Sharing Economy: A Potential New Pathway to Sustainability

Despite the success of some environmental and sustainability initiatives and measures in policy-making, business and society, overall trends follow an unsustainable path. Especially in the field of production and

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consumption of goods and services, environmental sustainability and social equality remain critical challenges. Therefore new approaches are needed alongside existing strategies and policy instruments. The "sharing economy" has the potential to provide a new pathway to sustainability — and transdisciplinary sustainability science has the opportunity to co-shape and accompany this pathway.

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Environmentalism and Sustainable Development

After 40 years of modern environmentalism and 20 years of discourse on and practice of sustainable development, the result is mixed – locally, nationally and internationally. There are success stories which should not be played down: the development of environmental policy, the institutionalization of environmental bureaucracy, the diffusion of environmental management in the private sector, the increased environmental awareness of citizens, an active civil society represented by non-governmental organizations (NGOs), or the emergence of interdisciplinary environmental sciences and education (Jänicke et al. 2003, McNeill 2003). And beyond the focus on environmental protection and regulation, the concept of sustainability has provided a new conceptual framework to handle complex, interlinked economic, social and environmental developments (Grunwald and Kopfmüller 2006). There is consensus among sustainability experts that transformative policies in social and economic spheres are needed. The spectrum of challenges ranges from impacts on intra- and intergenerational justice caused by increased inter- and intranational social inequality to socio-economic shifts related to globally diverging demographic changes, the need for sustainable business models as well as participatory decision-making in politics and society in order to foster social inclusiveness, to fundamental

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questions concerning the limits of combining economic growth with environmental sustainability (De Vries and Bert 2013). However, the outcome of uncountable local, national and international environmental and sustainability activities to date is limited. The global outlook is critical – both for environmental (UNEP 2012) and socio-economic (UN 2013) indicators.

Given this situation, new pathways to foster sustainable development must be explored. Basic environmental and sustainability approaches, such as the "holy trinity" of efficiency, consistency and sufficiency remain indispensable (Huber 2011). But they need to be more cautiously reflected regarding their potential and limits for societal transformation (cf. Leitschuh et al. 2013, pp. 44–71): efficiency strategies must be checked rigorously regarding the rebound effect. Consistency strategies must be tested more systematically regarding their long-term sustainability, e.g., renewable energy and rare metals or bioenergy and land-use change. Sufficiency strategies which approach the individual consumer without developing a coherent sustainability policy framework will possibly play only a minor role in improving sustainability.

Beyond these basic strategies, further conceptual approaches focusing on (participatory and integrative) sustainability transformation have gained attention in sustainability science and practice over the past 15 years. Alongside political-administrative sustainability strategies and governance (Lafferty 2004, Meadowcroft 2007), the transition management perspective involving participatory real experiments and network governance have garnered interest (Loorbach 2002). This approach aims to transform unsustainable practices, often in niches, by combining top-down and bottom-up activities. The potential of such approaches still has to be evaluated, and critical reflection is needed as to how they relate to requirements of representative democracy, politics and power relations. So far, they have not generated sufficient trans-

formative power to impact on the underlying socio-economic drivers of unsustainability that lead to, e.g., climate change, bio-diversity loss, soil degradation, and resource scarcity.

As a consequence, there is a growing need to create new pathways for sustainability. The recent debates around green growth, fair growth, zero growth, post-growth or de-growth, as well as on new interpretations and measurements of life quality that go beyond gross domestic product (GDP), reflect this ambitious sustainability discourse (Jackson 2011, Seidl and Zahrnt 2012, Randers 2012, Brand 2012, Binswanger 2012). These perspectives are opening up opportunities to reconsider the long-term sustainability of our socio-economic system. Parallel to these debates, another guiding vision is emerging: the "sharing economy". The umbrella term covers several interesting developments which could add a new perspective to the search for more fundamental sustainability visions.

Sharing Economy: More than Hype?

During the global financial and economic crisis of the past five years, alternative perspectives on capitalism and consumerism have been voiced. Between the poles of "repairing" and improving regulation of the existing "system" and radical alternatives to a capitalist market society, a third perspective has gained attention. The concept and practice of a "sharing economy" and "collaborative consumption" suggest making use of market intelligence to foster a more collaborative and sustainable society. Prominent examples are bike- and carsharing schemes as well as web-based peer-to-peer platforms covering a broad range of activities from renting rooms to sharing gadgets and swapping clothes.

Academic discourse on the sharing economy is lagging behind public discourse and practice. But first attempts at conceptualization and empirical analysis are underway. According to Wikipedia, the "(...) sharing economy (aka the share economy, the shared economy, the mesh or the collaborative economy) refers to economic and social systems that enable shared access to goods, services, data and talent. These systems take a variety of forms but all leverage information technology to empower individuals, corporations, non-profits and government with information that enables distribution, sharing and reuse of excess capacity in goods and services. A common premise is that when information about goods is shared, the value of those goods increases, for the business, for individuals, and for the community (...)".

