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OPINION / GÖRÜŞ

How Can Urban Planners in Türkiye Foster Stronger Connections with the Agricultural/Food Sector While Transitioning From Closed Plans to Open Plans?

Türkiye'deki Şehir Plancıları, Kapalı Plandan Açık Plana Geçiş Sürecinde Tarım/Gıda Sektörüyle Daha Güçlü Bağlantılar Nasıl Geliştirebilirler?

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Introduction

The Journal of Planning has decided to dedicate this special issue to Urban Food Planning, which I believe is a well-made decision. The guest editors asked me to write an article on this topic for the special issue, which I gladly accepted. One of the preconditions for the continued existence of a society is to ensure that all its members have access to sufficient and healthy food at affordable prices. This makes food planning tightly intertwined with the concept of the city. Historically, during the hunting and gathering stage of humanity's development, people were constantly moving across the earth to secure their food, sustaining their existence. Once humans began to form permanent settlements, arrangements were made to ensure the nutrition of these populations. Initially, people started agricultural production outside of the settled areas to maintain hunting practices (Hodder, 2012), diversified their food supply by domesticating animals, and thus began to sustain their lives.

Throughout the history, to feed urban population, it is necessary to transport agricultural products from where they were produced to the city. In a period when transportation relied on human or animal power and organic energy, land transport was too costly. The value of a product produced at a certain distance will be equal to the cost of transportation, beyond which distance, agricultural production would not contribute to feeding the city's population. Thus, the available transportation technology set the limit on how large a city's population could be at that time. In pre-industrial periods, the population size of land-based cities typically remained below 10,000.

In this early period, the city of Istanbul, with a population exceeding 300,000, could only exist due to its unique geographic location. To feed a city as large as Istanbul, food had to be brought from distant locations, which was only possible through sea transport. At this time, sea transportation was ten times cheaper than land transport. Therefore, the existence and sustainability of a city at the intersection of two seas, like Istanbul, were made possible. However, this was a highly critical relationship. The use of the term "provisionism" ("iaşecilik" in Turkish) to describe the institutional structure of the Ottoman economy is interesting

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in this context. The priority in managing the entire system was the provision of food and the supply of sustenance. The institutional structure of the empire was shaped in accordance with this priority, facilitating access to various and affordable food supplies (Genç, 2000).

Advances in Transportation Technology Transform the Relationship Between City Size and Agricultural Production

The relationship between urban phenomena, food regulation, and transportation costs has been reshaped by cultural advancements. After the 16th century, the development of capitalism, the advent of modernization, and the Industrial Revolution in production and transportation during the 18th and 19th centuries significantly altered the relationship between city size and food regulation. The most important change was the replacement of organic energy with inorganic energy in transportation, which greatly reduced the time and cost of transporting goods. This advancement in transportation technology meant that food regulation was no longer a limiting factor for city growth. Cities anywhere in the world that grew within market conditions would no longer face a limit in terms of food scarcity.

In the previous era, agriculture was primarily subsistence-based. Small family-owned plots of land produced what was needed for the family's own consumption, with a small portion sold in local markets to generate necessary cash. In an industrializing and modernizing world, agriculture became modern and commercial. Large-scale commercial agriculture, serving both national and international markets, was carried out using modern farming techniques, such as fertilization, pest control, and irrigation, based on healthy market information. Agricultural productivity per unit of land increased, meaning that the same amount of land could feed a much larger urban population. This led to a continuous increase in the proportion of the urban population. By the end of the 20th century, the proportion of the urban population, which had been below 10% in the pre-industrial era, rose to around 50%.

In subsistence farming systems, agricultural products were diversified, but in commercial farming, production became specialized in specific crops. Small landowners, who were the farmers of the previous era, could no longer participate in this kind of agricultural production. If a country was motivated to transition to modern agriculture, small landowners had three possible paths to success in this new environment. The first option was to lease land from others and expand their agricultural activities to become modern farmers. The second option was to form cooperatives, which could implement modern agriculture. The third option was to begin farming in greenhouses. Those who could not pursue any of these paths sold their land, became agricultural laborers, or migrated to cities.

During this period, settlement patterns were described with the opposing concepts of urban and rural (Tekeli, 2016, p. 127). A distinct division of labor emerged between urban and rural areas. Cities became the centers of non-agricultural activities, i.e., industry and services. They were densely settled areas with defined centers, forms, and boundaries, sprawling like an oil stain as new buildings were added. In rural areas, agriculture and forestry activities took place, covering all spaces outside cities and including villages. However, over time, this clear distinction between urban and rural began to blur. The opposition between urban and rural areas pushed agricultural activities entirely outside the city. The supply of food that would feed the cities was left solely to agricultural activities in rural areas.

