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Economics, urban planning, and food systems: from "*chrematistike*" to "*oikonomia*" toward sustainable cities

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The history of cities and of urbanism has closely followed economic changes—so much so that cities have been described as microcosms of our economic systems. As heavy contributors to climate change, pollution and the generation of waste, cities have been urged to embark on a transition to progressively become more sustainable. However, while efforts are being focused on transforming urbanism to face this challenge, urbanists are not sufficiently questioning the economic barometers they rely on. In an attempt to explain that making cities sustainable cannot emerge from relying on paradigms that create un-sustainability in the first place, this article suggests that insights from alternative approaches to economics (such as ecological economics) and to urban planning (that view cities as ecosystems) could help in understanding better what a transition toward sustainable cities could mean. Since jeopardized food security emerged from the recent Covid crisis as one of the main shortcomings of our globalized economic systems, the discussion places food systems at the core of the transition toward sustainable cities. What is suggested here is that, in the current context of a post-Covid, rapidly urbanizing and fighting climate change world, urbanists might find in the "*oikonomia*" etymological origin of economics (i.e., economics as "the management of resources to meet the needs of the household") a better source of inspiration than in its other etymological origin of "*chrematistike*" ("economics as the art of generating monetary wealth") to contribute to the type of advances in urbanism that are urgently needed.

KEYWORDS

urban ecosystem, food system, indicators of urban sustainability, sustainable cities, *chrematistike*, *oikonomia*

Introduction

This article focuses on new advances in urbanism aimed at facilitating a transition toward more sustainable cities. The perspective taken here is that urbanism, the history of cities and their place in a globalized world, all reflect the way in which our economic paradigm has evolved.

The Greek etymology of "economics" reveals two quite different interpretations of the terms. On the one hand, economics is "*oikonomia*" (the management of resources to satisfy the needs of the household). On the other hand, economics can also mean "*chrematistike*"—that is, the "art of making money" (Dierksmeier and Pirson, 2009). The way we have carried out our economic affairs throughout history has clearly illustrated a progressive preference for the second interpretation of the term. While "*oikonomia*" focuses on the self-sufficiency of communities, "*chrematistike*" relies on market mechanisms (self-stabilizing systems described as producing the best possible outcomes) and puts monetary performances at the very core of "economic success." Following the principles

of what we refer to as "neo-classical economics," economic evaluation methods have also grown to be centered on monetary measurements. This proved particularly challenging when trying to assign a value to crucial aspects of our lives that are not part of the market sphere (e.g., environmental amenities or mental health). Such "economy" "went from non-existent to occupying a central place in our world in the space of 70 years" (Earle et al., 2017, p. 34), precisely because it grew into an exact, "value-free" science, reflecting a mechanistic view of the world, to be analyzed only by experts.

This approach of "economics," away from the "political economy" of the nineteenth century, is difficult to conciliate with democracy since it re-defines political decisions as questions that become technical, removed from the public arena, and colonized by an economic language that a vast majority of citizens do not understand (Earle et al., 2017). The failure of economic models in predicting financial crises such as the 2008 one, in ensuring "progress" and wealth while protecting the ecological capital we depend upon, or in showing resilience in the face of adversity—such as the recent Covid pandemic—calls for a rethinking of the economic paradigm.

The history of cities and of urbanism has closely followed economic changes. From agricultural societies to industrial ones, it reflects a progressive detachment from nature, a craving for new technologies and products, and the promotion of a society based on competition rather than cooperation. Cities have even been described as microcosms of economic activities: in them, most economic growth is generated, together with the biggest emissions of GHGs, waste, air pollution and waste. The fact that such alarming damages can be produced in places occupying only 2% of the land reflects what our economic systems are capable of. Yet, although reflections are taking place regarding the needs to change our economic paradigms, the fact that urbanists tend to fall back on strategies dominated by neo-liberal aspirations has not been tackled. For centuries, a "successful city" was a rich one (Smiley, 2018).

A call to create more "sustainable cities" has been expressed by the UN Sustainable Development Goals (United Nations, 2015)—in particular, SDG 11, dedicated to making cities inclusive, safe, resilient and sustainable -, the New Urban Agenda, the Paris Agreement and the European Commission's Green Deal. To respond to it, this article suggests to envisage a collaborative bridge between (i) those in economics who seek a fundamental paradigmatic reform and (ii) those who already manage a "habitat"—the city—and who seek to facilitate a transformation that could lead to the creation of sustainable cities through new forms of urbanism.