Wikipedia is not peer-reviewed science, but given the lack of academic publications focusing explicitly on the sharing economy, this definition concisely summarizes key elements of the debate (Helfrich et al. 2009, Aigrain 2012, Harper 2012). The key publication so far on the sharing economy is the book *What's mine is yours* by Rachel Botsman and Roo Rogers (Botsman and Rogers 2010). Their overarching conceptual framework differentiates between three features of the sharing economy: 1. product service systems (PSS); 2. redistribution markets; 3. collaborative lifestyle. Alongside product service systems, such as carsharing or leasing

machinery tools and redistribution markets – from second-hand shops to Ebay –, they elaborate the idea of collaborative consumption as a new form of peer-to-peer sharing. The concept involves individuals exchanging, redistributing, renting, sharing, and donating information, goods, and talent, either organizing themselves or via commercial organization by social media platforms. According to the authors, this collaborative lifestyle will disrupt mainstream economies and consumerism, improve social cohesion, and contribute to the minimization of resource use. Despite the euphoric tone with which these processes are described, and the focus on collaborative peer-to-peer consumption, the book is helpful in suggesting what potential form a sharing economy might take.

Based on the perspective of Botsman and Rogers (2010), our conceptual and empirical study on the sharing economy in Germany aims at relating the sharing economy approach to the sustainability discourse (Heinrichs and Grunenberg 2013). It made clear that a more theory-grounded conceptualization of the sharing economy is needed. Key dimensions of connecting the sharing economy to the sustainability discourse are:

- the relevance of materialist and post-materialist values related to consumer practices together with a reflection of new results of happiness research in this context;
- the influence of environmental and sustainability awareness on changing consumer habits and practices;
- the broader debate on limits to (material) growth and new indicators of wealth and quality of life as the macro-political sibling of sharing economy practices;
- the disruptive development of information and communication technologies facilitating the sharing economy;
- the role of critical perspectives on capitalism and consumerism;
- the anthropological and socio-psychological discourse on homo economicus versus homo collaborans and the role of trust in human interaction.

Based on this conceptual perspective, we believe that the concept of the sharing economy should not be limited to collaborative peer-to-peer practices as can be observed in current media coverage and academic publications (Scholl et al. 2013).

New developments with relevance for sustainability seem to appear especially at the interface between product service systems, redistribution markets, and collaborative consumption. Furthermore, these forms of alternative ownership and usage should not be limited to end-consumer or peer-to-peer sharing but should include business-to-business relationships and the activities of civil society actors and government entities. Following this perspective, the sharing economy might serve as an umbrella concept and encompassing vision, helping to understand and guide new inventions and the institutionalization of new economic practices, roles and interactions of societal actors. As with all umbrella concepts, this is not about re-inventing the wheel and declaring that everything is new. The strength of an encompassing concept of the sharing economy would be to bring together scattered conceptu-

al and empirical knowledge on the different aspects of the sharing economy, which have been researched and experimented with over the past two decades.

For example, research into the empirical reality of consumption reveals that more than 50 percent of consumers in Germany have experience with some form of sharing economy, and that approximately 25 percent can be described as "socio-innovative co-consumers" (Heinrichs and Grunenberg 2013). A supply-side focus suggests there has also been a dynamic increase in sharing models concerning cars, bikes, rooms, food, gadgets, etc. (Scholl et al. 2013). Similar observations can be made for product service systems within business and between businesses and consumers or redistribution markets, including upcycling and other ways of finding new uses for old things. Moreover, other related forms of sharing, such as crowdfunding or the renaissance of cooperatives, connected to energy transition and beyond, are being experimented with around the globe. Finally, examples of governmental strategies can be found, such as the project Seoul, a Sharing City (see box) or the project Shareable Cities 1 involving 15 major US cities, which represent comprehensive policy approaches to develop the sharing economy by adapting regulation and incentivizing its expansion. These programmatic political activities are of specific interest because in many countries (e.g., Germany), discourse on the sharing economy essentially focuses on civil society, consumers, and new business models, leaving political and administrative actors sitting at the sidelines.

Considering these developments in terms of conceptual discourse and empirical practice, the sharing economy seems to be more than hype – rather it is a global phenomenon with remarkable dynamics. Given its potential for contributing to sustainable economy and society, inter- and transdisciplinary sustainability sciences should begin researching the sharing economy systematically.

