

(Un-)sustainable transitions: The case of the sharing economy

Giuseppe Salvia^a and Laura Piscicelli^b

^a Dept. Architecture and Urban Studies, Politecnico di Milano, Italy

^b Copernicus Institute of Sustainable Development, Utrecht University, Netherlands

Abstract

The recent rise of the sharing economy - consumers granting each other temporary access to under-utilised physical assets ("idle capacity") - has attracted the growing attention of policy-makers, businesses and the media as a potential new pathway to sustainable production and consumption. Nevertheless, there is mounting evidence that the sharing economy also has unintended negative effects such as increasing consumption and social inequality.

Whether or not the sharing economy will be able to deliver on its sustainability promises is difficult to say. In this paper we use theories of practice to provide insights into the dynamics of socio-technical change, including the sharing economy, and how this may result in (un)sustainable patterns of everyday consumption. We use Shove et al.'s formulation conceptualising practices as bundles of dynamically interconnected elements: materials, competences and meanings. The different ways in which these elements are brought together have implications for how each sharing economy practice will eventually normalise and diffuse. Meanings, we argue, play a major role in the stabilisation of more or less resource-intensive sharing economy practices, thereby affecting the trajectory of sustainability transitions.

In particular we illustrate how the association of meanings by prospective users to novel sharing practices may result in the sharing economy reproducing - and even reinforcing - existing unsustainable patterns of production and consumption.

The sharing economy may enable the transition towards a more sustainable society. However, redirecting the sharing economy towards a desirable (sustainable) direction require multiple strategies to be set, including a comprehensive understanding of how sharing economy practices are enacted in situated contexts; trialling localised, customised, small-scale interventions engaging multiple actors simultaneously; reframing (sustainable) targets and directions progressively and in response to intermediate reconfigurations of the elements.

1. The sharing economy: A potential pathway to sustainability

Current patterns of production and consumption in industrial economies are largely recognised as unsustainable (European Commission, 2011). A steadily growing population and rising living standards have exerted increasing pressure on the

world's finite resources, and created unprecedented levels of energy demand and waste (DEFRA (Department for Environment Food and Rural Affairs), 2007).

Opportunities for decoupling economic growth from environmental pressures by intensifying product use are attracting much interest from policy-makers and businesses (Stahel 1994)(Tukker and Tischner, 2006). As such, the recent rise of the sharing economy - consumers granting each other temporary access to under-utilised physical assets ('idle capacity'), possibly for money (Frenken and Schor, 2017, pp. 4–5) - has been welcomed as a potential new pathway to sustainability (Heinrichs, 2013)(Belk, 2010; Botsman and Rogers, 2010; Gansky, 2010).

Tapping into the excess capacity of existing goods, such as spare rooms and empty car seats, the sharing economy can increase resource efficiency (e.g. by avoiding new purchases, maximising the use of resources and reducing waste) and build social capital (Frenken, 2017; Leismann et al., 2013). More generally, the sharing economy may also foster a shift from private ownership to shared access and the reconfiguration of current unsustainable production and consumption systems (Martin, 2016; Prothero et al., 2011).

Despite the alleged environmental, social and economic benefits, the exponential growth of sharing economy platforms like Uber and Airbnb has exposed their (unanticipated) negative effects (Verboven and Vanherck, 2016)(Malhotra and Van Alstyne, 2014). There is mounting evidence that Airbnb short-term rentals exacerbate affordable housing shortage in some cities (Lee, 2016), and many cases of racial discrimination by Airbnb hosts have been registered (Clarke, 2016; Edelman et al., 2017; Todisco, 2014). Sharing economy platforms also seem to be prone to engaging in unfair competition and promoting tax avoidance (Frenken and Schor, 2017; Martin, 2016).

The role of the sharing economy in fostering a transition towards a more sustainable society is still an open question (Martin, 2016; Schor, 2014), also due to the lack of systematic comparative studies with conventional forms of consumption; see the case of home sharing sector (Voytenko Palgan et al., 2017). The realisation of its expected social and environmental benefits will depend on the evolution of sharing-based business models, the institutional contexts in which sharing economy platforms operate (e.g. regulations) and user practices (Frenken, 2017). Changes in the latter are the focus of this paper.

