Research Plan

URBAN FOODSCAPES

Productive Landscapes and Intersecting Flows



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Title:

Urban Foodscapes. *Productive Landscapes and Intersecting Flows*

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Introduction and problem statement

"If the global future is urban, as every indication suggests it is, we need to take an urgent look at what that means. Until now, cities have existed largely on their own terms, commanding resources and consuming them more or less at will. That is going to have to change. The feeding of cities has been arguably the greatest force shaping civilization, and it still is."

- Carolyn Steel, "Hungry City"

Food has always been one of humanity's main agendas and a basis for development of human settlements. Growing food dictated the yearly rhythm of life and its consumption was a backbone of daily activities and for some it still is today. Although markets, restaurants, kitchens, shops and waste dumps have always constituted a **backdrop to urban life**. (Steel, 2018), the question of how the food gets to our plates seems to be forgotten. Within the field of urban studies, the city's relationship with it's hinterland, the non-city landscapes has been neglected, but in a contemporary condition of global urbanization it becomes essential and must be reconceptualized (Brenner, Katsikis, 2020).

Throughout history technological advancements gave opportunities for new types of infrastructure unlocking new territories for food production and changing the relationship between the city and its hinterland. Productive landscapes, once integrated into the daily lives of the majority of the population, were pushed far from the urban realm and became economically marginal. Nowadays those hinterlands grew to unprecedented scales and became a part of the global food supply chain, it happens that selected hinterlands are not tied to any metropolis - they just support other hinterland areas. Most of them form mechanized assemblages of human and non-human infrastructure oriented solely towards profit (Brenner, Katsikis, 2020). For instance the global hinterland of modern London has a combined area more than a hundred times larger than the city itself, which equals the size of all the productive farmland in the UK (Steel, 2018). **Global hinterlands** made the food production sector reliant on too many economic factors and logistic supply chains. Those chains are prone to disruptions, and supply shortages are expected, as recent events such as Brexit and global Covid-19 pandemic have proven. What is more, in the face of climate change, the issue of food resiliency and sustainable food

production may become more important than ever before and we as architects and urbanists should strive for change.

As hinterland productive landscapes became more specialised, industrially intensive and having long logistic linkages, it often causes **deprivation of the local territories** (Brenner, Katsikis, 2020). As agriculture lays on the intersection of many metabolic flows it can be tied to exploitation and destruction in other fields, which has planetary consequences. For instance, it is responsible for the decline of global biodiversity by 50%, large-scale environmental pollution due to the use of agrochemicals, major greenhouse gas emissions from production and transportation of produce. What is more, agro-industries are also responsible for 70% of global freshwater consumption (Steel, 2018).

It seems that, similarly to water management (Gandy, 2004), food production became a **technological issue** that is a part of the "hidden city" network. This push back of 'undesirable' productive landscapes resulted in their **absence in the urban tissue of cities**. As GIS data shows, cities like London are considered green, but a large majority of that green is purely visual. In the capitalocene era of packaged, processed food, instant delivery and large-scale supermarkets, the **relationship between humans and their food sources** in cities seems to be lost. Food has lost its value as a source of life not only for capitalist corporations but also for many urban dwellers. This issue may be linked to large amounts of **food waste** coming both from London's households, restaurants, factories, which is still not utilized properly by municipal authorities (London Food Strategy, 2019).

Research questions

Main question:

1. How can foodscapes be integrated into London's urban fabric to reduce unused spaces, improve material and immaterial flows, enhance social connections and strengthen food resilience of boroughs?

Sub questions:

1. Where do **flows** of water, energy, people, nature and logistics **intersect** and which are the most relevant for contemporary food production?

2. What would be the spatial consequence of closing food-related cycles and **optimizing** flows?

3. What are the supplementary functions that growing sites and exchange nodes can utilize to reduce **food waste** and close material loops?

4. What actions need to be taken to integrate productive landscapes back into the city? What is the optimal **location** for them? What **new role** can they play in the urban environment?

5. Where are the **urban leftovers** that food production could utilize?

6. What would be the **middle ground** between large scale agricultural production and small-scale recreational farming?

7. What would be the spatial consequence of introducing **new types of infrastructure** (eg. drones, foodtubes) and new production and **processing technologies** (eg. aquaponics, biofuels)?

