

INPUT 2016

9th International Conference
on Innovation in Urban
and Regional Planning



e-agorà | e-ayopà

for the transition toward resilient communities

edited by G. Colombo | P. Lombardi | G. Mondini



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e-agerà/e-άγορά for the transition toward resilient communities

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INPUT 2016 “e-agorà/e-άγορά for the transition toward resilient communities”

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Mapping the food system in Turin

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Key-words: Food system, Urban Food Planning, Crowdmapping, GIS.

Introduction

Food, as a topic of study, has been for years object of surveys and analysis of human and social sciences in general and of geography in particular (Colombino, 2014). Among the most recent and interesting scopes on the subject, above all regarding its applications, there is the food-city relationship and the relative social, economic and environmental implications. This theme, defined Urban Food Planning by the Anglo-Saxon scientific debate (Morgan, 2009) has been increasingly popular in the last fifteen years both in the geographic studies and in the urban and territorial planning activities.

This contribution can be seen in a wider theoretical debate reflecting on the importance of food in urban development (Pothukuchi and Kaufman, 1999), through inclusive and shared food policies (Sonnino, 2009).

Pondering on the relationship between food supply and urban spaces poses a first important question on the knowledge we have of the food system structure, its dynamics and working procedures. Paradoxically, in fact, food systems are the less visible among the various urban systems, in that they are dispersed in their own pervasiveness (Steel, 2008). However, it is this pervasiveness that makes them

such remarkable instruments not only for analysis, but also for landscape, political, social and urban planning and so, in other words, for the transformation of the city itself. From this perspective, it is then necessary not only to identify, define and analyse the elements and their relations (actors, resources, flows, spaces...) but above all to represent and communicate them, increasing their visibility and perception both toward the public and the civil society.

Due to the ability to represent synthetically, selectively but systematically, the elements and dynamics on a territory, cartography is considered one of the most effective instrument to represent the existing phenomena, at the same time suggesting questions, solutions and directions. The role of maps in representing and connecting spatially referred data makes of them a privileged tool of research-action (Pain, 2004) whose aim is not to produce a representation of the world which pretends to be objective, but to collect information and data, to interpret and represent them, offering theoretical and operational tools to actors, stakeholders and policy makers of the researched field (Magnaghi, 2001).

In the last years, the impulse to participate and share data has increasingly gained more and more importance in the field of cartography (for food systems, too), through the diffusion of a shared cartography which, together with the official top-down representations, offers descriptions from the base of the territorial dynamics, a process usually called crowd mapping. Even if some scholars argued against the sameness of neo-geography and democratization (Haklay, 2013), what is clear is that the divide between those who collect and those who use data is partly overcome.

But the experimentation on which this work is based can't be considered a proper action of crowd mapping since it is more an exercise on mapping the food areas in Turin. The activities were supported by the Laboratory of Analysis and Urban and Territorial Representation (LARTU) of the Polytechnic of Turin, and are part of the Modulo Innovazione of the Corso di Laurea Magistrale in Design sistemico.

The main objective of the survey – started in October 2014 and ended in November 2015 – was to contribute to the Turin Atlas of Food, taking a census of all the spots in which food is produced, transformed, sold and consumed in the different districts of Turin, from the centre to the extreme suburbs.

Methodology

The data survey has been collected totally on the field, using the ArcGIS On Line software available on a Campus license recently bought by the Polytechnic of Turin and the Collector for ArcGIS app. It was then possible to collect and update data on the field using mobiles and/or tablets and it was interesting for students to use their private devices (either smart phone or Tablet iOS and Android, with integrated GPS, georeferencing any information), which became “field” instruments, apt to collect alphanumerical and cartographical data.

Students have collected and classified the food spots based on a methodological grid.

The grid has allowed to classify each point on the basis of:

- the phase of the supply chain (production, distribution, consumption);
- the type of the element: for example urban garden, wholesale store, market, supermarket, bar, restaurant, street food, etc;
- the presence *in loco* of the processing and consumption (in order to intercept those hybrid elements, such as, for example, a fish or wine shop where you can eat your products after being purchased);
- an explicitly characterization organic, local (with direct reference to the short chain and Km0 concepts), regional (Piedmont supply chain) and ethnic.

Tab. 1. Methodological grid.