In order to facilitate our reflection on such collaborative endeavor, the article suggests daring to envisage economics through the lens of "*oikonomia*" by prioritizing the meeting of "basic needs"—*ensuring urban food security*. Hence, in what follows, it explores how working on sustainable urban *food systems* could help in understanding better what a sustainable city could be (Part 1), as well as who could help in operationalizing a transition toward more sustainable cities, through a reformed type of urban governance (Part 2).

Sustainable cities: the centrality of food in urban ecosystems

The question addressed in this Part is: which type of "sustainable economic microsomes" are "sustainable cities of the future" going to represent?

As Earle et al. (2017, p. 154) stress, "the economy can always be something different: *we* need to decide what we want it to be through public discussion and ensure that everyone can understand the language of the debate." Neo-classical economists (*chrematistike* principles) currently describe the success of an economy through the increase of its Gross Domestic product (GDP). However, such indicator does not account for ecological, cultural or social "riches" that emerge from societies' activities. The fact that, during the Covid-pandemic, food security was jeopardized as a consequence of the fragility of the globalized economic system raised the question of "what matters most?" Eighty percent of food demand comes from cities, whose "performance" in terms of sustainability, should therefore progressively reflect a lower dependency on external food and a stronger resilience.

Centrality of food in urban ecosystems' sustainability

The fact that a "sustainable city" cannot be sustainable only from an economic, a social or an ecological perspective is being investigated through approaches placing basic needs such as the need for food, at the core of urban transitions. The links between the centrality of the food system[1] within a city and the multiple benefits provided by Urban Agriculture[2] (UA) have led Oliveira and Morgado (2016) and Skar et al. (2020) to see UA as a core ingredient to value in transitions toward urban sustainability. The FAO (2020) corroborates such statement, stressing that the COVID-pandemic enhanced food in-security.

The fact that UA has, for very long, been kept apart from urban planning processes is, consequently, being addressed (Pothukuchi and Kaufman, 1999; Cabannes and Marocchino, 2018). The numerous benefits it brings—which, on top of increasing food security and reducing food supply chains, include addressing climate change (CC), improving health and social cohesion, facilitating the creation of new jobs, managing water more efficiently, and re-using all sorts of waste (Skar et al., 2020)—put food systems and innovation in UA at the core of potential urban transitions (Sanyé-Mengual et al., 2019).

From "indicators" to urban "ecosystemic functioning"

Efforts to create "sustainable cities" can be found in projects on "smart cities"—described as instrumented, interconnected, and intelligent cities. However, critical views are now raised concerning the legitimacy of associating them with "sustainable cities" *per se* (Sengupta and Sengupta, 2022).[3] People interested in sustainable cities will also

1 A food system encompasses the full value chain of producing food for human consumption, from agricultural production, through transportation, handling, processing, storage, distribution and consumption, to waste management and disposal (Ericksen, 2008).

2 Urban and peri-urban agriculture (UPA) can be defined as the growing of plants and the raising of animals within and around cities (FAO, 2020).

3 The authors raise three key concerns related to ICT-focused urban development initiatives: natural resource usage, distribution of risks and benefits, and energy usage.

be pointed in the direction of eco-cities (Bibri, 2020),[4] zero-waste cities (Zaman and Lehmann, 2011)[5] and "circular cities" (Williams, 2023).[6] A plethora of indicators (Merino-Saum et al., 2020) now exist to describe aspects of "urban sustainability." However, with an emphasis on each dimension of "sustainability" (ecological, social, and economic), these disparate indicators tend to take urban planners away from a global, "organic" overview of a "sustainable city."

