



Routes of the medieval spice trade

Figure 1. Maritime Spice Routes indirectly connect markets from East to West already in middle ages © Sommariva, 2020

FOODWAYS: DIASPORIC EXPLORATIONS AT THE AGE OF (DIGITAL) DISCOVERIES

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Food markets has been always globally connected (directly or not) since ancient times. Catalysers of discoveries and exploration, the supply of precious foodstuffs has represented throughout history a driver of change for society. Today, living in an age that pours its commercial energy in the *commodification* of food, exploring the complex and often non-transparent trajectories food cycles need to take in order to reach our plates is generally impossible. Could it be that the world already produces enough food and will continue to do so, while the critical problem is related to logistics and distribution models? *Creative Food Cycles* moves in this direction by exploring new co-production models, to enlarge *scopes* and *scales* of regional *foodsheds* filling the gaps in-between the necessary abstractions of models/policies and the transience of civic actions/collective existences (Schröder, 2019). By addressing the food cycles holistically and as a *motif* of design, the paper explores the research-by-design activities carried out by Leibniz University Hannover addressing new spatial formats for urban inclusiveness, while promoting the role of urban planners, architects, and designers as facilitator empowered with new languages, tools and practices to widening the interfaces between creativity, places and public awareness.

food explorations / supply chains / regional foodsheds / creative food cycles / co-design



Figure 2. Modern innovations in food shopping and supply systems which changed our lives: supermarket, refrigerator, shopping cart, station wagon © Sommariva, 2019

THE SPICES THAT BUILT OUR COMMON MARKET: TALES OF MEN, ROUTES AND EXCHANGES

The idea of a “global economy” was already in place during ancient times and it was connected to valuable food cycles and exchange of its produce (Cardini & Vanoli, 2017). The extant, best-known picture of movement of peoples and intercultural exchanges—at least from Western/Roman perspective—of what could have been the centre of this trades is the Mediterranean Sea; not simply as a geographic region and a basin of civilization, as mostly described in literature, but as a network of goods, languages, routes, images and ideas that peoples had of themselves and of distant trading partners, often shrouded in mystery (McLaughlin, 2016). Mediterranean regions could not have been the same, without an intricately far-flung web of indirect connections to Asia, stretching from north caravans’ trails (Eurasian Steppe Routes), to eastern merchants’ routes (Asian Silk Road, Indian Grand Route) to the southern land-sea interactions (Arabic Incense Trail, Maritime Spice Route), eventually ending in Far East or Central China old’s capital Xi’an, the source of fine luxuries perfumes, gems, and, above all, spices. (Abu-Lughod, 1989; Sidebotham, 2019) Spices has been a catalyst of discoveries; driver for reshaping world’s trade geographies and, by extension, civilization. Among many biographies of explorers and

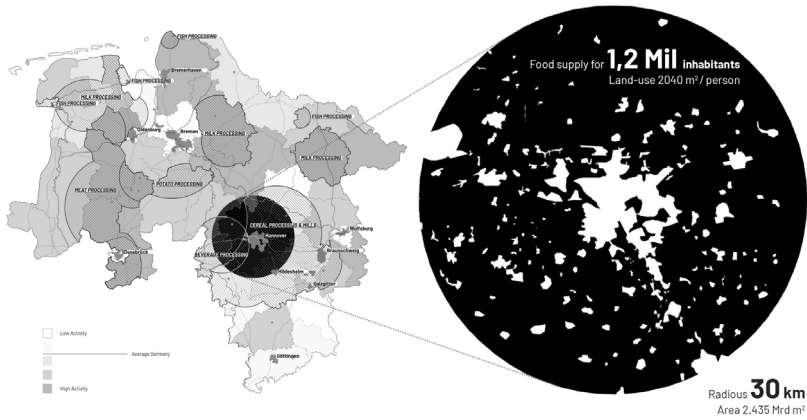


Figure 3. Hannover Regional Foodshed and local food supply capacity radius to satisfy local food demand © LUH_IIES, 2019

mariners discussing East-West historical exchanges and long-distance food-related dialogues, such as Marco Polo (1295) and Edward Gibbon (1737), the one less-known of a bankrupt Venetian merchant by the name of Romano Mairano is fascinating, to give an idea of how Mediterranean basin has been always the terminus of a larger cosmopolitan and multicultural hub of commerce. (Lawton, 2005)

In 1173, Mariano set sail looking for a risky, but wealthy career in overseas trading —through a contract called *colleganza*,¹ which establishes an association among itinerant merchant and local emporia— related to silk, ginger and pepper imports from Alexandria and the head of the Nile Delta, where such fine goods arrived since ancient times, by virtue of the access to the Red Sea trade routes. Mairano was bold but not crazy. He knew, such schemes had enriched Venetian merchants for generations, while many European feuds and markets were supplied with appalling food, necessitating huge quantities of pepper, ginger and cinnamon to disguise rancid taste or the salt used to conserve dried old meat.

