



Sharing Cities Shaping Cities

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1. Contemporary ‘Shapring’: How is Sharing Shaping Urban Practices and Dynamics?

In recent years, ‘sharing cities’ has spread globally, starting in 2012 when Seoul declared its intent to pursue sharing economy strategies [1]. Other cities then followed, including Amsterdam, Boulder, and Rio de Janeiro. Their pursuits to become sharing cities also intended to face major contemporary urban challenges, including global urbanization [2] and resource depletion [3]. Sharing cities make use of (often smart) technologies to connect a larger number of users to idling assets, hence to be ‘shared’ by a wider population, rather than being individually owned. Within this trend, assets that are typically shared include vehicles and rides, bedrooms and accommodation, as well as tools and competences.

Environmental, social and business advantages are envisaged by many [4–6], often leading to significant financial investments by industries, public bodies and international organizations. Sharing cities is a locution which has emerged to express the marriage of the sharing economy in urban areas [7–9]. Davidson and Infranca [10] describe urban conditions as fundamental for the value proposition of the innovative elements of the current sharing hype.

The physical and social configuration of a city shapes the way in which sharing takes place: size and type of fabric, mobility and accessibility, availability of public spaces, social norms, habits and traditions and, therefore, the unit of analysis. Vice versa, how sharing shapes—rather than being shaped by—urban features may apply likewise and, in our view, deserves attention to reflect upon the changes that the contemporary sharing-based practices may bring about.

Cities are complex systems, crossed and shaped by flows of both material and immaterial resources. Sharing practices are impacting on the human connections and relationships to assets, shifting from ownership-based to access-based approaches. It is not the practice of sharing alone that is new [11], but rather the dynamics of no longer relying on previously formed relationships with sharers ([9], p. 88), thus expanding the network of interactions to geographically distributed ‘strangers’ [12]. The types of connections between engaged actors are shifting from more traditional dyadic forms (i.e., one-to-one) towards polyadic (i.e., one-to-many) or even rhizomatic patterns (i.e., many-to-many) [13,14]. Also, in our view, these patterns of spread connectivity represent a key element of the ‘sharing’ trend, i.e., the facilitated access to a multitude of distributed assets, resources and people. All this will have strong implications in transforming cities in the near future; this urban transition is going to take place regardless of urban planning practices and top-down decision making. It is the sole responsibility of urban planners to recognize the new design challenges offered by the sharing society and turn them into opportunities for regenerating urban space.

This Special Issue intends to contribute towards this direction, i.e., scoping the implications of sharing in shaping the urban context, a dynamic we call ‘shapring’ for convenience. To this end, a call for contributions to a research symposium was launched to respond to research questions regarding:

- Urban fabric: How is ‘sharing’ shaping cities? Does it represent a paradigm shift with tangible and physical reverberations on urban form? How are shared mobility, work, inhabiting, energy, and food provisions reconfiguring the urban and social fabric?

- Social practices: Are new lifestyles and practices related to sharing changing the use and design of spaces? To what extent is sharing triggering a production and consumption paradigm shift to be reflected in urban arrangements and infrastructures?
- Sustainability: Does sharing increase the intensity of use of space and assets, or, rather, does it increase them to meet the expectations of convenience for urban lifestyles? To what extent are these phenomena fostering more economically-, socially-, and environmentally-sustainable practices and cities?
- Policy: How can policy makers and municipalities interact with these bottom-up phenomena and grassroots innovation to create more sustainable cities?

More than 70 contributions from over 30 countries were submitted for double-blind peer review and a selection of 12 were presented in Milan in March 2018, hosted by Politecnico di Milano. Nearly 50 delegates (including researchers, practitioners and municipalities' representatives) debated on key themes and features characterizing the phenomenon from multiple perspectives and drawing on insights from fieldwork activities in Europe, Asia and Oceania.

Some of the presented contributions were further developed for submission to the Special Issue, which in our view constitutes a primary step-stone in the path which addresses how the socio-technical innovation brought about by sharing is affecting the reconfiguration of urban dynamics and spaces.

The full papers of this Special Issue investigate multiple forms of sharing, including novel ones for either domestic or working spaces; collaboration forms, platforms and commons; citizens' sharing practice and data. These are briefly summarized below.

2. Shapring Domestic Space for Accommodation

Housing and accommodation are amongst the most recurrently cited practices of the sharing economy, possibly also due to the hype and debated case of AirBnB. Illegal accommodation conditions (e.g., hygiene regulation, fire safety) and restricted housing access for locals (e.g., higher rent prices) are detrimental consequences of shared accommodation abuses.