Major Structural Changes in the World and Turkey After 1980s

Significant transformations took place worldwide after 1980s. The shift from industrial society to informational society, from nation-states to a globalized world, and from Fordist production to post-Fordist flexible production occurred alongside a shift from modernist to post-modernist thinking. This transformation happened within the dominance of neoliberal political policies, and as a result, the urban-rural dichotomy lost its meaning. Agricultural activities began to take place in cities, and industrial and service sectors emerged in rural areas. The dividing line between urban and rural areas on maps became impossible to draw.

The shift to globalization and the informational society changed perceptions of urban phenomena, leading to the concept of the "planetary city," where the world was seen as one single interconnected urban entity (Brenner, 2014). The multi-faceted global transformation brought about a range of challenges in food planning that needed to be addressed. One major issue was the growing income inequality, exacerbated by the dominance of neoliberal policies. Solutions in food planning systems needed to ensure that all members of society could access affordable food, allowing everyone to achieve adequate nutrition.

As the world transitioned into the Anthropocene, both food production and transportation began to create serious environmental issues. The principle of sustainability, embraced at the Rio Summit in 1992, started spreading globally in response to rising awareness. As the impacts of climate change began to manifest, food planners recognized the importance of ensuring that solutions remained within the framework of sustainability. When it became clear that food production and transportation contributed significantly to the emission of CO_2 and CH_4 (carbon footprint), efforts were made to minimize the carbon footprint in food production and distribution. Planning began to consider carbon emissions as a cost factor, altering the optimal spatial distribution of agri-

cultural production. To reduce carbon emissions associated with transporting food over long distances, agricultural production to feed a community began to take place closer to consumption areas. This logic pointed to the need for urban agriculture. One reason for the breakdown of the urban-rural dichotomy was this shift towards urban farming.

Thus, the issue of planning urban areas that included agricultural production entered the agenda of urban planners. If a new city was being planned, addressing this issue would be relatively easy. However, in compact cities where urbanization was already complete, integrating agriculture posed significant challenges. In fully developed cities, agricultural activities would need to be introduced into marginal areas. For example, backyard gardens of residential buildings, parts of green spaces, and unused plots within cities could be repurposed for agriculture. Some even proposed utilizing balconies for this purpose. The development of soilless farming technologies could significantly contribute to the creation of innovative solutions. Another step to promote the spread of these practices could involve recognizing the dual value of growing food near or at one's residence. The first value is the market price of the products obtained. However, the subjective value derived from growing food at home, harvesting it by hand when needed, and using it fresh is a source of immense personal satisfaction that cannot be compared to market value. Just as accounting for carbon costs has caused significant changes in settlement patterns, considering this subjective value could lead to further developments in urban agriculture within compact cities.

II. In a Complex World, Both Urban and Food Planning Must Be Open Plans

As the Journal of Planning dedicates this special issue to "Food Planning," there is a search for how to integrate urban planning efforts with food planning. Two approaches can be taken in this endeavor. The first is to assume that the closed planning approach currently prevailing in Turkey will continue, and develop solutions accordingly. The second approach is to recognize the negative outcomes and criticisms of the closed planning system and explore the opportunities offered by the open planning approach as an alternative. This article will follow the second approach (Tekeli, 2023).

The "Comprehensive Rational Planning" or "closed planning" approach used in Turkey involves predicting the size and functions of a city twenty years into the future based on scientific analyses and then designing the city's spatial form accordingly. For twenty years, this plan becomes the single reference point for what is considered correct, good, and beautiful for the city. In this scenario, the plan must be implemented without deviation. However, urban phenomena are constantly evolving, our knowledge of cities and urban life is continuously changing, leading to the restructuring of coalitions of interests within society. Therefore, in a rapidly changing world, where threats and opportunities for cities constantly shift, it is impossible for an urban plan to remain undisturbed for twenty years.

These realities as well was the increasing complexity of societies make it impossible to predict the future with certainty. The emergence of complex systems is a collective phenomenon created by the interactions of individuals, and it cannot be reduced to individual actions. Complexity theory aims to analyze "self-organization", where the members of a system interact in non-linear ways. The social dimension, and its complexity, is constructed through relationships. The phenomenon of "emergence" takes the concept of planning out of the realm of closed systems. In such a scenario, only open plans can be discussed. Planning in the traditional sense becomes more about facilitating emergent processes rather than pre-determined outcomes.