In this paper we attempt to provide an interpretation of the dynamics that may contribute to the emergence of the negative (environmental, social and economic) effects of the sharing economy. We do so by drawing on sociological theories of practices (Shove et al., 2012) and discussing how mechanisms of re-crafting, substituting and interlocking of practices (Spurling et al., 2013) may result in the sharing economy reproducing - if not reinforcing - existing unsustainable patterns of production and consumption.

In particular, we will focus on the 'meaning' that consumers (as 'practitioners') associate to sharing economy practices and show that when meanings typically linked to conventional forms of consumption (e.g. convenience, status) are also associated to sharing economy practices, the latter are likely to develop in

unsustainable directions. We also illustrate our argument using preliminary findings from two ongoing studies in the areas of shared accommodation (Airbnb) and urban sharing services (e.g. car and tool sharing) in which the authors were involved at the time of this publication.

The paper is structured as follows. Section 2 introduces theories of social practices and the main dynamics of change in practices. We also argue that these dynamics provides insights to understand the the trajectory of socio-technical transitions. Section 3 addresses how sharing economy has generated changes in daily practices. Section 4 focuses on meanings, one of the three elements of social practices, and their role in driving the transition towards more or less sustainable direction. Section 5 discusses the key insights and suggests possible strategies to sharing economy towards more sustainability transition.

2. Social practices and the dynamics of change

In recent years, theories of practice have gained attraction as a theoretical approach able to shed light on the dynamics of social practices that are ultimately responsible for the emergence, persistence and disappearance of more and less sustainable patterns of everyday life (Shove and Walker, 2010)(Shove et al., 2014).

Theories of practices (and in particular Shove and colleagues' formulation of social practice theory) have been increasingly applied to study more and less sustainable forms of consumption in contexts as disparate as showering (Shove, 2003), doing the laundry (Higginson et al., 2015; Mylan and Southerton, 2017), cycling (Spotswood et al., 2015), eating vegan (Twine, 2017), energy demand (Shove and Walker, 2014; Strengers, 2012), home heating and cooling down (Gram-Hanssen, 2010; Hitchings, 2011; Strangers and Maller, 2011). However, only few studies have used theories of practice to examine the sharing economy and its potential to foster a transition towards more sustainable consumption practices (*cf.* Piscicelli et al., 2015; Piscicelli, 2016; Huber, 2017; Murgas, 2013).

Understanding how change in socially shared practices take place can provide valuable insights into how socio-technical transitions - including the sharing economy - can unfold in more or less sustainable directions. Sociological theories of practice can provide insights into the dynamics of socio-technical change, including the sharing economy, and how this may result in unsustainable patterns of everyday consumption (Welch and Warde, 2015).

For the first time to authors' knowledge, the main contribution is attempting an interpretation of the innovations brought forward by the sharing economy through the application of the mechanisms of changes of social practice as theorised by Spurling et al. (2013) as reported in the following section. In this section, we describe social practice and the mechanisms of change.

Building on the work of Bourdieu (1977) and Giddens (1984), sociological theories of practice conceptualise social action as the result of the interaction between human agency and social structure.¹ Theories of practice take social practices (and how they change over time) as the unit of analysis, although there are different interpretations of what a 'practice' is.

¹ For a comprehensive review of the theoretical foundations of theories of practice see also (Røpke, 2009) and (Gram-Hanssen, 2010).

Schatzki (2012) describes practices as organized constellation of activities performed by multiple people. These activities are recognisable entities across time and space, such as cooking, showering, travelling, praying and protesting. More specifically, Reckwitz (2002, pp. 249–250) define a practice as “a routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice – a way of cooking, of consuming, of working, of investigating, of taking care of oneself or of others, etc. – forms so to speak a ‘block’ whose existence necessarily depends on the existence and specific interconnectedness of these elements, and which cannot be reduced to any one of these single elements.”

