang and Lee (2017), Zhu <i>et al.</i> (2017), Henten and Windekilde (2016), Lin <i>et al.</i> (2017), Kim <i>et al.</i> (2015), Lee <i>et al.</i> (2016), Möhlmann (2015), Tussyadiah (2016), Wu <i>et al.</i> (2017), Mao and Lyu (2017) | Hwang and Griffiths (2017), Lamberton and Rose (2012), Möhlmann (2015), Santoso and Erdaka (2015) | – |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Motives for participation | Lamberton (2016) | Albinsson and Yasanthi Perera (2012), Martin and Upham (2015) | Hamari <i>et al.</i> (2015) | Gullstrand Edbring <i>et al.</i> (2015) | McArthur (2015) | Hamari <i>et al.</i> (2015) | Böcker and Meelen (2017), Chudzian (2015), Grybaitė and Stankeviciene (2016), Hawilitschek <i>et al.</i> (2016), Lawson <i>et al.</i> (2016), Milanova and Maas (2017), Wilhelms <i>et al.</i> (2017) | (Böcker and Meelen (2017), Grybaitė and Stankeviciene (2016), Lawson <i>et al.</i> (2016), Tussyadiah (2015), Wilhelms <i>et al.</i> (2017) | (Grybaitė and Stankeviciene (2016), Lawson <i>et al.</i> (2016) | – |
| Choice by consumer | – | – | Schneider (2017) | – | Chen, Phang and Zhang (2017), Mittendorf (2017a) | – | Wilhelms <i>et al.</i> (2017) Paundra <i>et al.</i> (2017) | Abramova <i>et al.</i> (2015, 2017), Ert <i>et al.</i> (2016), Hong (2017), Mittendorf (2017b, c, d), Pappas (2017), | – | – |

(continued)

| Research area | General | Gift giving | Swapping | Non-commercial exchange | Traditional sharing | Service swapping | Non-commercial sharing | Commercial sharing | Professional services | Public sharing services |
|-----------------------------|---------|-------------|----------|-------------------------|---------------------|------------------|--|---|-----------------------|-------------------------|
| Choice by resource provider | – | – | – | – | – | – | – | Paundra <i>et al.</i> (2017), Xie and Mao (2017) | – | – |
| Service quality | – | – | – | – | – | – | – | Karlsson <i>et al.</i> (2017), Mittendorf (2016, e, f), Mittendorf and Ostermann (2017a, b) | – | – |
| Offer pricing | – | – | – | – | – | – | Filippas and Gramstad (2016), Kreeger and Smith (2017), Kung and Zhong (2016, 2017), Teubner <i>et al.</i> (2017), Wang and Nicolau (2017), Weber (2014) | – | – | – |

Table VIII.

| Research area | General | Gift giving | Swapping | Non-commercial exchange | Traditional sharing | Service swap-ping | Non-commercial sharing | Commercial sharing | Professional services | Public sharing services |
|---------------------------------|--|--------------------------|--------------------------|---|--|--------------------------|---------------------------|---|--|-------------------------|
| <i>Macro level</i> | | | | | | | | | | |
| Impact (Traditional businesses) | Forgacs and Dimanche (2016), Huefner (2015), Kathan <i>et al.</i> (2016), Nishino <i>et al.</i> (2017), Plenter (2017) | – | – | – | – | – | Heo (2016), Weber (2015) | Aznar <i>et al.</i> (2017), Fang <i>et al.</i> (2015), Gutiérrez <i>et al.</i> (2017), Heo (2016), Horn and Merante (2017), Laurell and Sandström (2016), Mody <i>et al.</i> (2017), Richard and Cleveland (2016), Salvioni (2016), Tusseyadiah and Pesonen (2016), Williams and Horodnic (2017), Zervas <i>et al.</i> (2016, 2017) Greenwood and Wattal (2017), Li <i>et al.</i> (2016, 2017), Wang <i>et al.</i> (2017) | Bellos <i>et al.</i> (2017) | – |
| Impact (societal) | Plenter (2017) | – | – | – | – | – | – | – | – | – |
| Impact (ecological) | Plenter (2017) | Iran and Schrader (2017) | Iran and Schrader (2017) | Fremstad (2017), Iran and Schrader (2017), Parguel <i>et al.</i> (2017) | Ala-Mantila <i>et al.</i> (2016, p.), Iran and Schrader (2017) | Iran and Schrader (2017) | Iran and Schrader (2017) | – | Cervero <i>et al.</i> (2007), Martin and Shaheen (2011), Retamal (2017), Zamani <i>et al.</i> (2017) | – |
| Law and regulation | McKee (2017) | – | – | – | – | – | Berke (2016), Katz (2015) | Acevedo (2016), Berke (2016), Biber <i>et al.</i> (2017), Blevins (2017), Elliott (2016), Hong and Lee (2017), Katz (2015), Lobel (2016), Loewenstein (2017), Major (2016), Miller (2016), | – | – |