Theoretical framework

Hybridity

Foodscape term implies the reading of its territory as a permanent hybridized entity - an assemblage of urban regions and its vast extensions in which the main delineator and the binding principle is its connection to the food supply chain (Angelil, M., Klingmann A., 1999).

Foodscape Territory

One of the main publications that helped me understand the **territory** I am operating within is Lola Sheppard's "From Site to Territory". She argues that in the times of globalization, the site must be understood as a broadened territory. It is thickened with economic and political forces, environmental data, mobility systems and social influences, which all have its spatial consequences. Foodscape definition is a manifestation of such extended meaning of the physical site. It operates in the networked territory, which is a product of multiple intersecting networks of natural and man-made ecologies. Each node within the foodscape is a hub within a larger network of intersecting flows, with sources distant from the site itself. The node reflects a certain duality of being both a product of deterritorialization (Sheppard, 2013) and hyperlocal conditions that are created by a unique intersection of physical and non-physical flows creating an urban metabolic ecosystem. As the research progresses, in order to form a vision for an alternative model of food production in London, I will inspect the possibilities of extending the foodscape site even further - into its epigenetic territory, in which data and information, as dynamic forces, will be continuously scripting its performance (Sheppard, 2013) and hopefully my architectural response will serve as its interface.

Hinterlands and metabolic flows

As I presented in the problem statement, foodscapes is a product of **intersecting flows** of diverse metabolic inputs such as food, water, energy, material, labour and outputs as waste, carbon, pollution, seeing as a global hinterland, outgrow the outdated city versus hinterland dichotomy (Brenner, Katsikis, 2020).