More holistic approaches have been articulated by authors such as Girardet (1990) and Ulgiati and Zucaro (2019) who worked on the "metabolism" of cities. Such "metabolism" aligns with the notion of "ecosystems functions" (De Groot, 1987), which provide goods and services needed both by human communities and the ecological systems upon which human survival depends. Following this approach, a city provides a variety of functions (resources for direct consumption or production; habitat; "amenity and information" functions—beauty, cultural components, learning and exchanges—and regulatory functions[7]). Reflections on *regulatory functions* are the ones that challenge most our understanding of what a "successful" city is since, as De Groot (1987) and Rashed (2018) highlight, our societies depend upon a healthy life-support and therefore need to *regenerate ecosystems* to use natural resources in a sustainable way. The "measure" of the sustainability of a city therefore becomes its ability to regenerate the ecosystems upon which it depends.

Oikonomia approaches to sustainability support such an eco-systemic approach. Originally aimed at generating self-sufficiency, they defend the fact that it is activities such as UA that can best protect *all* the environmental functions of a city at once, thus facilitating a transition to sustainability.

Reforming urban governance: the need for participatory processes

Ecological economists highlight the need for citizens to take part in decision-making in sustainability projects for these projects to last (Healy et al., 2013). As Blackstock et al. (2007) explain, "Sustainability requires *institutional and personal* transformation, in *understanding and practice*" (p. 726). In response to this, participatory and collaborative approaches to decision making are strongly advocated, requiring a change in the economic decision-making paradigm. In urbanism, participatory governance principles have been advocated by texts such as the New Leibnitz charter (EU2020.de, 2020). Here, we explore how a focus on UA can inspire new forms of governance.

Relevance of UA in making urban governance more participatory

Krivy and Kaminer (2013) explained how a "participatory turn" in urban planning and urban design emerged out of a "growing governance deficit." As they and Dyer et al. (2017, p. 1) stressed, "The power to shape the form and functioning of the city has been for a long time almost exclusively held by urban design professionals, exerting it under the guide of public administrations and in strict alliance with building companies"—a phenomenon symptomatic of a *chrematistike* approach. While such approach seems impossible to reconcile with participatory objectives, an understanding of "economic practices" that is closer to *oikonomia*—orientated toward the management of our resources to satisfy the needs of the "community"—seems more promising.

Research in participatory governance processes is giving attention to the need to generate participants' empowerment and sufficient cross fertilization of knowledge. Such social learning process will take place if urban planners provide platforms that facilitate exchanges—that go beyond mere "consultation." The success of participatory urbanism will also largely depend on whether citizens are keen and able to participate. Their motivation and involvement will reflect whether citizens relate to the issues at stake or not.

To this end, an exploration of the relevance of using UA, both to transform cities into more sustainable ones and to enhance citizens' participation, has grown. The motivation behind small-scale UA initiatives was boosted both by the COVID-19 crisis and by the UN CC programme[8]—which highlighted the links between food production and CC and suggested ideas for local sustainable energy access and transformation, producing food locally, creating wealth from waste, or reclaiming green spaces.

While UA can contribute to addressing CC, what is most urgently felt by citizens is a jeopardized food security that affects their immediate needs. This concern has helped people understand the importance of UA initiatives as a way of improving the food system and of fighting CC. As Simon (2022) explains, "Such form of activism is explained through the "psychological proximity and activism theory," which suggests that when climate change is proximate, an individual is more likely to care about it and to be motivated to act on it because they tend to perceive CC in *concrete terms* and thus directly link the concrete problem to an action to mitigate it" (p. 7). New forms of CC activism based on local urban initiatives such as UA can therefore contribute to changing urban governance systems processes and strategies toward ensuring that *citizens' basic needs (and defined as such by citizens themselves)* are being met.

Alternative food networks and food democracy in urban governance

Local UA initiatives have also benefitted from exchanges of know-how facilitated through networks such as Alternative Food Networks (Renting et al., 2003), whose objective is to question mainstream food production processes and to generate more inclusive

4 Bibri (2020) examines how the eco–city is practiced in "ecological urbanism" with respect to *sustainable energy systems*.

5 For the authors, *waste management* is one of the most important challenges for sustainable city design, especially in high consumption cities in the industrialized world.

6 Williams explores how *circular development* offers ecological, social and economic benefits all at once, contributing to creating resource efficient, ecologically regenerative and resilient cities.

7 These functions regulate essential processes and life support systems (e.g., climate regulation) (Ekins et al., 2003, p. 169). In the context of cities, these can include ecological regulatory functions fulfilled by green infrastructures, e.g., fighting climate change—and by other mechanisms that keep the urban metabolism alive and cohesive (e.g., regulatory frameworks).