Jacqui Alexander [15] reports emerging housing typologies in Melbourne in response to the demand for shared accommodation. A densification of sharing room standards is witnessed, often shrinking in size and reshaped in suboptimal conditions (e.g., room with no access to natural light) within supersized houses to escalate profit. Alexander conceptualizes novel forms for houses to be shared, meeting comfort standards and more importantly proposes strategic planning to assist in subverting the possibly pernicious effects of global disruption in favor of local interests.

Mark Hammond [16] interprets sharing accommodation as a process of citizen engagement in the house design process, beyond profession and technical skills. The author explores and applies the concept of 'spatial agency' in the development of co-housing spaces in the UK to be inhabited by older people. Although the investigation embraces a wider definition of the sharing economy, which is not necessarily related to the contemporary forms, the cases presented highlight two major implications of interest in architectural and urban studies aligned with the aim of this Special Issue, i.e., on the one hand, how the definition of indoor shared spaces and assets may reverberate in the reconfiguration of local communities, neighborhoods and the whole cities; on the other hand, the reshaped role of the architect who may enable—rather than define—the configuration of space that best fit with its inhabitants preferences.

3. Shapring Working Space and Offices

The sharing economy and practice are also related to novel forms and dynamics of working, demanding flexibility, adaptability, knowledge transfer, etc. Coworking spaces are spreading to meet such forms, as highlighted by two full papers investigating the Italian context, which raise reflections upon urban reconfiguration and developments.

Giacomo Durante and Margherita Turvani's study [17] contributes to the identification of a 'coworking bubble', due to a low performance output of such spaces in Italy. The factors are multiple, mainly depending upon the space managers and number of services provided. The implications spread across the cities and the novel forms of work which such spaces and their users may generate.

Mina Akhavan [18] and colleagues investigated the impact of Italian coworking spaces in their urban context, with a focus on the case of Milan. Coworking spaces appear to support situated urban regeneration, especially when in connection with contemporary forms of socializing in cities, as in the case of Social Street.

4. Shapring through Collaborative Platforms

Sharing also applies to collaborative communities who cooperate to make a change, often for local impact. Different forms of collaboration are present, specifically through platforms, cooperatives and professional mediators.

Mayo Fuster Morell and Ricard Espelt [19] describe the forms and dynamics of the platform collaborative economy, drawing on outcomes from fieldwork research. Three macro-models are identified (i.e., open commons, uniform, platform coops) and 10 case studies in the Barcelona collaborative economy ecosystem were analyzed according to six democratic common qualities, which constitute the Star Framework. The application of the framework helps to qualify the nature of existing cases and infers the possibility of an alternative economy based on solidarity and collaboration to be initiated and fostered in the future.

5. Shapring through Data

Sharing in urban contexts redefines territories and reshapes their syntax. Citizens make use of the city and assets by drawing on local knowledge, accomplishing daily practices, and uptaking socio-technical innovations to accomplish their routines. This determines how cities are made.

These urban dynamics are reflected by data exchanged by citizens with the digital and online services they use. The presenters of the citizens' sharing panel of the symposium reported their studies on how data sharing reveals or may reveal such novel urban forms, with the audience questioning whether this data may predict patterns.

Katharine Willis and Afif Fathullah [20] address how data on emotions and crowd-sourcing may be used to investigate how citizens experience places. Using physiological wearable devices, human body alterations are proxies for emotional variations. These are identified while Plymouth's citizens navigate in the city, thus depicting the emotional landscape and stress hotspots. Such an approach could be scaled up in the future through widely distributed devices (e.g., embedded in smartphones) and may inform urban planners and municipalities in particular about how the city is felt and where interventions may be required to enhance citizens' urban experience.

Sun [21] reports insights from a study on dockless bike sharing (DBSS) user experience in Beijing, China. Social and environmental sustainability are the key issues. Low is the access for low-income and older people. Furthermore, bike sharing seems to use new resources rather than existing ones. Optimal governance of DBSS is to be distributed and coordinated between governments (infrastructure and regulations), companies (qualities and maintenance) and citizens (education and culture).

Vecchio [22] addresses the role of policy to enhance urban mobility through demand matchmaking and shared means, as a way to access opportunities, namely, to overcome criminality and poverty in marginal areas. The evidence is built upon fieldwork data of travelers across the Colombian capital, Bogotá, in which the coproduction of mobility services is explored.

In response, policy measures are proposed as operational options that nonetheless require recognition and support by the institutions responsible for urban mobility planning.

6. Conclusions

The papers introduced above contribute to the effort of initiating structured, fieldwork-informed reflections about shaping, and the change to the urban fabric generated by the spreading of sharing-based practices. Although interpretations of sharing and the sharing economy were not necessarily consistent, relevant areas of investigation and territory were covered and raised the importance of additional investigations. The other areas that deserve attention include:

- Sharing as an urban phenomenon and the limitations in marginal contexts (either periphery or smaller cities), where sharing could provide benefits and reshape the urban configurations and dynamics.
- The potential of intensifying the use of existing assets by sharing is often contradicted by the replication of assets to ensure flexibility and adaptability, leading to a dualism between scarcity and abundance.
- The implementation of policies regulating interventions in the urban configuration for enabling forms of sharing that may benefit local citizens, thus limiting risks for gentrification or escalation of resource intensity.