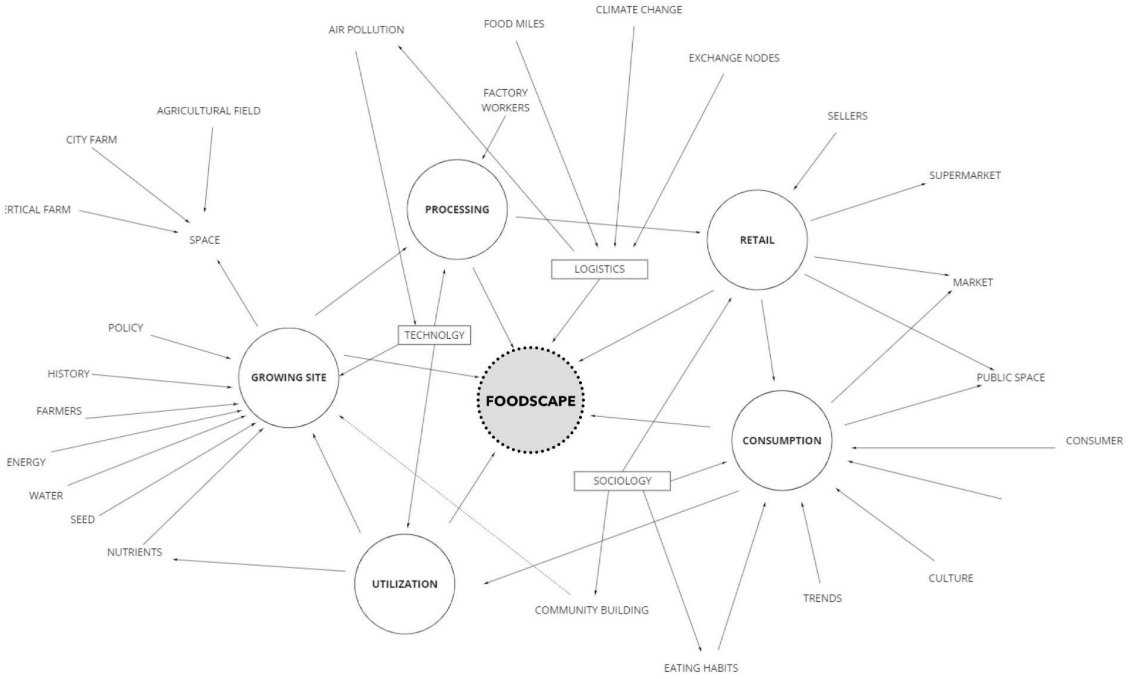
Urban metabolism and flows

Similar concept of **urban metabolism** as an interconnected space of metabolic flows is presented by Matthew Gandy in "Rethinking urban metabolism: Water, space and the modern city". Although Gandy uses water as a lens to see complex metabolic relations and its relationship with the human body and technology I see a lot of analogies to the flow of food within the city and its both social and bio-physical consequences. Food as being essential in maintaining metabolism of the human body and the **social production of space** thus influencing both private and public realm (Gandy, 2004). Similarly to water, foodscapes imply a series of connections between the visible and invisible dimensions of the city, but also serve as a delineator of social power causing either urban cohesion or disruption (Gandy, 2004).

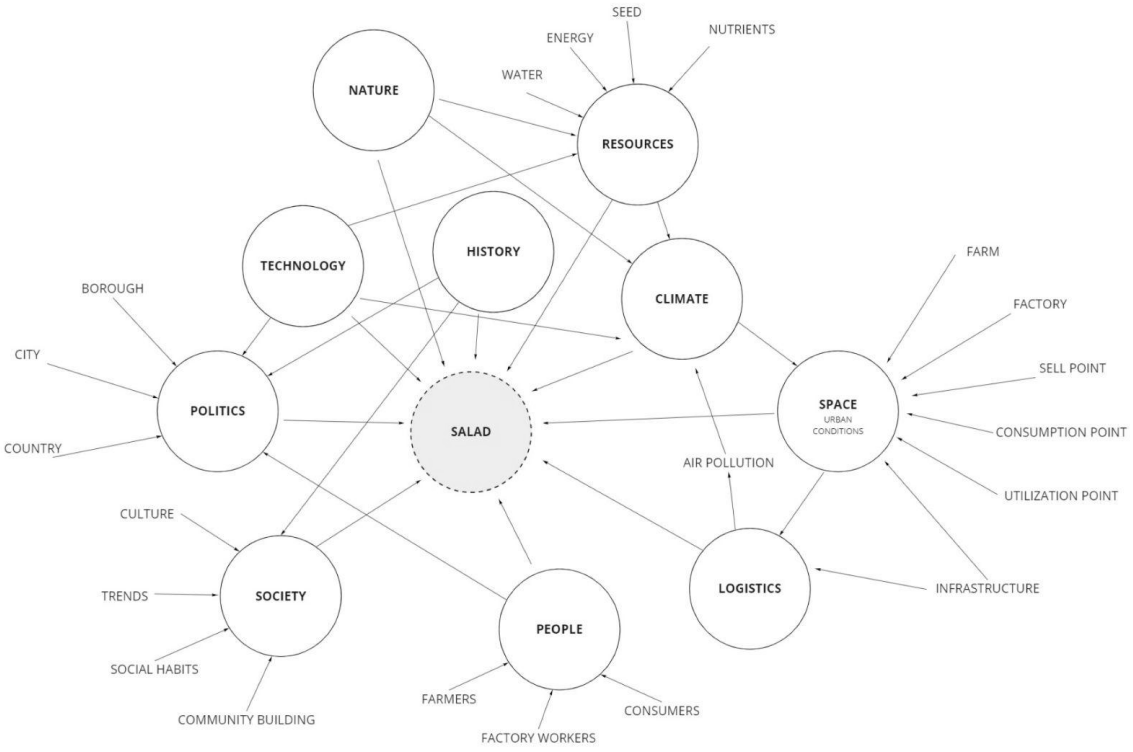
Nature - human - technology

Theories of **nature** and the definition of First, Second, Third and Fourth nature (Hunt, 2000) as a relation between productivity, culture and aesthetics will help me devise my urban and architectural strategy and place my intervention in one of those, beyond or in between these categories. Also the notion of biophilia (Wilson, 1984), as an innate tendency to focus on life and life-like processes will most likely drive my design response - in a sense of both utilizing nature in my design but also creating man-made environments that resemble natural conditions.