8 https://unfccc.int/topics/education-youth/youth-engagement/global-youth-video-competition/global-youth-video-competition-2019/cities-and-local-action-to-combat-climate-change.

food systems leading to enhanced food democracy. Originally introduced in response to the increasing corporate control of food systems, food democracy describes a situation in which "all members of an agro-food system have an equal and effective opportunity for participating in shaping that system, as well as knowledge about the relevant alternative ways of designing and operating the system" (Hassanein, 2003, p. 83). A new definition of food citizenship (Renting et al., 2012) emerged from this, leading to the creation of more sustainable food systems—"in which the food production chain ensures food and nutrition security, accessing food for all, while promoting a healthy environment, economic dynamism, social cohesion, and public health" (Oliveira and Morgado, 2016, p. 5). AFNs aim at reducing the reliance on a small number of large, international food suppliers in the event of unexpected environmental or economic shocks (Carey, 2013). They have also enabled dialogues with local authorities and other types of partners, leading to institutional transformations that progressively included UA into urban planning and linked it to the introduction of green infrastructure, as well as transportation considerations that reduce supply chains.

Such institutional advances have been reflected through texts that promote the transformation of cities into more sustainable ones thanks to a focus on food resilience (e.g., the Milan Urban Food Policy Act 2015; the EC Farm to Fork strategy, 2020 and the 2030 EC's Food initiative). These networks have facilitated a sharing of knowledge and of objectives and are starting to alter the way in which "transition strategies" are being designed at the city level.

An *oikonomia* approach to "economic performance" can thus encourage participation at the local and also at a more global level since it promotes collaborative forms of learning and co-creation throughout time in view of understanding better how to adopt and operationalize regenerative approaches.

Toward cooperative "urban economies": creating circular cities

Reflecting on the benefits of "re-visiting" *oikonomia* in the context of urban governance, this article finally suggests that UA has created an opportunity to explore Circular Economy (CE) principles based on the minimization of waste—an urgent urban requirement since 70% of them are generated in cities.

Creating more sustainable cities requires a radical transformation of our development model, possibly enabled by what Ceschin and Gaziulusoy (2020) called "Design for Sustainability" (DFS)—including restorative or regenerative design (EMF, 2020). DFS can propose alternative forms of CE in which the waste of one production system is used as an "input" in another.

A focus on food security as an indicator of urban resilience has helped us in understanding that a "sustainable city" needs to value all aspects of sustainability. As a consequence, planning for a food system strategy should involve linking food strategies to other city concerns, such as water (including flood) management and the transport system—since continuing the current excessive dependency of the food system on road transportation might result in higher levels of CO_2 emissions, with severe impacts on sustainability.

The urban governance changes that promoting a CE would induce could be facilitated by concepts such as social economy and social entrepreneurship, which will help create innovative activities that can re-use and value waste. In this case, the "success" of a circular city will be measured by its ability to minimize its waste. Besides, an urban governance process focused on promoting circularity will have to ensure that stakeholders' participation lies in *cooperation and complementarity* between urban activities, rather than the *competition* that underlies neo-liberal approaches of economic systems.

Conclusion

One of the main reasons why cities are un-sustainable in the first place is because their running relies, to a large extent, on economic indicators and growth targets that illustrate an economic paradigm in line with *chrematistike*.

In order to make an honest breakthrough in terms of "urbanism toward sustainability," urban planners will have to work with indicators, paradigms and governance processes that value new types of "urban performance."

By highlighting the centrality of food systems in the urban ecosystemic fabric, this article has attempted to illustrate the need to open up to what the *oikonomia* version of "self-sufficiency-economics" has to say in terms of natural resource management, meeting people's needs and interacting with our habitat.

The first part of the article therefore focused on showing to what extent food security and protecting ecosystems functions in view of promoting a regenerative type of urban-economy might be helpful in terms of identifying "urban sustainability." In the second part, a focus on participatory urban governance systems demonstrated that, either through new forms of practice-oriented climate change activism at the individual level, or global alternative food networks promoting food democracy, or circular economic cooperative principles, these new approaches to decision-making are moving away from neo-liberal principles, opening alternative paths to contribute to transitions toward urban sustainability.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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