Especially during the Middle Ages, for the guilds of merchants of the Maritime Republics, the Middle-East with Alexandria, Cairo, Constantinople, Acri and Antioch represented the gateways to riches. Just to give an idea of the commercial values of spices, Venetian and Genoese merchants were used to sell a pound of pepper



Figure 5. Diasporic cuisine recipes presented at Foodshed Convivium and PorTable unfolding event © CFC, 2019

merce among East-West could not last forever: the fall of Constantinople (1453) barred Europeans from important combined-land-sea routes. In parallel, the rediscovery of Ptolemy’s cartographic knowledge was a revelation to provide worldview evidence that the Indian Ocean, for Roman culture, was landlocked. (Love, 2006) Again, creative inventions and social innovation triggered by growing food markets and commodities demand, resulted in extensive overseas explorations to find new sources of supply. From the early navigation to the Atlantic archipelagos of Madeira (1419) and Azores (1427), to the coast of West Africa (1434), looking for new ways to reach India (Vasco da Gama, 1498), the discover of the Americas (Columbus, 1492-1502) till the circumnavigation of the globe (Magellan, 1519-22), Portuguese and Spanish emerged as the main competitors of a Spice-race: an appetite that spanned the planet and, in doing so, transformed it. Food and fine goods started to be mapped alongside nautical routes to reach them in newly-discovered lands outside Europe. Understanding how food supply represented a powerful factor in European culture to foster social innovations and new economic perspectives, is strictly related to the beginning of what we know today as “globalization”. (Arnold, 2002)

THE AGRI-BUSINESS SOCIETY: CURRENT TRENDS AND SUPPLY CHALLENGES

Whether the Asian colonial empire of Portugal, England and the Netherlands might be said to have sprouted for the sake of cinnamon, cloves, pepper and how fortunes were made and lost due to them, yet to modern eyes it might seem unrealistic that spices should have exerted such a powerful attraction, however different was culinary taste, food condition or the preservation methods. Mildly exotic condiments, one can argue, but how the world changed around them is hard to believe. Food has been always a material for sustainable renewal of cities.

Living in an age that pours its commercial energy in the standardization of food, according to the "take-make-dispose economy"(Ellen MacArthur Foundation, 2014), which has long relied on the commodification of finite goods to sustain growing population and stability, today exploring the complex and often non-transparent trajectories food cycles need to take in order to reach our plates is generally impossible. Even if the civic debate on food safety, organic produce and nutritional values is internationally sound, and we think to know a lot about good and healthy diets, looking at the effects of globalised food networks is a topic about which not everybody is completely aware. For instance, two recent surveys led by British national newspapers, like the Mirror and the Sun (Tiplady-Bishop, 2019) show that only 22% of UK citizens know that most of the bacons sold in supermarkets came from foreign farms, and only 36% of children distinguish correctly the vegetables served in schools. As Robyn Metcalfe argues in her recent book *Food Routes* (2019), domestic economies has been transformed by our continuous quest for newly fresh and healthy food we can trust as well its convenience and personalisation to satisfy consumers' wishes and food phobias: the peaches from the farmer next door, one hundred types of bread, spices and exotic fruits for all seasons, dozens of coffee types, long-life milk and great quantities of pork, chicken and beef, which indeed is not quite the most efficient way for feeding us, considering the intensive sub-tropical land-use transformation for creating new arable and pasture lands since up to 18% of South American and African deforestation emissions are caused by Europe, as the world's third largest net importer of agri-products (Rifkin 1992; Zell-Ziegler et al. 2017).

In the same way, the proliferation of all-you-can eat, fast-food or diasporic ethnic cuisines compared to regional food heritage is indicative, especially in urban areas, of parasitic forms of collective consumption (Merrifield, 2014) and the diffusion of socio-economic inequalities related to food accessibility, known as food deserts or obesogenic environments (Townshend & Lake, 2017). If Food is a shared necessity, it is also a shared way of thinking. The question of how to develop this all-inclusive supply challenges, on the one hand, has fostered the tsunami effect of big distribu-

tion chains and specialised places for trade in home products (e.g. shopping malls) or in fake-diversities (e.g. discount-stores, mini-stores), on the other, leading to a progressively relocation of food tastes at the expense of a diffuse urban metabolic imbalance, making citizens more and more subject to a “supermarket diet”.²

The figures are staggering, seeing the city as the pivotal context of action. *Hungry Cities* (2009) as stated by Carolyn Steel, where we take for granted that food availability in a store or a restaurant will be continuously replenished day after day, while people’s perception are drawn apart from on current levels of production, distribution and consumption related to food, it’s indeed remarkable that cities in the world get fed at all.