Phases of the supply chain	Elements of the system	Is there processing? (yes/no)	Is there consumption? (yes/no)	Organic	Local (short supply chain and Km0)	Regional (Piedmont supply chain)	Ethnic
Production	Urban farms						
	Urban gardens						
	Food industry						
	Other						
Distribution	Wholesale store						
	Truck						
	Shop						
	Market						
	Minimarket and neighborhood supermarket						
	Superstore and hypermarket						
Consumption	Bar						
	Restaurant/pizzeria/self service etc						
	Street food						
	Pub, nightclub, etc						
	Water distribution						
	Milk distribution						
	Vending machine H24						

The LARTU, initially dealing with the experimentation and the procedures of data collection through mobile devices, has then followed the modelling and realization of the used data base (geographical and alphanumerical, coherent to the survey data regarding the agribusiness chain) and has eventually tested it.

The students have then been taught the use of Collector, GeoDB and the “field” procedures to produce thematic maps for single markers, in order then to show collectively to professors and colleagues what were the impressions and suggestions during the survey and the analysis of the study area.

Results and discussion

In total, in a year work, more than 100 people - both students and researchers - surveyed and classified more than 6358 spots, the majority of which being bars, pubs and ice-cream parlors (2180), retailers (1418); restaurants and pizza restaurants (1183); takeaways (543).

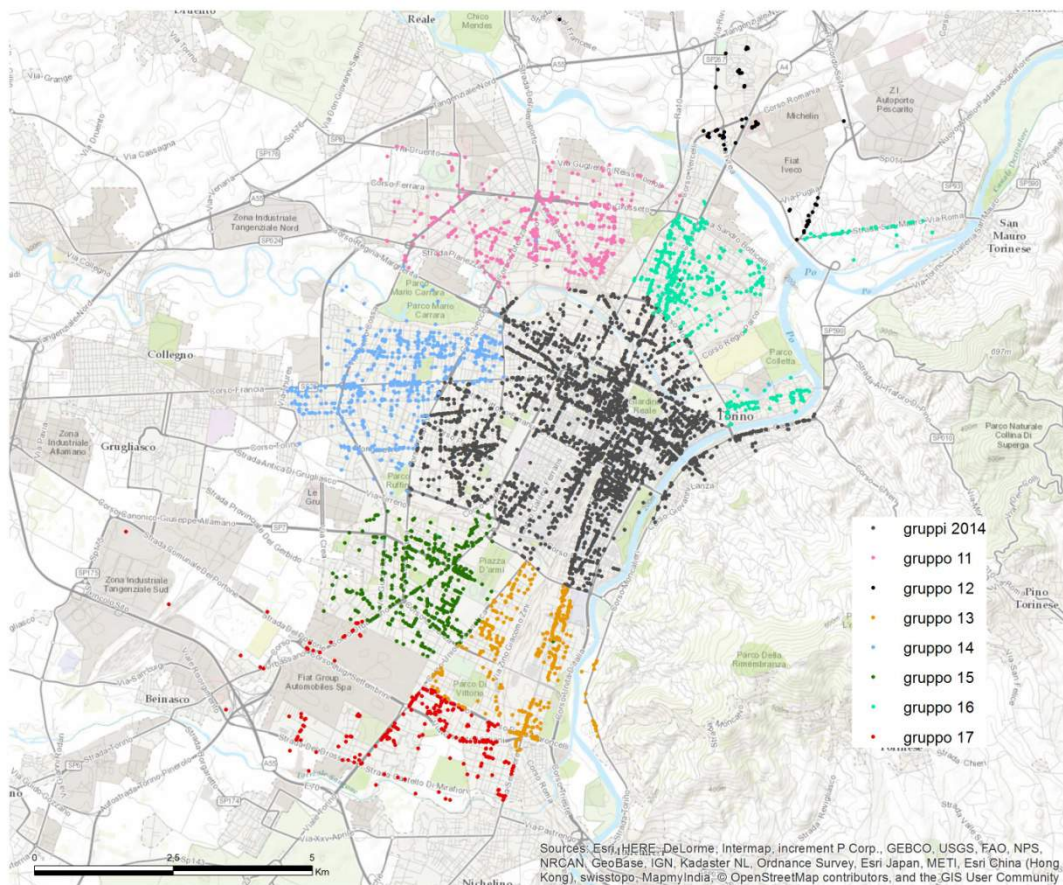


Fig. 1. The places of food in Turin detected by the different groups of students.