Open planning diverges from closed planning in multiple dimensions:

- The first dimension is *the continuity of the planning process*. Planning must be ongoing, with the ability to respond immediately to every opportunity and threat. Open planning ensures that plans are always up-to-date and never obsolete.
- The second dimension pertains to *the decision-making process*, which must not exclude any member of society from decisions that affect their fate. Openness is defined through human relationships, making the plan a part of governance rather than a mere management. Such plans do not impose decisions on the community but work democratically with them.
- The third dimension is its relationship with a strong public sphere. In communities with well-developed public spheres, inter-subjective values flourish, fostering a sense of community and commitment. This creates a favorable environment for participatory planning.
- The fourth dimension provides the opportunity for communities to express their unique characteristics and identities.

When city plans are made as open plans in a country, it means that the residents of those cities remain vigilant about the development of their urban environments. Open plans create conditions where citizens cannot remain indifferent to their city's growth. Open plans are not authoritarian and are always open to new planning decisions, meaning they are inherently adaptable. Additionally, decision-making processes and the implementation of open plans must remain transparent and open to public debate, ensuring democratic oversight.

Especially in societies where participation capacities are low among marginalized groups, "Urban Social Laboratories" can be used to increase participation in planning processes.

In today's complex world, urban plans should be made as open plans. At the same time, food supply systems and their planning have become complex phenomena, leading to the necessity of open planning in food systems as well. Since food planning must be open to accommodate the nutritional needs of a community, it cannot be integrated with closed planning systems. Making both plans open will strengthen each of them.

III. The Severity of the Food Crisis in Turkey Necessitates a Connection Between Food Planning and Urban Planning

To discuss food planning, we must first acknowledge its place within human rights. The oldest human right is the right to life, which was expanded in 1948 by the Universal Declaration of Human Rights to include the "*right to a dignified* life." Nutrition, necessary for sustaining life, is a fundamental human right. Everyone has the right to sufficient, safe, and healthy food that is easily accessible and sustainable. However, both the state and the individual share responsibility for ensuring that this right is exercised in a balanced and healthy manner. The problem of nutrition does not only arise when people lack access to adequate food, but also in cases of over-nutrition, leading to obesity. Today, this problem is experienced in both its facets, both globally and in Turkey. Therefore, the right to food must be exercised in a balanced way. But the right to food goes beyond that: eating is a pleasurable and refined activity that brings people joy. Enjoying food is part of the right to a dignified life (Tekeli, 2017).

For a country like Turkey, which has a large population and a strategic geopolitical position, producing enough agricultural products to meet the needs of its population is an important strategic goal. Turkey's high level of microclimatic diversity allows for the production of a wide variety of crops. There are very few agricultural products that cannot be produced in Turkey. Until adopting neoliberal policies in the 1980s, Turkey had achieved a high degree of self-sufficiency by introducing new agricultural products, such as tea and various citrus fruits, and by reducing its reliance on agricultural imports through support policies. Turkey had reached its strategic goal of making agriculture autonomous.

Until the 1980s, Turkey had greatly reduced its agricultural imports and achieved self-sufficiency by introducing new agricultural products. However, after the 1980s, Turkey adopted a neoliberal economic strategy that abandoned the import substitution model in favor of an export-oriented strategy. In response to the economic crises that followed, agricultural subsidies were reduced. As a result, the composition of agricultural production in Turkey changed. While some sectors specialized in export-oriented products and developed, others became dependent on imports. This transformation occurred during a period when Turkey was undergoing rapid urbanization, leading to a reduction in the total agricultural land. This reduction was primarily observed in the continuous shrinking of fallow fields, pastures, cultivated lands, and vineyards. In contrast, the areas dedicated to vegetable production, fruit and olive orchards, and greenhouse production (undercover cultivation) increased. Although Turkey's total agricultural production and exports increased, the country's agricultural imports also saw a significant rise, eroding Turkey's self-sufficiency. Turkey became dependent on imports for staple products like grains (wheat and corn), legumes, oilseeds (sunflower, soybean), animal feed, and especially live animals.

Additionally, Turkey's unplanned intensive agriculture contributed to the climate crisis. In 1990, Turkey emitted an average of 3.96 tons of CO_2 equivalent per capita, a figure that rose to 6.04 tons per capita by 2013. Of the carbon emissions in Turkey, 82.2% were generated by energy production, and 17.6% were attributed to agricultural activities. Agriculture was also responsible for 46.5% of methane emissions, 36.7% of waste emissions, and 79.4% of nitrous oxide emissions.