The notion of social practice has increasingly been applied to the study of consumption to explain how more resource-intensive ways of doing and living have come into being (Mylan, 2015; Røpke, 2009; Shove, 2005; Shove et al., 2012; Warde, 2005)(Spaargaren and van Vliet, 2000). Building on Shove et al.’s (2012) definition, we conceptualise practices as bundles of dynamically interconnected elements that people (i.e. consumers) as ‘practitioners’ actively combine together. Shove et al. (2012) have developed a model of social practices based on three type of elements: ‘meaning’, ‘competence’ and ‘material’ (Figure 1). They argue that: “in doing things like driving, walking or cooking, people (as practitioners) actively combine the elements of which these practices are made”; therefore, practices “emerge, persist, shift and disappear when connections between elements of these three types are made, sustained or broken” (Shove et al., 2012, p. 14).

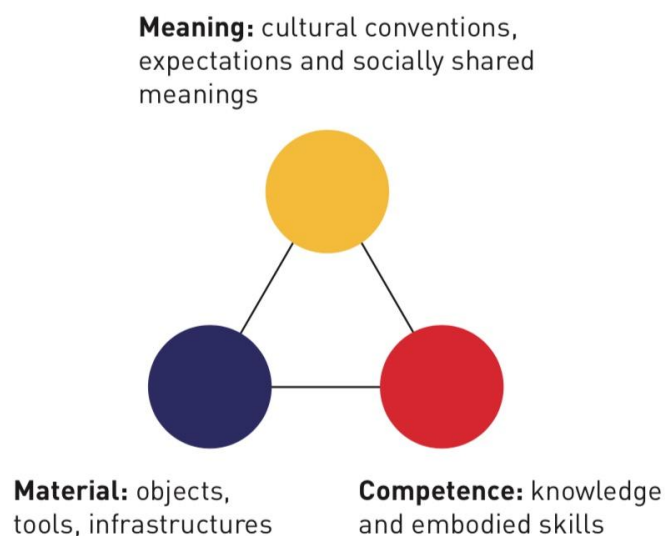


Figure 1. Shove’s Material-Competence-Meaning model (Piscicelli et al., 2015: 23).

Taking the example of driving, the practice is constituted by materials (e.g. cars and other vehicles, roads and other infrastructure), competences (e.g. steering and controlling the vehicle, knowledge of the local driving code and how to refill the fuel

tank) and meanings (e.g. freedom to move, convenience, the car as a status symbol).

The different ways in which material, competence and meaning elements are brought together have implications for how a practice eventually normalise and diffuse.

If a practice is sustained by the recursive connection of certain elements, the introduction of new elements or a novel combination of existing elements bring about changes in practices, towards more or less sustainable patterns. In particular, Spurling et al. (2013) suggest three different mechanisms through which established practices can be made more sustainable: (a) re-crafting practices, (b) substituting practices, and (c) changing how practices interlock.

- a) Re-crafting practices* entails changing the elements (i.e. materials, competences and/or meanings) that make up existing practices in order to reduce their resource intensity, e.g. replacing petrol car with electric ones;
- b) Substituting practices* involves discouraging unsustainable practices and replacing them with more sustainable alternatives that can satisfy the same needs and wants, e.g. switching from car driving to cycling;
- c) Changing how practices interlock* requires understanding the interactions between different practices and how change can ripple through interconnected practices.

3. Changes in social practices through the sharing economy

The sharing economy is reconfiguring the elements of existing practices, namely travelling (e.g. driving, cycling) and sleeping out (e.g. renting a room).² The most notable elements include under-utilised goods and online platforms (i.e. materials), digital literacy (i.e. competence), ownerless consumption, financial gains, environmental benefits (i.e. meaning)

The service features introduced by the sharing economy are:

- Access rather than ownership (e.g. car sharing and pooling instead of using a private car)
- Spatial distribution, i.e. multiplying the number and availability of resources per given territory, through geographically spread services, e.g. spare accommodation in households rather than hotels.
- Ubiquitous availability of the internet and tools for being online (e.g. smartphones, Web 2.0 and digital platforms), which reinvented “traditional market behaviours – renting, lending, swapping, sharing, bartering, gifting [...] in ways and on a scale not possible before the internet.” (Botsman and Rogers 2011: xv) (also Belk, 2014a; Huber, 2017; Stokes et al., 2014).