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References

1. Moon, M.J. Government-driven Sharing Economy: Lessons from the Sharing City Initiative of the Seoul Metropolitan Government. *J. Dev. Soc.* **2017**, *33*, 223–243. [CrossRef]
2. UNDESA. World Urbanization Prospects: The 2018 Revision. 2018. Available online: <https://esa.un.org/unpd/wup/Publications> (accessed on 21 February 2019).
3. Krausmann, F.; Gingrich, S.; Eisenmenger, N.; Erb, K.H.; Haberl, H.; Fischer-Kowalski, M. Growth in global materials use, GDP and population during the 20th century. *Ecol. Econ.* **2009**, *68*, 2696–2705. [CrossRef]
4. Botsman, R.; Rogers, R. *What’s Mine is Yours. How Collaborative Consumption is Changing the Way We Live*; HarperCollins: London, UK, 2010.
5. McLaren, D.; Agyeman, J. *Sharing Cities*; The MIT Press: Cambridge, MA, USA, 2016.
6. Rifkin, J. *Age of Access: The New Culture of Hypercapitalism*; Putnam Publishing Group: New York, NY, USA, 2000.
7. Agyeman, J.; McLaren, D.; Schaefer-Borrego, A. Sharing Cities. Briefing for the Friends of the Earth Big Ideas Project. 2013. Available online: https://friendsoftheearth.uk/sites/default/files/downloads/agyeman_sharing_cities.pdf (accessed on 21 February 2019).
8. Agyeman, J.; McLaren, D. Sharing cities. *Environment* **2017**, *59*, 22–27. [CrossRef]
9. Cohen, B.; Muñoz, P. Sharing cities and sustainable consumption and production: towards an integrated framework. *J. Clean. Prod.* **2016**, *134*, 87–97. [CrossRef]
10. Davidson, N.M.; Infranca, J.J. The Sharing Economy as an Urban Phenomenon. *Yale Law Policy Rev.* **2016**, *34*, 215–279.
11. Price, J.A. Sharing: The Integration of Intimate Economies. *Anthropologica* **1975**, *17*, 3. [CrossRef]
12. Schor, J. Debating the sharing economy. *J. Self-Gov. Manag. Econ.* **2016**, *4*, 7–22.
13. Giesler, M. Consumer Gift Systems. *J. Consum. Res.* **2006**, *33*, 283–290. [CrossRef]
14. Ertz, M.; Durif, F.; Arcand, M. Collaborative Consumption: Conceptual Snapshot at a Buzzword. *J. Entrep. Educ.* **2016**, *19*, 1–23. [CrossRef]
15. Alexander, J. Domesticity On-Demand: The Architectural and Urban Implications of Airbnb in Melbourne, Australia. *Urban Sci.* **2018**, *2*, 88. [CrossRef]

16. Hammond, M. Spatial Agency: Creating New Opportunities for Sharing and Collaboration in Older People's Cohousing. *Urban Sci.* **2018**, *2*, 64. [[CrossRef](#)]
17. Durante, G.; Turvani, M. Coworking, the Sharing Economy, and the City: Which Role for the 'Coworking Entrepreneur'? *Urban Sci.* **2018**, *2*, 83. [[CrossRef](#)]
18. Akhavan, M.; Mariotti, I.; Astolfi, L.; Canevari, A. Coworking Spaces and New Social Relations: A Focus on the Social Streets in Italy. *Urban Sci.* **2019**, *3*, 2. [[CrossRef](#)]
19. Fuster Morell, M.; Espelt, R. A Framework for Assessing Democratic Qualities in Collaborative Economy Platforms: Analysis of 10 Cases in Barcelona. *Urban Sci.* **2018**, *2*, 61. [[CrossRef](#)]
20. Fathullah, A.; Willis, K.S. Engaging the Senses: The Potential of Emotional Data for Participation in Urban Planning. *Urban Sci.* **2018**, *2*, 98. [[CrossRef](#)]
21. Sun, Y. Sharing and Riding: How the Dockless Bike Sharing Scheme in China Shapes the City. *Urban Sci.* **2018**, *2*, 68. [[CrossRef](#)]
22. Vecchio, G. Producing Opportunities Together: Sharing-Based Policy Approaches for Marginal Mobilities in Bogotá. *Urban Sci.* **2018**, *2*, 54. [[CrossRef](#)]



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