As the research progresses, with new findings, the theoretical framework presented above will be expanding. Especially when it comes to theories that touch the relationships between humans, nature and **technology**.



il. 01 - Simplified foodscape territory



il. 02 - Simplified systemic diagram

Methodological positioning and description of research methods

Similarly to foodscape metabolic flows, research inputs will be represented by various intersecting flows of information influencing each other that eventually will manifest as research outputs.

Literature review provides a starting point for my research. First and foremost, the established theoretical literature becomes a filtering lens for further investigations. It will help me in positioning myself within a greater discourse concerning the changing relationship between humans and nature, between nature and technology and between the hinterland and the city. It will serve as a tool to form relevant definitions and establish main research areas. Next the **thematic** literature will be used to investigate problems related to the food supply chain - its technical and social aspects will be studied. As my knowledge expands, new academic sources will be added, supplementing my research with new terms and theories that will help me with my future design. Literature will inform and will be in a constant feedback loop with the diagramming process.

As literature review progresses, different kinds of **diagramming** will be used simultaneously to categorise and evaluate usefulness of found data, to synthesize ideas and to establish relations between elements. In order to filter most relevant information I will make **lists** and use **mind map** technique in order to establish strongest narrational flows. This way I will obtain a main focus point for further research. I will utilize Actor-Network Theory (ANT) in order to establish main non-human and human actants that are a part of the food production network (Latour, 2005). This **systemic diagram** will also show a multi-scalar and cross-disciplinary perspective of the food production chain and help me create pictorial **assemblage** based on satellite images of physical spaces that appear in the network. After the site visit in London, the assemblage will be completed with personal site photographs.

A large part of my context research will focus on **mapping**. Cartographic representation, will serve both as a synthesis of information about the current conditions of the food production chain and the initial approximation of the foodscape territory (Sheppard, 2013). Using GIS data, current productive lands and exchange nodes, such as food markets, working wharves and train stations will be placed on the map to establish peculiar site conditions, study relationships and look for deviations with the network. Next, the cartographic act becomes a tool to project potential future intersections of material flows - first nodes that will have a potential to become hubs - the site of architectural intervention.
In a later phase a **section** through the chosen site will be made to evaluate vertical potential of food production within a close proximity to the site.

Cartographic map will inform an **atlas** of current food production sites in London eg. farm fields in the Green Belt, city farms, community gardens and allotment gardens and assist in revealing

main relationships according to selected location. Further analysis of site relationships will be presented in the form of a diagram.

All research methods will be in a constant loop with each other - informing my next steps by sorting, synthesizing, extracting and finally representing the most relevant information.

Argument about relevance

Urban future

Our future will most likely be urban and may be prone to climate disruptions, therefore looking for alternative ways of shortening food supply chains and searching for circular food production technologies and sites to feed the growing population of cities seems essential.

Multi-scalar issue

Since foodscape is multi-scalar, the scope of its spatial consequences range from urban design, through architecture and interior design, to even product design. It influences every aspect of human life and can be materialized in the form of land use zones, urban patterns, architectural layout and design of various food-related home appliances and utensils. The issue is both global and local, public and private. Similarly, within cities productive landscape strategies have a potential to be implemented on different scales - from individual gardens, to large industrial urban vertical farms - being able to transform unused spaces into productive areas. Especially in the digital age, when current technological advancements like vertical farming, drone transportation and utilization of data may yet unlock new spaces for farming, proving once again that they can change the urban environment completely.

Crossovers

Foodscape being at the intersection of diverse material and immaterial flows spans across many disciplines and involves various actors, therefore the broad reading of its complex territory implies that optimizations and improvements within foodscape will have an impact on many actors and networks. Due to its cross-disciplinarity, food production has potential to be supported with complementary functions to create complex hybrids - such as education or manufacturing - in order to assist in closing production cycles and material loops. For instance food waste could be utilized as an energy source, but also contribute to the emergence of new craft based on naturally processed bio-materials.

Momentum

The research on foodscapes will hopefully contribute to the current initiatives - like London's Food Strategy, Edible London, Capital Growth - undertaken by communities, charities and local authorities in order to combat food poverty, strengthen community bonds through food sharing and enhance the quality of public space. Because in a world that is going digital, food may be one of the last truly physical things connecting us to space, time, nature and each other.