The ‘sharing’ service elements above may be dynamically integrated in the configuration of existing practices should these fit within their patterns (e.g. people routines, habits, expectations). The integration of these elements by a larger population and its replication over time will generate an innovation in practice with

² Sharing economy and sharing practices are convenient terms to frame and indicate a focus of interest; nevertheless using sharing practices as a unit of analysis risks to shift the focus from the actual source of environmental impacts, i.e. the habits and practices which may be (or not) reframed through sharing-based strategies.

possibly an enduring effect, thus generating a transition towards sharing based patterns of consumption .

Practices must be performed repeatedly over time and space to generate an enduring effect. Drawing on Wenger's interpretation (1999: 45), "practices are [...] the property of a kind of community created over time by the sustained pursuit of a shared enterprise". In our view, such shared enterprise determines the sustainability trajectory in which a practice may evolve into, which may not necessarily be the creation and sustainment of an environmentally conscious and frugal community, but rather the exploitation of distributed assets for accessing to goods which were not accessible before, namely because of issues of higher costs, inconvenience and uneven spatial distribution.

Understanding trajectories of sustainability transitions - and in this case, the sharing economy - implies the understanding of patterns of change of daily practices, when novel elements associated to sharing economy are introduced. These patterns represent how practices evolve over time and may lead to a transition. The multiple dynamics of individual instances of appropriation and configuration (i.e. how people perform the practice in a routines way) constitute recognizable trajectories of normalization (i.e. becoming socially recognised and applied) and how these intersecting trajectories influence the realities of contemporary performances of practices (Hand and Shove, 2007). The collective trajectory of such practices is thus the sum total of the many different ways in which people integrate specific skills, discourses and materials.

In this paper we interpret the transition as the process when a relatively large number of practices engaging a set of common elements - which may be associated to or grouped as sharing in this case - is being normalised, i.e. become steadily performed and reproduced by communities of people. By consequence, transitions are sustainable whereas the normalised change of practices generate a lower negative impact on the environment.

Drawing on the circuits of reproduction presented in the previous section, it may be inferred that the advocates of the sustainable transition through sharing may had envisaged the reproduction of normalised routines and practices formerly based on ownership of the engaged material elements into an access-based shape namely by:

- Recrafting the urban mobility practice by dropping out personal (possibly second, often unused) cars in favour of shared schemes (e.g. Martin et al 2010)(e.g. Prothero et al., 2011; Shaheen and Cohen, 2007)
- Replacing the practice of accumulating, saving or disposing of goods no longer in use with their circulation and lifetime extension by donating, renting or selling them to peers through online platforms, such as Craigslist, Ebay, Freecycle, or Kijiji (e.g. Arsel and Doshba 2011)
- Interlocking the practice of living in an only partly inhabited house (e.g. an empty nest) with the one of meeting other people and making some pocket money by renting out the often unoccupied spare bedroom occasionally (e.g. Midgett et al., 2017)(Chenoweth 2009).

The reproduction of practices may not necessarily follow the envisaged sustainable trajectories and contrasting insights are gained, with more energivore practices tracked in few cases, most notably including:

- Recrafting the urban mobility practice with public transport in favour of more convenient or comfortable sharing cars

- Sustaining and even escalating - instead of replacing - the replication of purchasing goods (Arsel and Doshba 2011)(Parguel et al., 2017), thanks to the constant influx of novelties and ubiquitous accessibility through the online platforms (e.g. Denegri-Knott 2011)
- renting out or even building new whole living units (rather than spare rooms in in-lord? living conditions) to meet the demand for more accessible accommodations, and sustaining more frequent or longer trips (Voytenko Palgan et al., 2017).

Such contrasting findings derives from also a lack a systematic studies, together with variable research contexts, boundaries settings and framings (Voytenko Palgan et al., 2017).

The advocated more sustainable scenarios originally envisaged actually manifested in more or less big communities of practice; nevertheless on a short term they do risk not to be uptaken by a sufficiently large population to determine a transition towards sharing sustainably and to generate a positive energy saving net (e.g. Nijland and van Meerkerk, 2017).

