
Making the city : re-assembling spaces of manufacturing

Clément Renaud

Monique Bolli

Marc Laperrouza

Florence Graezer Bideau

EPFL CDH

1015 Lausanne, Switzerland.

clement.renaud@epfl.ch

monique.bolli@epfl.ch

marc.laperrouza@epfl.ch

florence.graezerbideau@epfl.ch

Abstract

This introductory paper questions how urban places emerging from the maker movement are re-assembling spatial settings in cities, with the example of the Shenzhen/Hong-Kong area. We discuss how the growing importance of assemblage in manufacturing processes may produce new urban forms, while possibly leading to standardized and risky technocratic projects.

Author Keywords

Makers; cities; manufacturing; assemblage; China.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

Globalization has led to fundamental transformations of urban spaces all over the world. Cities in Europe have seen the decay of vast industrial areas, while entirely new industrial spaces have emerged, more specifically in China that has become a major hub of the global manufacturing network during the last three decades.

Today again, the transformations of industrial models are going to change radically the face of cities worldwide. Fablabs, hacklabs, hackerspaces, makerspaces, coworking spaces... are trying to define new ways of working, producing and inhabiting the city. The actors of this change are a vast and eclectic array of people, commonly called “makers”, but also tools, settings, brought together by a supposedly common set of practices and discourses. Urban renewal in “post-industrial” cities has vastly been thought through the prism of “creativity” (Florida, 2004), resulting in policies of Creative Industrial Clusters (CICs). More recently, a new hunger for fabrication has led to a switch of interest from policy-makers towards the relocation of manufacturing capacities within urban areas under new

forms, theorized as the “fab city” with the primer example of Barcelona (Diez & Posada, 2013).

In China, which has been at the core of industrial transformations since the 1980s, deep changes are undergoing in the urban fabric of the main cities under the influence of the makers. New organizations have emerged and gradually become important actors and models for local industrial renewal (Lindtner, 2014). Their meeting with a growing interest from the highest governmental spheres has led more recently to a new set of national policies with the *Made in China 2025* and its *Mass Makerspaces* program.

Interestingly, this program evolves from a pressing need for urban and industrial renewal, which is also felt in the West, but with a completely different background: in China, the industry still acts as a main source of economic and social stability for the country ; in Europe, most factories have moved to China years ago. The two different geographic zones cross paths again in a new dynamic stemming from automation, in which the maker movement conveys new forms and discourses about globalization and practices of production.

In the present research, we ask the following questions : how are the existing urban spaces produced by prior industrial dynamics going to be renewed or transformed by the apparition of the maker movement? What will be the urban dynamics of this movement? How will it contribute to re-assemble local places that have been produced by old models of factories and manufacturing - some of them which have already been transformed into creative clusters?

To answer these questions, we aim at studying the transformations of different urban regions in China. Some specific setups in the Pearl River Delta (AI, 2012) are of particular interest, especially in the region of Shenzhen/Hong Kong.

We want to consider the city, not as a fact, but as an assemblage (McFarlane, 2011 ; Farías, 2011). The concept will be useful here to consider how the production of new spaces, objects and communities is reconfiguring existing local settings. In manufacturing, the evolution of resources in design and fabrication are turning means of production into means of assemblage. The success of open-source software development has largely relied on standardized and modular architecture. Linux’s package management system has arguably been the key for multiple contributors to build one of the most sophisticated technological system on earth, and has turned into default pattern of development in new generations of languages and softwares. In the same way, the processes of manufacturing rely more and more on an interdependent ecosystem of available resources. As in software development, knowledge of those dependencies will allow to quickly assemble new (physical) products while bringing more focus on the development of services. The knowledge and ability to assemble, in both sourcing and fitting together properly, has therefore become a key resource for industrial production - see Tim Cook at Apple for an example.

Following this dynamic, urban spaces may reconfigure into a network of interdependent units of production. This spatial transformation will involve new modes of assemblage not only on the technological level, but also on the political, economical and social levels.

One of the things that makes things “assemblable” is the use of common interfaces. Historically, the introduction of the container has led to a vast increase in international trade by the introduction of a common standard (Levinson, 2006). To increase the ease of assembling, the process of standardization may apply as well to existing urban spaces in need of such interfaces (e.g. fablabs, makerspaces...).

Nevertheless, the technocratic project of developing pluggable spatial and technological setup is already showing its limit. The conurbation of Shenzhen and Hong Kong offers an interesting case here. Policy-makers are already planning to merge both cities in 2047 to form a gigantic manufacturing and financial hub of formidable entrepreneurial capacity. While the spatial setup is almost ready technically and performance analysis shows how both cities could benefit from forming one of the largest and richest urban area on the planet, a major point of resistance stands. Shenzhen and Hong Kong, with divergent histories, both want to be part of a same “maker movement” but they lack a common representation of the direction that this movement should take.

By interrogating the spatialization of the maker movement, we question where the maker movement is heading, its urban direction and its positioning.

Acknowledgements

This project is supported by the Fond National Suisse de la Recherche (FNS) : <http://p3.snf.ch/project-162499>

References

1. Al, S. (2012). *Factory Towns of South China*. (S. Al, Ed.). HK: HK University Press.
2. Diez, T., & Posada, A. (2013). The Fab and the Smart City. The use of machines and technology for the city production by its citizens. In *Proceedings of the 7th International Conference on Tangible, Embedded and Embodied Interaction - TEI '13* (pp. 447-454). New York, New York, USA: ACM Press. <http://doi.org/10.1145/2460625.2460725>
3. Florida, R. L. (2004). *The rise of the creative class : and how it's transforming work, leisure, community and everyday life*. New York, NY, Basic Books.
4. Farías, I. (2011). The politics of urban assemblages. *City*, 15(3-4), 365-374. <http://doi.org/10.1080/13604813.2011.595110>
5. Levinson, M. (2006). *The box : how the shipping container made the world smaller and the world economy bigger*. Princeton, N.J., Princeton University Press
6. Lindtner, S. (2014). "Hackerspaces and the Internet of Things in China: How Makers are reinventing industrial production, innovation and the self." *China Information* 28(2): 145-167.
7. McFarlane, C. (2011). The city as assemblage: Dwelling and urban space. *Environment and Planning D: Society and Space*, 29(4), 649-671. <http://doi.org/10.1068/d4710>