Research plan diagram

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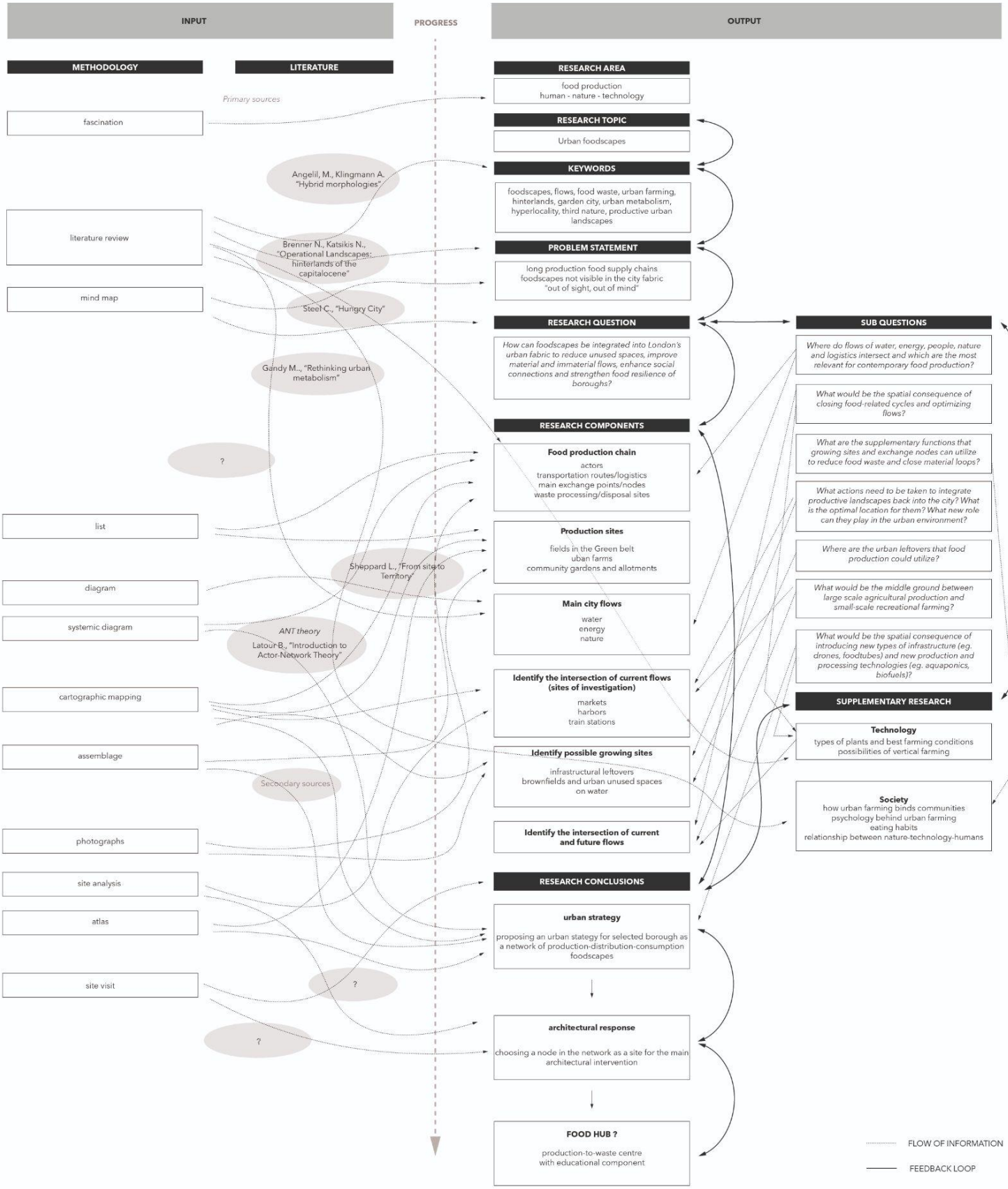
Productive landscapes and intersecting flows



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