Disruptions and transitions require substantial continuity (Morley, unpublished), i.e. the reproduction of the integration of novel elements (or existing ones in novel ways) to become normalised. A mounting number of sharing based online applications for instance are shortlived (Mainieri and Pais 2016).

Practices compete with each other for time investment and possibly substantial the amount of 'energy' or effort required to break and create links in practice in favour of more sustainable patterns. Literature on rebound effects and misuse of socio-technical innovation reinforce such a disconnection between how changes, disruptions and transitions or intended goals are framed and how these take place in practice (Akrich, 1992). A gap often divides original intentions and actual uptake.

Shove et al. (Shove et al., 2012) acknowledge that Wenger (1999) takes these ideas a stage further, arriving at the conclusion that community and practice constitute each other. This is useful in explaining why top-down initiatives often run into trouble: if communities of practice are born of the experience of doing, they cannot be willed into existence or designed from afar.

In our view, the definition of the trajectories of sharing economy developments may be better anticipated or framed if the elements of practices and their reconfiguration are the focus. Reflecting on how existing practices unfold may help in projecting possible trajectories of development if novel elements are introduced.

In the case of the sharing economy, the 'material' element of ubiquitous (access to the) internet especially through smartphones and the relatively low level of digital 'skills' required for accessing to shared assets helped the spreading of the phenomenon. The threat for the unsustainable transition that such a phenomenon could trigger is most evident through the analysis of the third element in Shove's theory, i.e. the meanings. In this paper, we argue that meanings play a major role in the stabilisation of more or less resource-intensive sharing economy practices, thereby affecting the trajectory of sustainability transitions. Our interpretation of the reconfiguration of meanings in daily sharing practices is reported below.

4. The multiple meanings of sharing economy practices

As stated above, meanings may be main driver towards possibly unsustainable trajectories of transitions. In this paper, separating meanings from the other elements or from other meanings follow convenience of explanations, as the elements are interwoven.

Drawing on literature and on interim reflections from fieldwork activities, we argue that meanings conventionally associated to more consumerism based patterns of consumption characterise the contemporary forms of sharing practices, thus reflecting continuity rather than (major) disruption, at least in aspects which may favour sustainable patterns

The identified meanings addressed below in turns regard:

- Monetary savings and profit making
- Indulgence and consumerism
- Convenience and comfort.

4.1 Sharing is caring, for profits too

Sharing is said to be an ancestral practice for some (Pierce 1975). Sharing is conventionally intended as an act of reciprocity, donation, mutual support as also expressed by the way of saying 'sharing is caring'. The recent upheaval of the sharing economy is also often paired with statement regarding its potential for collaboration, cooperation, social inclusivity.

Nevertheless, such alleged inclusivity is debated (Schor, 2017; Schor et al., 2016), also because interactions between engaged parties are not necessarily based on reciprocity. Monetary transactions are not excluded from a multitude of activities, definitions and interpretation of such an approach, also becoming the driving motivation for people engagement in some sharing based services (e.g. Bardhi and Eckhardt, 2012; Wilhelms et al., 2017)(Mohlmann 2015; Lidloff et al 2014), more likely for saving money as users rather than for gaining profit as providers (Böcker and Meelen, 2017).

This often attracts the criticisms when the word 'sharing' is used when reciprocity and donations are not engaged (Belk, 2014b; Stokes et al., 2014)(Botsman, 2014; Cohen, 2014; Eckhardt and Bardhi, 2015), thus falling into what Belk calls 'pseudo-sharing' to stress the absence of communities and the distributed benefits (Belk, 2014b).

As mentioned above, a multitude of sharing economy services provide the chance to gain some profits by letting people using or accessing to someone else's assets. Yet, for example, started off as a means for renting out spare rooms to earn some pocket money and meet new people, Airbnb or similar platforms are often envisaged as a business opportunity for professional hosts to list multiple properties previously accessible to local residents (Piscicelli 201).

In other words, sharing platforms are often used as a major - rather than complementary - source of profit, especially by leveraging on gaps in the often demanding regulations which enable also the offer of usually cheaper alternative to more conventional systems of provision

the key element for the sake of this paper is the occurrence of novel market and business opportunity based on sharing, or in other words the money making (and

saving) as a main - but not the only one - meaning associated to the practice, which reveals to be consistent in a consumerism based market.