Furthermore, one of the critical outcomes of *unplanned* agriculture in Turkey was the fluctuation of prices for products like onions, potatoes, and tomatoes. Farmers decided which crops to plant based on the prices from the previous year, leading to significant problems. In a year of low production, prices would rise, and farmers would make substantial profits. However, when many farmers planted the same crop the following year, prices plummeted, leaving farmers unable to sell their produce and facing significant losses. This production pattern led to significant harm for consumers in one year and for producers in the next.

When a country's economic policies follow the Washington Consensus, the capitalist policies implemented often lead to frequent economic crises. During these crises, income inequality widens, and low-income groups face significant nutrition problems. In the current crisis in 2024, food prices in Turkey have skyrocketed, and the number of people at risk of hunger has increased significantly. Additionally, food price trends in Turkey have diverged sharply from global trends. While global food prices have been on a downward trend, food prices in Turkey have continued to rise, making the food crisis in Turkey particularly critical. Low-income groups, who previously lived in squatter areas, were further affected when urban transformation projects began to dismantle squatter areas. The loss of food production in the gardens of these squatters exacerbated the situation (Tekeli, 2017, p. 24).

IV. How Can Food Planning Be Integrated with Urban Planning in Turkey?

We have seen how agricultural production in Turkey has evolved, the multi-faceted problems it has created, and how it has led to both an economic and agricultural crisis. However, the monetary policies that Turkey develops to emerge from its economic crisis will not also resolve the crisis in the agricultural sector. Solving the agricultural crisis requires separate and comprehensive planning. Since this article focuses on the local implementation of Turkey's agricultural policy, we must also consider how it can be integrated with urban planning. The proposed food planning must address the issues we have outlined thus far. Let us now examine the fundamental principles of the proposed food planning and its connection to urban planning on various levels.

- In Turkey's agricultural planning, the primary focus should be on ensuring the right to a dignified life and achieving self-sufficiency in agriculture as a strategic goal, giving priority to producing the necessary food domestically. The solution should not be sought in imports.

- Turkey has already laid the groundwork for successful agricultural planning. The Farmer Registration System has been established, large plains have been identified, and the Council of Ministers has been given the authority to determine the pattern of agricultural production in these plains. Using this preparation, Turkey can plan its agricultural production to meet domestic needs and increase exports. To achieve these goals, differentiated agricultural support programs should be developed based on regions and products. The support amounts should comply with Article 14 of the Agricultural Law, which stipulates that agricultural support must not be less than 1% of the Gross Domestic Product.

- In line with these support programs, the quotas for products to be produced in the designated agricultural basins (large plains) each year, and how they will be distributed, should be determined. When making these decisions, efforts should be made to shorten the food supply chain to reduce Turkey's carbon footprint.

- In metropolitan cities/localities where agricultural planning is carried out, it is essential to ensure that agriculture becomes a respected and sustainable activity that contributes to economic development and is environmentally friendly.

- A metropolitan municipality, when implementing its agricultural policy, should prepare a new 1/100,000 scale territorial plan for its surrounding region. This new territorial plan will integrate the food plan with urban plans. Achieving such integration will largely depend on reorganizing the existing legend in the plan.

- In this context, greater municipalities, in particular, should work to improve the agricultural infrastructure within their jurisdiction to increase local agricultural production. This includes paving field roads in areas with high agricultural productivity, expanding cold storage capacity, establishing a network of accredited laboratories for agricultural analysis, and creating a cold chain system.

- Given the uneven development in Turkey and the agricultural crisis, the threat of hunger and malnutrition facing low-income groups has prompted the government and metropolitan municipalities to develop social programs. Integrating these programs with local agricultural planning efforts could help solve some of the critical issues in agricultural planning, particularly the problem of demand.

- To reduce the carbon footprint, food planning should aim to shorten supply chains, necessitating an increase in urban agricultural activities. In this regard, district municipalities could play a significant role. These municipalities, with their existing powers, can successfully run campaigns to increase the production of agricultural products within their jurisdictions. For example, a campaign could be launched to use small vacant spaces within the physical fabric of a district or the balconies of buildings for agricultural production.

I have reached the end of my article, which discusses how food planning and urban plans can be integrated at the local level in Turkey. Some practical steps have already been taken in this area (Greater Municipality of İstanbul, 2021). In the face of the global climate crisis and the food crisis in Turkey, urban planners are increasingly compelled to adapt and evolve their planning approaches. I expect this necessity will further distance them from closed planning systems and bring them closer to open planning.

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