The survey results have been further analysed both in relation to the urban agribusiness chain and in respect to some characteristic typologies, showing how:

- in urban spaces, agribusiness production locations concentrate on the border of the county seat, that is areas in which agriculture survives, often mixed with other kind of urban texture;
- transformation locations (in a wider sense, including a series of craft or semi craft activities in which food is used as a raw material, as fresh food or as ingredients in various forms in laboratories and kitchens to become a finished product) are about 3648;

- production locations consist of retailers, which is the most widespread typology (in total 1418), followed by district minimarkets and supermarkets (485), big iper and supermarkets (119), markets (57), wholesale stores (29). The territorial coverage is relatively different among districts, some of them having certainly more services (the centre, but not only), while others less (with some cases of nearly “food desert” in the extreme north and south suburbs); small retailers disappear considerably in the suburbs, presumably due to the higher competition of the wholesale distribution in this area.

The locations of food consumption are the more widespread category, in particular in the historical centre and in the adjacent districts, which in fact have been for some years now the core of the evening and night “movida” in Turin.

As for the peculiarity of the categories, the survey shows that:

- the concentration of ethnic elements is particularly high in the districts which in people’s mind are tagged as “multi-ethnic”. However a considerable concentration of these locations has been recorded in areas where small shops or restaurants are run by South Americans, particularly Peruvians. As a whole, ethnic food locations recorded in Turin are 611; the most numerous categories are kebab shops (Turkish and North African, 159 in total), followed by Japan (862), China (59), Middle Eastern countries (19), Africa (10), India (10), United States (10), Peru (7), United Kingdom-Ireland (6), Mexico (6), Rumania (6);
- the concentration of elements explicitly characterized by local or biologic products is higher in areas where people from the high and medium class live, and much less in the popular districts, revealing that for different reasons – economic and cultural – local and biologic food is still a class interest and choice.

Conclusions

The spotting of the agribusiness chain is a fundamental exercise for urban food system planning, since it allows a punctual and territorially exact survey about the resources.

Moreover the possibility to match the survey data with the socio-economic markers of the respective areas allows further investigations on the relations between food and other urban issues and so to ponder on food and the various urban policies. These actions, when conveniently transformed in other scales, and properly implemented and managed are useful not only to fulfil knowledge gaps but also to show the plurality of actors in the food system, including the weakest (if rightly employed), stressing their roles, needs and perspectives, using professionally managed multimedia equipment, but open to the widest possible community.

This is the founding idea of the wider project, a theoretical – methodological framework on which the experimentation was then based.

The Atlas of Food is a research-action project, which is being implemented by an interdisciplinary research group based in Turin, including geographers, planners, IT experts, agronomists and designers of the Polytechnic and University of Turin and of the University of Gastronomic Sciences.

The Atlas of Food involves six different departments

- Department of Cultures, Politics and Society (CPS) of the University of Turin;
- Department of Agricultural, Forestry and Food Sciences (DISAFA) of the University of Turin;
- Department of Computer Science di INFORMATICA of the University of Turin;

- Interuniversity Department of Territorial Sciences, Project and Politics (DIST) and Laboratory of Analysis and Territorial and Urban Representation (LARTU) of the Polytechnic University and University of Turin;
- Department of Architecture and Design (DAD) of the Polytechnic University of Turin;
- University of Gastronomic Sciences (Pollenzo, CN).

The core of the project is the realization of a multimedia, interactive, participated Atlas, currently centered on the city of Turin, but replicable and scalable in any other urban/metropolitan food system.

The general objective of the Atlas is to develop and implement an interdisciplinary methodology of food system analysis and assessment at a metropolitan scale, through traditional charts and maps, participatory mapping and a strict relationship with social networks, notably, an innovative social network developed at the University of Turin (First Life project) for field action, leading to an innovative interactive Atlas of Food.

The Turin Atlas of Food has the following specific aims:

- to provide an open access tool, collecting and representing data, information and ideas about the food system at the city-region scale. The web platform represents the main deliverable of the project.
- to support the public-private network which is working on establishing a food commission, through analysis of the food system, development of scenarios and suggestions for the food strategies, aiming at enhancing the sustainability, equity, participation and resilience of the food system;
- to increase the awareness of the actors of the food web about food, fostering the visibility and sharing of the issues linked to the different phases of the food chain;
- to provide a platform where the stronger and weaker actors of the food chain can virtually meet, reciprocally know, share ideas, creating an opinion making critical mass that is able to address food policies;
- to monitor the food system regularly with a participatory approach, reporting changes, trends, opportunities and threats.

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