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Circular City and Cultural Heritage Interplay



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EDITORIAL*Luigi Fusco Girard***1. The role of cities in the sustainable development**

In our increasingly urbanized world, cities are facing important challenges (related to economic, social and environmental crisis) referred to three great changes: demographic changes (population growth), structural changes (globalization) and environmental changes (climate change and pollution).

Cities play a central role in the achievement of sustainable development. Cities (and in particular metropolitan cities) can represent a threat in the achievement of sustainable development but, at the same time, they can become the starting point to implement sustainable principles and goals. Many of Sustainable Development Goals (United Nations, 2015) can be achieved in the city because many problems are here concentrated.

The growing urbanization and natural resource depletion require the identification of new models to increase urban productivity in environmental, financial, economic and social dimensions. They require exploring new ways of value creation ensuring, at the same time, economic prosperity, resource availability and wellbeing in a long-term perspective.

It is necessary to rethink traditional models exploring and critically integrating alternative development models.

2. The circular economy

The circular economy, based on the principle that in nature nothing is “waste” and everything can become a “resource”, can be adopted to operationalize sustainable development principles.

This stimulates an indefinite enlargement of the lifetime of resources and their “use values” during the time, promoting circuits of cooperation among different actors.

Circular economy represents “a tangible set of solutions for reaching sustainable patterns of production and consumption”. It effects on economy (bio-economy, energy economy, etc.), jobs and environmental system.

There are many contributions at international level for supporting the transition towards this new development model. United Nations have introduced in the New Urban Agenda (the outcome document of Habitat III - October, 2016) the notion of circular economy.

The United Nations Environment Programme (UNEP) in 2016 has recognized the necessity to entrench the principles of the circular economy in order to move towards sustainable development.

The European Commission adopted a package to support the EU’s transition to the circular economy, including legislative proposals aimed at stimulating the European route towards circular economy. The objective of this package is to boost economic growth, making it more sustainable and competitive in the long term. It considers circular economy as a means for contributing to innovation, growth and job creation.

Circular economy is originally referred to how the flows of resources can be “closed” at different scales. Felix Preston has defined circular economy as the «restructuring of the industrial systems to support ecosystems through the adoption of methods to maximize the

efficient use of resources by recycling and minimizing emissions and waste».

Circular economy is mainly referred to waste cycle management. But, this approach can be overcome and transferred from a sectorial approach (waste management) to the comprehensive city organization, its economy, its social system, its governance in order to improve urban multiple productivity. Therefore, circular economy could be recognized as a general development model.

3. The circular city model

More generally, circular processes are referred to processes imitating the organization of natural systems.

To move from linear (“take, make, dispose”) to circular processes, that is to close the loops, not only actors individually need to be considered in the process, but also the relationships among them.

The circular economy is a “regenerative” economy of materials, natural resources, land, energy, water, cultural and social resources.

In the urban field, it does not refer only to maintenance, reuse, rehabilitation and restoration processes, but it is the economy of synergies and symbiosis between productive activities, between industrial systems and cities, between cities and extra-urban/rural areas. Strengthening/regenerating relationships/bonds contributes to wealth and job opportunities, thus enhancing the quality of the landscape and more in general to the “human” dimension of urban/metropolitan development.

Circular city is a city able to close its loops of resources through circularized processes, which are able to regenerate original capital stocks, tangible and intangible resources, lasting them over a longer time period.

Circularization processes and synergies promote resilience and creativity and thus sustainability. Circularization is a principle that can be applied to such issues as economic patterns (circular economy), but also management systems or participative multi-level governance: circularizing social and political processes includes fostering socio-economic systems that promote equity, social inclusion, reciprocity and mutual responsibility; and political systems that are more participative, responsive, preventive, non-elitist and egalitarian.

There are some good practices showing that circular organization is economically convenient, producing at the same time social and environmental benefits.

Circular processes should be included in cities agendas, representing a mean to enrich/enhance the relationships between city components (micro-communities, urban villages, etc.), thus reducing the urban/metropolitan system entropy.

The circular city is characterized by synergies. Synergy is a principle for development of creative learning, self-organization, strategic thinking and shared intelligence, which can be applied to urban, economic, social, cultural, ecological and political systems.

A “cultural revolution” is also required for moving away from the logic characterizing so far traditional linear capitalist approaches and encouraging towards the circular logic of nature.

Cultural heritage/landscape can help people interactions density that shapes the “spirit of the city”, that is its identity. Circularization applies also to the cultural acknowledgment of the role of peri-urban and rural landscapes for urban/metropolitan sustainable development, promoting heritage-led regeneration of cultural/traditional landscapes for wellbeing, social

cohesion and cultural development of populations.

