

## Mapping Cities: the Bologna Self-Mapping Project<sup>1</sup>

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### Abstract

Today, great transformations involve maps of cities and urban spaces. Everybody knows that “mapping”, as a practice, has considerably evolved and represents now a universally shared and global experience, belonging, in everyday life, to the vast domain of popular culture (from Google maps, to gps and gis use in sports, holidays etc.). Based on these considerations, we would like to present the results of the first part of the Self-mapping project, a research project initiated thanks to the University of Bologna’s public competition “topic ISA-2010”.

The project was designed to create a methodology for the analysis of urban space, attempting to include Gps tracking and ethno-semiotic methodologies. It regards the mapping of territories, intended to start in Bologna, with the idea of extending the research to other urban situations, including post conflict situation, such as in Kosovo and Bosnia.

The overall intention is *to study the crossing of urban space by its inhabitants, focusing on the comparison of maps*, as potential tools for urban policy regarding new forms of knowledge, marketing of the city and territory, as well as a possible means of “good practices”.

### Parole chiave

Mapping, urban crossing, urban space, ethno-semiotics, cartography.

### Sommario

1. Self-mapping: the general purpose, motivation, and framing of the research project
2. Methods and results: the intersection of ethno-semiotic mappings and methods as determining element of Self-mapping.
3. Expected and first emergine results.
4. Conclusions

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<sup>1</sup> This paper has been conceived together by the two authors, even if the writing of the first two paragraphs has been made by Federico Montanari and of the last two paragraphs by Luca Frattura. But we must also remember that this article, as well as the whole research to which it refers, owes much primarily to the work of Gaspare Caliri (also for his work as researcher, as well as for images provided and Gps tracing) and secondly, to the entire research group CUBE, University of Bologna.

## **1. Self-mapping: the general purpose, motivation, and framing of the research project.**

The research project Self-Mapping, winner of the ISATOPIC 2010 public competition sponsored by the Institute of Advanced Studies of the University of Bologna, was developed utilizing an interdisciplinary perspective. It draws on a form of analysis that, adapted from the social sciences, starts from the observation of concrete practices and experiences of life in the city. The project also intends to promote an innovative and “bottom-up” concept of marketing and understanding the urban territory that originates from the significance indicated by its users, the people who live there, via the maps that they produce.

In recent decades, interest in the study of the city and urban spaces, from many different angles such as the humanities, social sciences, urban and land-use planning, as well as the biological, environmental, and engineering perspectives, has gradually expanded and multiplied. The reasons for this increase of interest are various. The “problem of the city” is one of humanity’s most significant problems, an issue central to our coexistence, and perhaps even for the development and survival of the human species and the world. In this respect, a little more than a year ago, the United Nations stated, “the majority of the human population now lives in cities” (an attestation long anticipated by planners and anthropologists). Among the best known urban planners, Mike Davis (2006: 121) argues that if seen as ecological systems and in terms of exchange with the outside environment (water, waste, transport, logistics and food distribution), the metropolis or megalopolis, but in general all major cities, are characterized by a high degree of complexity, much higher, for example, than that of a rainforest.

Certainly, this comparison would not completely convince the biologist, or the student of botany, however, the metaphor is valid here, important for emphasizing the extreme degree of irreducible complexity systemic of cities. On the other hand, another striking metaphor is that proposed by the great anthropologist C. Lévi-Strauss. In an interview appeared on the Italian newspaper “La Repubblica” a few years ago, Lévi-Strauss pointed out how the city, when seen from a distance, appears to be a metastasis or calcification of a large malignant invader, an evil from the earth (the human species). Beyond the paradoxical and seemingly apocalyptic nature of this vision, it is undoubtedly effective in showing how cities can be seen as formations and layers: products, emergencies and condensations of the concrete practices of human life.

Taking into account all these issues and discourses, in particular the expanding “problem of the city” (that is, its transformation into a general and dramatic problem, touching so many disciplines and fields of research) combined with the fact that the topic of the city itself is associated with a great and long research tradition, the question arises as to how might one develop a new research project. We asked ourselves, alongside all the previous research projects, how could we create something innovative, that could offer something different or at least from a different angle. The basic motivations that provided the initial inspirations from the “Self-mapping” project were,

on one hand, provided by the new dimensions addressed by urban studies, and on the other, the desire to link areas of research that have expanded and developed in recent years.