(continued)

Table X.
Literature overview
on macro level studies

Table X.

| Research area | General | Gift giving | Swapping | Non-commercial exchange | Traditional sharing | Service swap-ping | Non-commercial sharing | Commercial sharing | Professional services | Public sharing services |
|-------------------|------------------------------|-----------------|---|-------------------------|--|---|------------------------|--|-----------------------|-------------------------|
| Community conduct | Watkins <i>et al.</i> (2016) | Godelnik (2017) | Godelnik (2017), Schor <i>et al.</i> (2016), Schor and Fitzmaurice (2017) | – | Godelnik (2017), Pera <i>et al.</i> (2016) | Godelnik (2017), Schor <i>et al.</i> (2016) | – | Munkøe (2017), Pfeffer-Gillett (2016), Posen (2015), Redfearn III (2016), Sprague (2015), Stafford (2016), Todoli-Signes (2017), Zale (2016) | Gruen (2017) | – |

| Level | Research area | Observation | Research questions |
|-------|-------------------------------------|--|---|
| Micro | Adoption and continuance | Continuance decisions were investigated based on the characteristics of the currently used platform only while disregarding prospects from alternative platforms | Why are users switching among different Sharing Economy platforms? How can user switching be mitigated or prevented? |
| | Motives for participation | A large number of studies has investigated motives for participation focus on economic, ecologic and social motives. Potential for meta-studies | Why and how do the motives to participate in Sharing Economy transactions differ culturally or regionally (e.g. developed and non-developed countries)? |
| | Choice by consumer | Focus of choice variables has been on price and quality of the resource | How does the social profile of the resource provider influence the consumer's choice? What characteristics of the shared resource (e.g. usage frequency or handover convenience) influence the consumer's choice? |
| | Choice by provider | Strong focus on consumer's reputation and trustworthiness but does not reflect on unique characteristics of sharing practices (e.g. shared time during consumption) that emphasizes non-functional characteristics of the consumer (e.g. social profile) | What is the influence of consumer's non-functional characteristics (e.g. hobbies or interests) on provider's choice when selecting a consumer? Which design elements should a platform provide to support the choice of providers? |
| | Offer pricing | Pricing focuses on static prices | How do consumers react to dynamic pricing of Sharing Economy offers (e.g. surge pricing)? How do automatic price suggestions on Sharing Economy platforms influence the intention to transact on consumer side? |
| | Service quality | Service quality measures have not been adapted to the unique characteristics of sharing practices | How can the quality of a Sharing Economy transaction be measured? How does the (expected) interaction among resource provider and consumer influence the perceived transaction quality? |
| Meso | Business models | Focus on the development of new business models without investigating the adaptation of existing business models towards sharing practices | How can traditional manufactures transform their business to counter the potential threats of the Sharing Economy? |
| | Platform evolution | Focus on evolution strategies without incorporating external events and their applicability for different sharing practices | How can Sharing Economy platforms expand their activities toward other sharing practices? How do external events (e.g. venture capital or legal changes) influence the evolution of Sharing Economy platforms? |
| | Platform governance | Governance mainly focused on self-regulation and sanctions without considering alternative governance types (e.g. social control) in relation to the success of the platform | What governance strategies apply to different sharing practices and how do they influence the success of Sharing Economy platforms? |
| | Platform and infra-structure design | Focus on improvements of the platform. Models for improving the physical infrastructure and the | How can the handover processes for the shared resource be improved? Which legal regulations contribute to the |