The landscape is here considered as the core of a project of territorial/regional development based on the circularization of economic processes that widens from the symbiosis within the production system to the symbiosis between urban and rural areas, landscape and region, involving all significant players in cooperative processes.

Many issues arise. Considering the circular paradigm as a way for implementing the urban regenerative strategy, the new research should explore how cities, and in particular metropolitan cities and port cities, are implementing circular economy in their agenda, linking also social components and cultural ones (cultural heritage, cultural landscape).

Many cities are moving towards this new urban circular metabolism, but the “circular city” is a still much discussed concept in the international debate representing a rich field of research.

The aim is to investigate practices of (metropolitan and port) cities that are adopting circular economy as a strategy to achieve sustainable development, with a particular focus on tools and empirical data able to support the transitions towards this new model, demonstrating its convenience in economic, social and environmental terms. To date, there are some good practices that should be carefully assessed in all relevant dimensions.

In particular, some problems are linked to the following issues:

- How (metropolitan and port) cities are including circular economy in their development strategies for making the “Smart City”?
- How to identify different approaches to implement circular city strategies for making “inclusive, safe, resilient and sustainable cities”?
- Which good practices about evaluations of circular economy implementation focused on multiple dimensions (and in particular on the social dimension of circular economy)?
- Which appropriate decision support system, tools, indicators, knowledge and data able to assess/monitor the performance of the new “circular city model”?
- What is the role of cultural heritage and cultural landscape in public space making, in increasing interpersonal interaction/connectivity in the fragmented city, in enriching civic participation, in reducing systemic entropy, reconnecting people to places?
- Can the “circular city model” be assumed as the “Smart City model”?
- Which new business models, new financing tools, new governance tools in the “circular city” for implementing efficiency and competitiveness?
- How Big Data can be used in circular economy/circular city, in planning the built environment?
- In which way the landscape perspective can implement the “circular city model”?

Some of these issues will be answered in an international conference, entitled “Shared Spaces in Smart Places”, organized by the Harvard Faculty of Arts and Sciences and the Regional Science Academy at the Harvard University in Cambridge (USA), on 6 and 7 November 2017. Edward Glaeser, Saskia Sassen, Roger Stough, Michael Porter, Mercedes Degaldo, Hans Westlund, Peter Nijkamp, Michael Batt and Luigi Fusco Girard will attend this conference.

Furthermore, the contributions that are here presented try to give some answers to the above-mentioned issues.

In particular, Mariarosaria Angrisano and Luigi Fusco Girard analyses some best practices in order to demonstrate that the circular economy is able to restore identity of the city, to

increase the tangible and intangible values of the built heritage and to reduce the costs of urban renewal. They also propose an applicative case study related to the regeneration of Torre Annunziata port area, a city in the Southern Italy, characterized by a suggestive cultural and landscape heritage.

Karima Kourtit and Peter Nijkamp sketch the principles and design of advanced smart city research from the perspective of digital big data, against the background of the emerging “New Urban World”.

Luigi Fusco Girard and Antonia Gravagnuolo explore the concept of circular economy and how it can be applied to cultural heritage and landscape regeneration, stimulating the experimentation of new circular business, financing and governance models in heritage conservation.

Francesca Nocca and Antonia Gravagnuolo explore and analyse the emerging “circular” model of urban development. They test its potentialities and limitations in the case study of Pozzuoli, a small-sized historic port city in the metropolitan area of Naples, Italy, highlighting whether and how cultural heritage can be a driver for circular regeneration of the port-city system.

Patrizia Riganti discusses the issue of heritage conservation in Indian cities in the face of current rapid urbanization trends. In particular, she analyses this issue in the Indian context where the federal government has recently launched a programme on smart cities to improve cities liveability. She argues that a novel “smartheritage” approach is needed to support decision making in urban conservation

Maria Di Palma analyses some good practices about a new model of social and economic growth based on the circular economy principles. This case studies show how urban policies oriented to the economy of culture, in synergy with the development of the circular economy, allow not only to support and strengthen social capital and to make cities more liveable, but also to produce new economic and employment opportunities.

Silvia Iodice investigates the possible evaluation approaches in order to analyze the urban ecosystems in view of climate change, with the aim of outlining the issues and the components to take into account to give life to a possible integrated approach.

Stefania Regalbuto shows a project of the regeneration of the port city of Naples, Italy, highlighting the role that cultural heritage can play in this process. She focuses her attention on the capacity of cultural heritage to produce multidimensional benefits.