There are, in this regard, two specific reasons that led to the development and articulation of the “Self-mapping” project which is presented in the article that follows.

On one hand, there is the expansion and diffusion of “mapping” projects (both of scientific or commercial nature, for social uses and for marketing) not only of urban spaces, but of the territory in general. Today, this type of work, the production, processing and construction of maps, is highly pervasive, and breaks through the boundaries of traditional disciplines<sup>2</sup>. In fact, in recent years, it has become a veritable social, cultural and widespread practice, that does not come just from the commercial market, but has also taken on, so to speak, aspects of a widespread grassroots practice. Think of Google, Google maps and Google earth, or the spread of devices such as smart phones. We can consider the passage of GIS and GPS technology from the professional arena (geographers, geologists, archaeologists, military, engineers and researchers) to the consumer market through motorists, tourists, mountaineering and trekking lovers, and boat owners. None of this can be considered as secondary to the overall scope of the research project. This is particularly the case in the social sciences which concerns itself with the behavior of this species of monkeys, as someone once said, that has the occasional habit of dressing itself, throwing bombs and using cell-phones to launch their verses.

But there’s more, which is the second point regarding the specific motivations of the Self-Mapping project, regarding which, we outline our assumptions and first results.

Bruno Latour (see, e.g., AA.VV., 1999) in his studies about the relationship between technology, science, and social behaviors, insists on the importance that even the social sciences attribute to extraordinary and widespread phenomenon of “visualization.” For some time, thanks to the web, computers, and “imaging” technologies and devices in general, it is as if social and cultural phenomena and behavior were struck by a transformation which perhaps seems obvious and predictable to other scientific research areas, but that for the human sciences represents a breakthrough and innovation, as well as a challenge. Once, the use of display devices (beyond the use of tables, graphs, diagrams and, not surprisingly, the same maps that have always been the heritage of the humanities and social sciences) was essentially typical of Physical and Natural Sciences. Consider the use video and photographs, by history, anthropology, and law, aimed at re-building significant or

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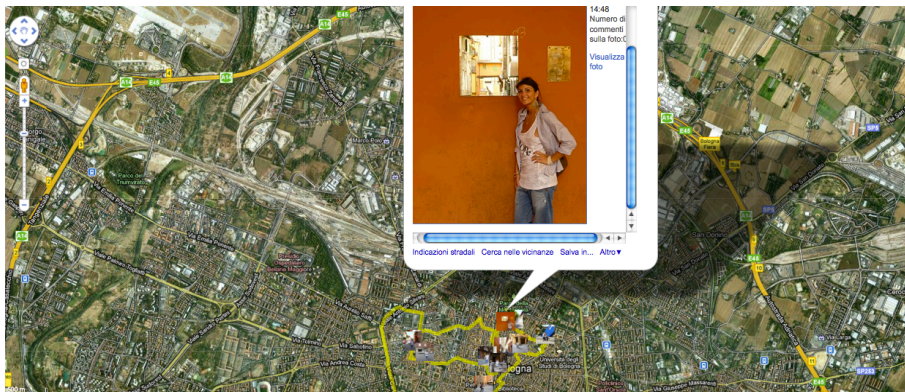
<sup>2</sup> There’s non need to recall here the fact that it is at least since the end of the eighties that a major trend in cartography is one that identify maps as a way to express knowledge and power: the so called “critical cartography” has had a significant evolution during the last two decades and, starting from the seminal works of D. Wood (1992) and A. MacEachren (1995), has soon begun to consider semiotics and other related disciplines, such as anthropology, as useful instruments in order to investigate the interactions between inherent and explicit meanings of maps.

dramatic moments of a given phenomenon, historical process, or event. According to Latour, the technologies of visualization and, in particular, the web, internet, computers connected to other computers and we could say “geo-location”, represent an even bigger turning point.

For some time now, we can visualize the exchange of text messages in real-time during a major historical event (this, from another point of view, is both an opportunity for a researcher, and an open question regarding democracy, given that the same mapping can be easily acquired and used by the police). In recent years we can “show” and share our movements in a given urban area or territory, even through open-source platforms.

Given these insights and theoretical premises, the project intended to start in Bologna, seen as an ideal city in which to apply the methods proposed by the project, with the idea that it would serve as a pilot for a larger research project. The ultimate goal is that of building a model and a research “format” which, once developed and tested, could then be used in other urban situations and contexts.