Furthermore, networks and services for sharing do not necessarily generate communities of interest which show proudness, sense of belonging (e.g. Bardhi and Eckhardt, 2012).

4.2 Sharing is accessing to (more) goods

Sharing economy is often welcome for the chance of minimising the duplication of purchases, by giving the possibility to satisfy short term demand of assets. People may access to the required goods to satisfy a temporary need or wish, instead of purchasing a new item. This characterises much the advertising of car sharing, through which the acquisition and therefore also the manufacturing of the second family vehicle for occasional use may be replaced through a fleet shared by a number of users.

Nevertheless, the appeal of a temporary access to goods meets a larger set of wishes beyond the rational-choice driven one of resource and monetary optimization. Car sharing schemes revealed to be an alternative not only for a second car but also for usually less impactful mobility systems, including public transport, bikes or short walks. The urban mobility is recrafted by giving an opportunity of driving to whom may not afford a new car.

Similarly, online platforms offers the possibility to access temporarily to expensive or luxury goods, including fashionable items, sport equipment, yachts, helicopters ... (<https://www.triplepundit.com/special/rise-of-the-sharing-economy/luxury-goods-rise-of-the-sharing-economy/>). Similarly and opposedly, sharing economy often offers a cheaper alternative to more conventional market solutions, namely because of the minimization of middle man. Energivore practices like moving and travelling became less expensive and more affordable, thus accessible to many. Furthermore, access based consumption enables “liberate consumers from the emotional, social, and property obligations that come with ownership [...and thus enabling] freedom of lifestyles and flexible identity projects” (Bardhi and Eckhardt, 2012, p. 15).

On the one hand, sharing economy may appear as a ‘more democratic’ system giving everyone the possibility to use and benefit from goods, especially if in use for a short term, including the much cited case of a drill; on the other this expands the set of goods that people may aspire to, thus escalating consumption and related impact on the environment.

The wide availability of goods online through distributed networks of peers revealed to be also a source of temptation for indulgent consumption, in particular for environmentally conscious people, who could found a satisfier for the desire or cult for the new (Denegri Knott 2011)(Parguel et al., 2017). This is not a novelty brought by sharing economy and allegedly contradictory behaviours of consumers declaring to pursue sustainable consumption patterns were tracked in the past (e.g. Bardhi and Arnould 2005).

4.3 Sharing for convenience and comfort

Literature and the authors’ fieldwork activities converge in the acknowledgment that mounting people using shared services and assets find these convenient. Meanings

of convenience and utilitarianism are particularly evident in car sharing for instance (Bardhi and Eckhardt, 2012). Shared mobility fits with and helps to keep up with contemporary ways of living and routines, especially in urban contexts. In particular, bike sharing and last mile, enabling women to move in urban context feeling safely at night time (Salvia and Morello, under review). A study on car sharing in Germany revealed how flexibility of the car sharing system is particularly appreciated, especially in relation also to public transport systems (Lindloff et al 2014).

The seminal work by Shove (2003) stressed how consumption is the result of negotiated perceptions of comfort and convenience in particular, which is reflected also in sharing economy.

Possibly, seeking convenience characterises also the conventionally stressful urban rhythms, likewise sharing economy considered to be a quintessentially urban phenomenon.

5. Conclusions and outlooks

This paper attempts to raise critical reflections on attempts of transitions towards more sustainable patterns of consumption through sharing. Major potential is envisaged in strategies of resource optimization by increasing use intensity. The ubiquitous access to the internet, the high levels of smartphone ownership and in general the interaction in web 2.0, enabled the fast spreading of sharing economy, especially in the Western world.