Sharing Economy and Sustainability: A Research Agenda

Sustainability sciences are well-equipped to contribute to research and development of the sharing economy. 1. They have a strength in inter- and transdisciplinary research, contributing to a holistic understanding of the sharing economy as a complex and systemic issue. 2. Existing research foci in sustainability science fit perfectly into the bigger picture of the sharing economy, e.g., using instead of owning or the solidarity economy approach. Sustainability sciences should focus on analysis of the current status of the sharing economy, its drivers and future developments, and develop design options in order to exploit the sustainability potential of the sharing economy. This will require theoretical, empirical, conceptual and transformative research and development. Specifically the following topics should be addressed:

- Theoretical elaboration of the basic concept of the sharing economy, in order to obtain a differentiated conceptual understanding, including alternative forms of ownership and consumption on the demand side (consumers/peers) and changes on the supply side (co-production, open innovation) or emerging forms that blur the distinction between producer and consumer.
- **2.** Theoretical and empirical analysis of drivers and blockages for the sharing economy in politics, economy and civil society.
- **3.** Empirical analysis and assessment of practices concerning the economic, social, and environmental effects of the sharing economy.
- **4.** Theoretical and empirical elaboration of the relationship between the sharing economy and mainstream (ownership) economy and its implications for the discourse on economic growth, green growth, post-growth, and de-growth.
- **5.** Scenario analysis of the potential evolution of the sharing economy under different political, societal, economic, and environmental conditions.
- **6.** Development of options for policy makers, business and civil society actors to shape the sharing economy in a sustainable way.
- **7.** Transdisciplinary and transformative research and development in concrete areas of the sharing economy such as housing, mobility, machine tool use, public spaces, etc. to support the expansion of the sharing economy.

The engagement of sustainability science on these topics would contribute to a more detailed understanding of the extent to which the sharing economy could meet expectations regarding effective resource use, strengthening social capital and fostering decentralized value production. Together with practice, transdisciplinary sustainability science could also actively (co-)shape the further development of a sharing economy with regard to sustainable societal development.

To summarize, we can state that the sharing economy has the potential to serve as an umbrella concept that may bring together and re-frame older and recent alternative forms of economic activity and their academic conceptualization. The significant (public) attention, evoked by the sharing economy over the past two years, indicates the attractiveness of the phenomenon for broader parts of society. The sharing economy approach might bring together the fragmented landscape of diverse academic perspectives and practices in specific milieux and niches. Pioneers in academia and practice who have worked on concepts such as using instead of owning or sufficiency over the last two decades should embrace the current discourse and practical developments (Jackson 2005, Mont 2004, Princen 2003, Linz 2002, Paech 2012). They should connect their perspectives under the umbrella concept of the sharing economy for at least two reasons: 1. Potentially game-changing new developments, such as the roles of information and communication technologies and social media, have not been incorporated in most work on similar topics. 2. The current debate on

¹ www.collaborativeconsumption.com/2013/06/26/shareable-cities-resolution-passed

BOX:

Seoul, a Sharing City Sharing City – A New City Paradigm

"On September 20, 2012, the Seoul Metropolitan Government disclosed its plan for promoting the 'Seoul, a Sharing City' project, which includes sharing programs and policies for generating or diffusing 'sharing city' infrastructure following the declaration of the 'Seoul as a Sharing City' vision. The Metropolitan Government regards 'sharing city' as a new alternative for social reform that can resolve many economic, social, and environmental issues of the city simultaneously by creating new business opportunities, recovering trust-based relationships, and minimizing wastage of resources. In particular, the city plans to deploy secondary sharing infrastructure from now on to enhance the usefulness of idle resources such as space, objects, and talents since its urban policies have concentrated on constructing primary sharing infrastructure to date, such as roads, parking lots, schools, and libraries. Parallel to such, the Metropolitan Government plans to implement policies of opening public resources to the citizens by having the public sector take the initiative while focusing on the implementation of policies that respect and promote private sector capabilities."a

Recognizing especially social challenges, such as a high rate of suicides, individualization, and lack of social capital on the one hand, the challenge of environmental sustainability in the megacity on the other, the City of Seoul aims to develop new sharing infrastructures such as co-working spaces, residential houses with shared spaces, car- and bikesharing, etc. to improve quality of life and urban sustainability. Within a strategic approach, city authorities employ different policy instruments to foster the sharing economy. These include economic incentives to stimulate sharing economy start-ups, planning approaches with regard to shared (public) spaces or coordination and information measures to stimulate innovation and adoption of sharing models between different societal groups from business, through entrepreneurship to administrative bodies.

a The "Seoul, A Sharing City" Project: http://english.seoul.go.kr/gtk/cg/major_project.php.

the sharing economy provides an opportunity for moving alternative ideas and approaches into the mainstream and developing a more comprehensive and stronger vision for sustainable development than we have used thus far.

Even though the sharing economy alone cannot bring about a sustainable society, it should be explored in detail. Since there is no single "golden bullet" to facilitate sustainability, different pathways need to be explored and opportunities seized. As a potential new pathway to sustainable development, the sharing economy should become a subject of research for interand transdisciplinary sustainability science. Recent funding activities such as the programme *Social-ecological Research* in Germany (*SÖF*) can provide impetus in this area.

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