The project hopes also, ultimately, to provide materials and tools for institutions and public administrators a) that takes into account new ways of both studying and mapping the territory. That does not only analyze, but also knows how to provide practical and innovative tools for territorial planning choices, but also b) is able to provide content that takes into consideration different ways of promoting this same territory.



## 2. Methods and results: the intersection of ethno-semiotic mappings and methods as determining element of Self-mapping.

The Self-mapping project was launched, in its first stage, through the development, distribution and first analysis of 150 questionnaires regarding the routes and places that people living in Bologna believe to be meaningful and relevant for them. These questionnaires were composed as follows: they asked the following personal/demographic questions (age, profession, where they lived and where their legal residence was), and then asked the participants to provide at least 5 places in Bologna that they deemed significant in combination with as many keywords.

From a methodological point of view, it was not considered necessary to use a statistically significant sample of the population. We instead used the “snowball” method, which is also used within the “Social network analysis” research paradigm; the central idea (due to the so called “Actor-Network Theory – “ANT”) is that in any given group or social gathering the basic components are not individuals but networks, that is, relations between actors. In practice, from the methodological viewpoint, one needs to have access to these networks, which are real social entities produced by the relationships that actors have with each other. “Snowball” method involves contacting certain people regarded as potentially “interesting” and relevant respect to the information that they could provide the research project, and then ask them if they could indicate other people who might be useful to the project, who, for reasons of association, affinity, they are in contact with, etc.. This approach should make it possible to have a non-arbitrary access to networks of people that move in a given territory, for example.

Furthermore, beyond this theoretical-methodological element (also thanks to advice received from the ISA tutor of the project), we decided to continue utilizing this type of methodology in order to conduct research that would explore how to discover and follow “emerging” styles, “behavior”, and habits, instead of examining a pre-established sample of individuals. Hence the metaphor that came up during the meeting with the tutor: the concept of an “urban oceanography”. In our case, the “buoys” that we need in order to follow individual behavior and movement (and therefore in a certain sense, the flows and “currents” of movement in the city), need to be further elaborated with an analysis that is at once more precise and broader in its scope.

At any rate, the questionnaires served almost as bait, beyond the collection of information and data on citizens and the people who participated in the research, beyond their preferences and styles of “use” of the city, to get closer to the individuals in order to explore, in a second phase, the real and actual urban explorations.

There is a third theoretical-methodological element, however, that we see as a priority, indeed central to this research project, which lends it its innovative nature: the use of ethno-semiotic methodology (see, Marsciani, 2007; Del Ninno, 2007).

This method intersects, in fact, participant observation ethnography with the analysis of constructs, processes and systems of signification typical of semiotics. It utilizes “discursive objects” such as the questionnaires, as well as “practices-seen as texts” such as the behavior of people in a given urban space. The use of this method (which lends a specific profile to this research) seemed particularly innovative precisely because of its parallel use not only with the methodology mentioned above, but also with the geo-referencing technology and mapping, which allows us to trace the paths of the people who have been our guides in this analysis of urban spaces.



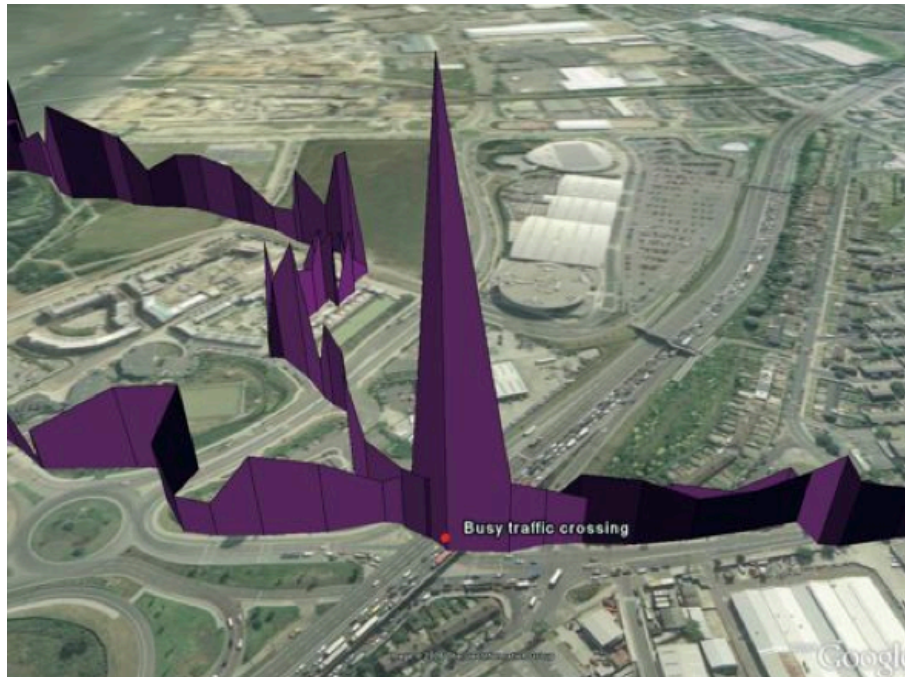
### 3. Expected and first emerging results