Every day, in urban areas the size of London Paris or Berlin, more than 30 million meals are produced, processed, transported, stored ready to be consumed, of which almost the 47% –amounting to a footprint of 0.74 kg/day per person– is wasted away, without adopting any recycling strategy. Just to figure out the nutritional values compared to agricultural yields: it takes about 10 calories of fossil-fuel energy to produce a single calorie of modern supermarket food. (Pollan 2006; Steel 2009; Newman, Cepeda-Márquez 2018).

But one of the great ironies of contemporary society is that this change of paradigm regarding food as an urban commodity is related to five product design inventions which have deeply produced social innovation and transformed Western Society more than any other urban design project have done in history. This is the legacy of the modern shopping and supply systems which affect our life today: (1) Fanny Farmer Candy (1920) was one the first self-service store, forerunner of modern supermarket supplied by distribution centers of parent food companies; (2) General Electrics (1927) commercialized one of the first domestic refrigerator which use Freon, expanding the “cold chain” market, necessary to grant long-last preservation of foodstuffs; (3) Sylvan Goldman (1936) introduced the shopping cart in his supermarket chain in Oklahoma, in order to let customers be able to move and to buy more foodstuffs; (4) Malcom MacLean (1956) transformed how food and goods is transported globally, shipped on cargos or loaded on trucks and trains through modern containers; (5) Ford automotive (1957) produced the family-station wagon increasing the number of vehicles able to carry more groceries and goods.

Could it be that the world already produces enough food and will continue to do so, while the critical problem is related to logistics and distribution models? Might we make a dramatic reduction in food waste if we could just distribute more of what we already produce? Can digital transition and ICT can help stop the bleeding of

food within our global supply chain? Much of these challenges will depend on urban ability to support transformative mechanism to enhance sustainable co-production models, to enlarge scopes and scales of urban-rural linkages in order to investigate mutual influences and synergies of regional foodsheds³, to understand how to satisfy locally our food demands, confronting spatial changes, inequalities, conflicts and insecurities determined by globalised food regimes.

CREATIVE FOOD CYCLES: ACTION-RESEARCH FOR A FOODSHED CONVIVIUM

In last twenty years, many attempts to target food issues into urban agenda and planning debate⁴ have been investigated. Creative Food Cycles explores a field of research-action, which establishes a multidisciplinary dialogue between urban policies and governance models related to food, while promoting the role of urban planners, architects, and designers as facilitator empowered with new languages, tools and practices to widening the interfaces between creativity, place-making and public awareness. (Schröder, 2019)

Design disciplines, in fact, can support the urban community in building the places of its own interaction with food through multiple occasions of social innovation and co-management, with different levels of transversal interactions: (1) by envisioning operational strategies dimensioned according to the expected impacts and policy frameworks, in order to define spaces of civic interactions and multifunctionality and daily care practices (places); by explores the geographies of change and the territorial performances of food-sharing practices, prosumer model, new start-ups, living-lab and community spaces (flows); in raising food awareness through responsible social habits by promoting a Zero-waste knowledge education and a new recycle culture (players).

By addressing the food cycles as design concept through which experiment new forms of social participation and co-creation, the activities carried out by project's partners in open-day laboratories has been significant to promote the transformability of urban spaces to enhance ecological resilience and creativity at different scale of interventions. In this context, the workshop organised by Leibniz University Hannover (Chair of Regional Building and Urban Planning) focused on the development of a new urban food hotspot (Sommariva & Sposito, 2019) to give visibility to urban-rural linkages, by designing a multi-purpose stage for pop-up markets with an open and flexible programme of shared uses.

Among the different lines of inquiry explored by the participants, the one of Conviviality and Sustainability has been chosen as the most significant, for having in-

terpreted the paradigm of low-carbon urban transition through the contribution of a simple piece of urban furniture: PorTable, an unfolding movable table which can functionally re-activate unused parking slots providing a community raised bed for the cultivation of culinary and wild herbs. The transition to a “car-free urban model”, it means more unused (parking) spaces opening a wide range of micro initiatives and possibilities, to be envisioned according to the logic of tactical urbanism (Lydon & Garcia, 2015), driven by residents with the aim of recycling abandoned space into new community hubs.