Nevertheless, mounting evidence suggest that such innovation may be deeply motivated by the seeking of profits, convenience, status and indulgence, which are typical of consumerism. Therefore the sharing economy may become a chance for escalating - rather than minimising - resource consumption when consumerist meanings are associated to the novel practices, at least in the short term. However, on a longer term the practices reshaped by sharing economy may unfold differently. Normalised reconfigurations of practices are difficult to anticipate, therefore there could be still margins for such a promising phenomenon (which again may increase the resource efficiency of existing resources) to turn into a more sustainable transition. Shove and Walker (2007) highly encouraged cautionary approaches when attempting to study transition management also due to the impossibility of predicting how practices and demand unfold. Schor anticipates that “new technologies of peer-to-peer economic activity are potentially powerful tools for building a social movement centered on genuine practices of sharing and cooperation in the production and consumption of goods and services” (Schor, 2014, p. 0). Originated in countries with higher pressures to commodify and concentrate value, according to her the phenomenon may evolve towards a fairer and more sustainable trajectory as this expands “in political, regulatory, and social contexts which are more attuned to the stated values of fairness, sustainability, openness, and cooperation” (Schor, 2014, p. 14), typically European, thus crossfertilizing.

Yet, the transition to a more sustainable form of consumption requires that sharing enables optimisation rather than the escalation of consumption. The mere promotion of sustainability-related meanings in the sharing economy may not meet the consumers' priorities, as care for sustainability and environment result not to be a main motivator to join sharing enabled practices for many. A pool of experts in the sharing economy business converged towards the interpretation of environmental sustainability as the least important driver of collaborative consumption in the near

future, due to the low priority associated to this by many people; nevertheless, environmental issues and sustainability are the top developments to be expected in their view (Barnes and Mattson 2016).

Furthermore, the meanings of sharing practices are shaped by also the means of provision of the service. The way through which services are arranged and consumption of sharing services take place appears in continuity with the more conventional consumerism-based means. For instance, ride sharing is not necessarily integrated in car-sharing services; residential units offering accommodations for a short term are not necessarily lived by also the landlords or city residents to favour cultural exchange with the locals.

Sharing features may enable the connection between energivore elements of normalised practices; for instance, the spatial distribution and reduced costs for accessing to product may encourage the consumption of novel product categories (e.g. luxurious) for those who were prevented before; for long, consumption has been theorised for its socially constructed meanings, typically of status and capital.

Finally, these reflections are based on occurrences emerged at the early stages of the phenomenon. Although on a short term, such unsustainable trajectory was not difficult to predict taking into account how daily practices are performed in the current consumerism-based society where profits, access and convenience are the drivers, on a longer term radical changes are not to exclude.

5.2 Possible strategies for redirecting sharing practices

The sharing economy may, however, still enable the transition towards a more sustainable society in the longer term. In particular, we envisage some potential for redirecting sharing towards more sustainable patterns of consumption and production in the following strategies, to be consolidated and proved with future research.

First, a comprehensive systematic understanding of how sharing economy practices are enacted in situated contexts, how the meanings of sharing and 'stranger sharing' (Schor, 2014) are negotiated, how routinised practices unfold and synchronise with others; this may help to better anticipate if and how practices could be recrafted, performed or interlocked with others when novel elements are introduced. As stressed by Mont (2004, p. 149), "[u]nderstanding the socio-cultural and even historical context in which consumption activities take place may provide useful insights into differences in the uptake of sharing systems and other more environmentally sound consumption practices".

Second, trialling and providing visibility to localised, customised, small-scale interventions engaging multiple actors simultaneously in order to trigger a 'shared', institutionalised socio-technical innovation.

Finally, reframing (sustainable) targets and directions progressively and in response to intermediate reconfigurations of the elements to counteract undesired developments. This also helps with the wicked nature of defining and assessing sustainability impact. Quantifying the effects of an intervention or phenomenon on

the environment is challenging in multiple terms (e.g. quality of data, set boundaries). Splitting the overall strategy in sub-plans or shorter term actions may contribute to gain insights about the trajectory progressively and engaging a more limited number of variables.

As argued by Shove et al. (Shove et al., 2012, p. 145) “policy making is not a matter of pursuing pre-defined outcomes by means of manipulating driving or obstructing factors. It is instead better understood as a more process-based ‘succession of short and fairly rapid steps’ involving sequences of ‘trial-and-error’ learning or ‘serial adjustment’, anchored in and never detached from the details and specificities of the practices in question.”

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