Soon after the distribution of questionnaires began the actual urban exploration phase, with the mapping of certain citizens' routes with GPS instruments. We accompanied them in their urban "explorations", conducting interviews, and taking video footage and photographs. The routes of about 30 people were specifically "mapped" in Bologna (data now available in a public Dropbox folder) in a multitude of methods; in the form of maps readable by google, audio interviews, as well as photographs of places that the same individuals judged relevant to their urban routes (it's important to remember that these people suggested their own urban routes).

Subsequently, the work of elaboration began, regarding the questionnaires, then the maps, including the relative interviews and audiovisual material, and finally the ethno-semiotic analysis of all of the collected data.

As to the expected results, both the questionnaires and the elements that emerge from the paths traced by the GPS instruments, tend to show moments of significant differentiation. For example, we expected that the majority of participants would have indicated in the questionnaires, or that they would have brought us to in their meanderings, places that, all things considered, were typical and standard respect to the stereotypes and reputation of the city. This almost never occurred. In addition, in cases where it did, it was reported and represented in a way that provided interesting elements to the analysis.

We first analyzed certain routes that seemed particularly relevant for the originality of the choices of the studied subjects.



An example of Emotional mapping. Source: Nold, 2006.

What began to emerge from this analysis phase (not yet completed) is a kind of provisional typology of urban pathways.

The primary initial question, while accompanying people in their urban “explorations” was: “where would you bring a friend from out of town?”. Starting from the actual response to this question, it was possible to sketch a taxonomy of “urban pathways”, and therefore routes considered logically “most significant” because they open possibilities that are categorical inter-defined.

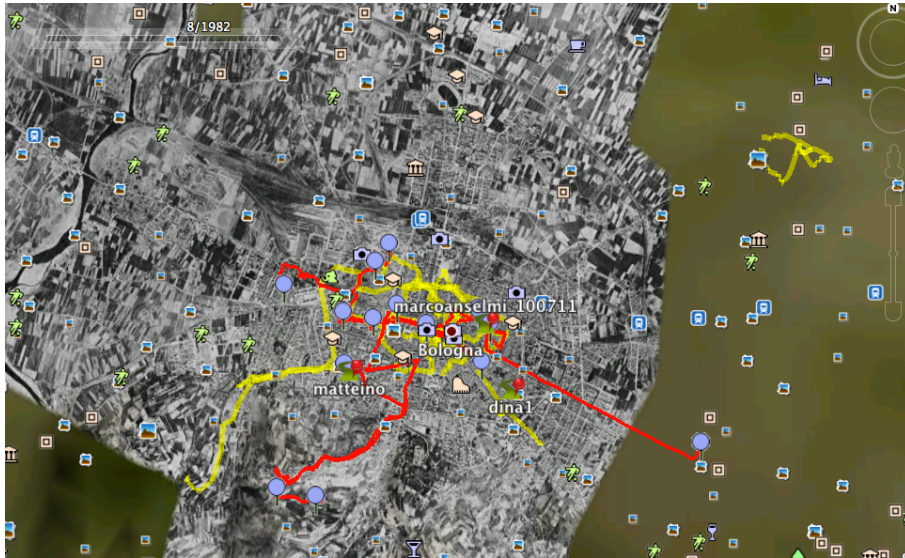
In particular, the routes are arranged in a two-pronged approach to “urban re-conceptualization”, not necessarily dependent on the scale and the traditional categories of urban planning.

It could be said that in some cases the discursive organization of the explorations depended on a “thematic” structuring of the city (on specific types of space, distributed throughout the city; in one example the mapping avowedly followed the “city of vintage”), or on a “pathway strategy” dictated by a categorical approach (e.g. the association of distant points in the city, the division of the city in zones, as in the case of trip from San Michele in Bosco to the city center).