The necessity to put higher attention to the role of open public space in the urban agenda of 2030, is linked to the challenges posed by a rapid urbanization trends, towards sustainable transportation models in the era of digital transition and the post-metropolis. With this scope, PorTable installation wants to contribute by investigating the potential networking logic of sustainable foodshed, recollecting local narratives, grounding international food flows, exchanges and transfer of everyday simple rituals: the care of an allotment garden, the laying of a community table, the setting up of a pop-up market enriched by cultural activities and manifestation, a stage where to display a Foodshed Convivium.

This final act, indeed, promotes the communicative meaning of the installation, extending the concept of conviviality through the embodiment of art-language and graphics design connected to food cycles.

The aim is to critically trace food-flows starting from Hannover/Lower Saxony regional foodshed impacts, to widen cultural geographies, hybridization and dependencies at global scales, looking at the changes occurred through times in regional recipes and local food culture. Discrepancies of tastes and local cuisines have been analysed and re-valued through a selection of dishes, according to main categories of organic, conventional, or experimental food processing methods in Northern Europe, while four topics defines the different areas of co-design: (1) low-impact cuisines and low-carbon daily diets; (2) recipes of memory and territorial identities; (3) food innovation and cross-overs; (4) waiting cuisine and trail cooking.

The output of the workshop ranged from traditional to diasporic cuisine recipes, but with a look to traceability and seasonal availability of ingredients to reimagine meals by means of creative inventions and multi-culturalism, replacing commercial products with those that allow for a lower impact both on nutritional and environmental aspects (e.g. vegan goulash), or those naturally more adaptive to climate changes. In other cases, variations to the records of regional cookbooks and cross-cultural influences produced unfamiliar results enriching Foodshed Convivium of participants’ personal view on changing societal food habits (e.g. abendbrot,

zigara börek).

Reconnecting to its Latin etymology as a prologue to a shared dinner, the Foodshed Convivium, expressed a way of living together by re-creating an urban atmosphere. A collective display of different food culture and meals enriched the role PorTable of real aggregator of civic-engagement; a public living room, where everybody can access, taking a seat by bringing a chair, tasting and exchanging food while exploring curiosities and data about ingredients, cooking phases and food-supply infographics, drawn on an eclectic table-cloth which specific zoom, recipe-by-recipe, into regional foodsheds. In its intention, Portable can be transferred and revised according to different configurations, community demands and creativity. Given the modularity of its design, the installation can catalyse strong place-making effects through different forms of spatial engagement, while promoting awareness on current trends, data visualization of food cycles.

Unfolding urban spaces for conviviality and social rituals is, therefore, a design-driven strategy to give voice to communities' interests a personal implication in new fields of action, such as self-sufficiency, food sovereignty and cultural biodiversity, creating narratives of urban-rural linkages and circular economy experimentations. The challenge towards the definition of responsive urban spaces, able to implement models of conviviality alternative to traditional logics, represents an opportunity to rediscover the role of the design as a tool for intertwining relationships, places and identities. The theme of the urban project and its relationship with food, which apparently may seem far from the field of action of architects or designers, on the other hand, represents a horizon still to be investigated, in order to combine the relationship between places of production, marketing and diffuse sociality in the urban scene.

FOOTNOTES

1. In Venetian law, *Colleganza* was a notary contract of command, widespread in maritime trade since 10th century, for association of capitals established by itinerant and resident merchants in overseas emporia. The office allowed a merchant short of substances, but willing to take all the risks of the journey, to act as a free-trader, facilitating the supply of goods for import/export; the experience of the resident merchant in matters of local products and pricing was the other crucial aspect for the success of the business. For more info see: Rösch G. (1992) "Mercatura e Moneta". In: Storia di Venezia. Dalle origini alla caduta. Treccani, Roma.
2. In Germany, for instance the 85% of food retail trade is controlled by only four big distribution chains –Aldi, Edeka, Rewe, and Schwarz Group (Lidl and Kaufland), excluding specialist retailers and e-commerce. These companies operate on an international level, acting as gatekeepers for the global import/export in food products. The German discounter Lidl has stores in 26 countries worldwide, the French Carrefour is represented in 34, and the US giant Walmart in 29 (German Federal Cartel Authority, 2019)
3. W.P. Hedden in the book *How great cities are fed* (1929) describes with the term *Foodshed* a region of food flows, conceptually analogous to a watershed, which is characterized by a socio-geographic space where food is produced, processed and distributed within a particular urban region and for a given city, market and population.
4. In the framework of recent action research dealing with food and urban governance, the most interesting lines of investigation respond to systemic (Gandy 2004), infrastructural (Morgan, Sonnino 2010), processual (Girardet 2015), urban-rural (Schröder 2017) strategies, multiplying the level of academic debate and innovations in food policies, territorial evidence and food economy, everyday urban life and social practices, and future urban sustainability goals (Sommariva & Sposito, 2020).

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