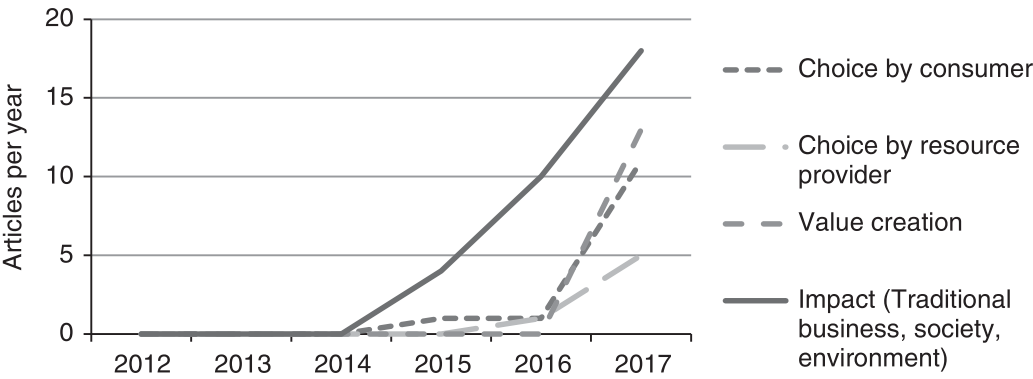
(continued)

Table XI.
Exemplary
opportunities for
future research

| Level | Research area | Observation | Research questions |
|-------|--|---|--|
| Macro | Value creation | offline handover of the shared resources are missing Scarcity of studies on the long-term success of Sharing Economy platforms. Additional potential for studies with focus beyond economic value (e.g. ecologic or hedonic value) | design of the necessary infrastructure (e.g. charging stations for electronic vehicles)? How can Sharing Economy platforms create sustainable value for their consumers and foster a long term relationship with them? How do non-economic values (e.g. hedonism or social interaction) contribute to the success of a Sharing Economy platform? |
| | Characteristics and conceptualizations | Contradictions in definitions, characteristics and scope of the Sharing Economy. Focus on individual dimensions of sharing economy practices | – |
| | Impact | There are indicators for potential impact of the sharing economy in select areas, however, there is a lack of measurement models for long-term impact of different sharing practices on the economy, society, and environment | How do different types of sharing practices impact traditional businesses? How does the potential impact of the Sharing Economy differ regionally? How does the Sharing Economy contribute to a more sustainable lifestyle (e.g. reduction of pollution)? |
| | Community conduct | Only investigated in non-commercial contexts of sharing practices | Why and how does the community behavior differ among commercial-orientated and non-commercial orientated sharing practices? |
| | Law and regulation | Clear legal and regulatory boundaries for Sharing Economy transactions missing | What are the requirements for additional laws or new forms of regulation for the Sharing Economy? How can social charges and retirement arrangement be assured in a Sharing Economy? |

Table XI.

Figure 7.
Hot topics in sharing economy research



sharing practices, it can be assumed that their effects differ widely between different political, social, and cultural settings. Therefore, the impact may differ among the different sharing practices. As the field matures, quantitative estimations of impact could complement our understanding. Therefore, future studies should consider possible differences among the sharing practices in their quantitative models, when estimating the impact of the Sharing Economy.

A full overview on the numbers of studies for specific sharing practices and research areas is given in Table AI. Table XI provides an overview of future research opportunities across levels of analysis and research areas.

5.5 Contributions and limitations

Our study aims at contributing to the research on the Sharing Economy in three ways. First, we develop an organizing framework that maps and structures different perspectives on the Sharing Economy. Rather than fueling normative debates on the scope of the Sharing Economy, this enables us to disentangle the different research streams on the Sharing Economy and enables researchers to clearly define the area of sharing services they are investigating. It also allows them to demarcate themselves from other studies by emphasizing the unique characteristics of the sharing practices that they investigate. Second, we categorize previous studies in the field of the Sharing Economy according to investigated research areas and their perspective on the Sharing Economy. This provides a full overview on what has been investigated for what type of sharing practice. Thereby, we help to explain confusing or seemingly contradictory results. Third, our categorization and the resulting structuration of prior studies create an understanding of research gaps and opportunities while incorporating the specificities of the investigated sharing practice. Researchers can use this as a structured tool for analyzing and contextualizing research questions and to distinguish effectively between Sharing Economy questions that are actually novel from those that have been addressed in adjacent research areas (Andersson *et al.*, 2013; Lamberton, 2016).