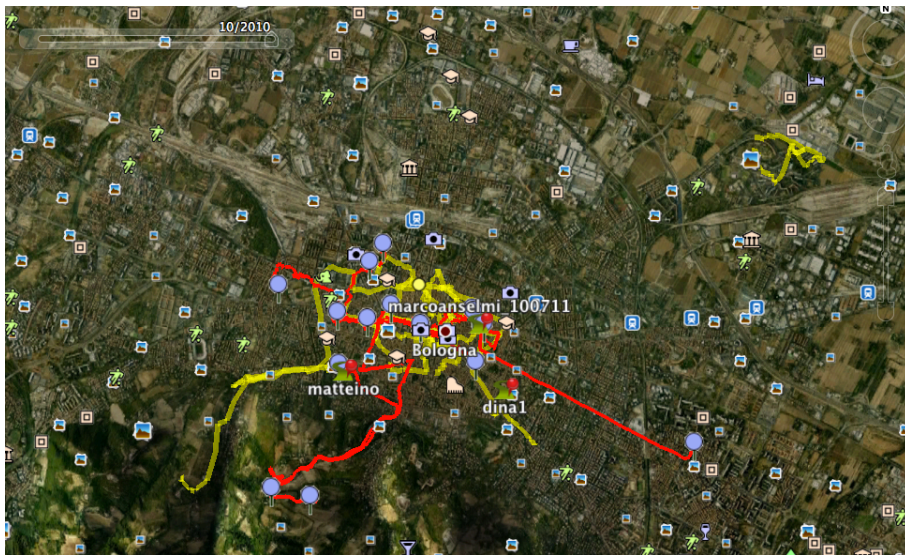
In other cases, instead, a route that marked the identity of particular zone prevailed, as alluded to by the neighborhood definition (as in the cases of San Donnino and Pilastro).

We could add that the actual explorations concord with the results of the questionnaire, but reflect a different methodological approach from the point of view of social research and the “perception” of the city. The method we experimented and that we continue to test is a hybrid between those traditionally adopted by the social sciences and the most recent experiments in participatory processes based on so-called “community engagement”.

More than individuals from a random sample, the explorers that we consulted, and that accompanied us through the city streets, could be seen instead as facilitators in a process (in this case of analysis) of territorial re-appropriation. Following this method, the discussion regarding the associated identity “stereotypes” of various areas of Bologna was not addressed directly, but evolved organically from the engagement process (otherwise known as empowerment process) with the citizens and therefore from the experiential re-appropriation of urban spaces.



Traced paths of participants to “Self-mapping” research in Bologna



Traced paths of participants to “Self-mapping” research in Bologna.

## The phases of research

### 4. Conclusions

In order to analyze urban space, we decided to study the ways such a space is actually crossed by its inhabitants, and to do this through the employment of maps which the inhabitants themselves produce. This new approach to a semiotic analysis of the urban space (let's say an “ethno-semiotic” approach) differs from the “classical” one in that, while the latter aims are in the direction of describing spaces as “closed” texts, a part of their



actual enunciation circumstances (i.e. the way they are crossed, and thereby experienced, by agents/subjects), the former focuses precisely on those practices of city crossing whose performance leads to the actual enunciation of urban space, and allows us to consider such a space as a text, whose boundaries are never completely defined. As a consequence of the employment of this ethno-semiotic approach ("Self-mapping"), we expected to get new insights about the analyzed territory, that could lead us to a better understanding of the way inhabitants enact spaces and places belonging to their everyday life. The first results of our work seem to go beyond our expectations: there has been a significant trade-off between the standard, stereotypical representations of the city and the ones we have collected. The 30 explorations that have been already carried out, have almost always ended up with the discovery of new, unpredicted "shapes" assumed by Bologna urban territory. These are shapes that the territory assumes since it is re-conceptualized by one of its inhabitants while he is performing the common task of city-crossing together with another, less common task, such as "urban mapping". Our working hypothesis, now, is that an urban space is not suitable neither of a unique representation (which we already deemed to be trivially untrue) nor of a cluster of stereotypical ones, since it has as many shapes as many and different are the ways we may have to cross it, each of which leading to the production of a different map (and thereby of a different representation). This new hypothesis seems to have already received a first confirmation by our research, even if it still lingers in wait for further tests and refinements.

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