The findings help to understand the Sharing Economy facets, distinguish them from other or related phenomena and aim at increasing the applicability of Sharing Economy research for practice. Practitioners (e.g. venture capitalists) can use our findings to improve the estimation of the market size of the particular niche within the Sharing Economy and thus make more effective decisions. Sharing platform providers can use our categorization to develop new business models or to extend existing ones, e.g. by intensifying the usage of resources by not promoting a transfer or ownership or by attracting users with different commercial orientation to extend their user base. Sharing Economy platforms often operate in legal gray areas and have raised complex legal questions (e.g. Katz, 2015; Pfeffer-Gillett, 2016). For legislation it is important to understand the different facets of the Sharing Economy. Policy makers could use our findings to enact more precise laws for those subtypes of the phenomena that actually require regulation.

Yet, we need to acknowledge some limitations to our review. First, despite our structured approach using a well-documented and rigorous procedure, we may still have missed relevant articles. We restricted our literature review to the main keywords related to Sharing Economy practices and excluded the variety of terms coming up with that phenomenon. We implemented elaborate forward- and backward-search procedures to identify important articles that did not come up from our research and had our article cross-checked by other experts in Sharing Economy research to mitigate the risk of important omissions. Second, we focused on IS conferences and did not consider conferences from other disciplines. We did this because of the historical importance of conferences as a publication outlet in IS research. However, this focus could lead to an exclusion of possibly relevant conference articles of other disciplines.

6. Conclusion

We conducted an interdisciplinary literature review on the Sharing Economy and related phenomena. Based on the examined literature we derive four core elements of sharing transactions and developed a categorization of sharing services. By applying our categorization, we are able to distinguish and visualize Sharing Economy practices from other closely related phenomena like collaborative consumption or access-based consumption. Furthermore, we apply our categorization to systematically structure existing research. Thereby, we are able to explain contradictory research findings and identify avenues for future research.

Notes

1. www.airbnb.com
2. www.uber.com
3. www.wimdu.com
4. www.lyft.com
5. Since the aim of our review is a qualitative rather than quantitative analysis of the research area, this inclusion does not bias our results and is the outcome of a carefully considered trade-off between recency and quality of the articles reviewed. It is informed by the fact that, in contrast to other disciplines, conferences in this area publish all full papers instead of providing abstracts or work-in-progress.
6. Due to space limitations of the manuscript at hand, the full concept matrix was omitted from this paper, but is available upon request.
7. www.couchsurfing.com
8. www.freecycle.org
9. www.zipcar.com
10. www.foodsharing.de
11. www.swapstyle.com
12. www.tauschticket.de
13. www.kleiderkreisel.de
14. www.craigslist.org
15. www.ebay.com
16. www.amazon.com
17. www.neighborgoods.net
18. www.blablacar.com
19. www.car2go.com

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| Level | Research area | Gift- Giving | Swap- ping | Non- commercial exchange | Commercial exchange | Traditional sharing | Service swapping | Non- commercial sharing | Commercial sharing | Professional sharing | Public sharing services |
|-------|--|-----------------|---------------|--------------------------------|------------------------|------------------------|---------------------|-------------------------------|-----------------------|-------------------------|-------------------------------|
| Micro | Adoption and continuance | 0 | 1 | 1 | 0 | 1 | 0 | 5 | 14 | 4 | 0 |
| | Choice by consumer | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 10 | 0 | 0 |
| | Choice by provider | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 |
| | Motives to participate | 2 | 1 | 1 | 0 | 1 | 1 | 7 | 6 | 2 | 0 |
| | Offer Pricing | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 0 | 0 |
| Meso | Service quality | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | Platform evolution | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 |
| | Platform governance | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 |
| | Platform and infrastructure | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 0 |
| | design | | | | | | | | | | |
| Macro | Business models | 0 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 4 | 1 |
| | Value creation | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 9 | 4 | 0 |
| | Characteristics and conceptualizations | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 1 |
| | Law and regulation | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 20 | 0 | 0 |
| | Impact | 1 | 1 | 3 | 0 | 2 | 1 | 4 | 18 | 3 | 0 |
| | Community conduct | 1 | 3 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 |

Table AI.
Overview on the
numbers of studies for
specific sharing
practices and
research areas